REPORT ON

FCC CRF 47 Part 2: 2007 & Part 27: 2007 Testing of the Beijing Xinwei Telecom Technology Inc., Broadband Wireless Base Station McWiLL XW5000-07

COMMERCIAL-IN-CONFIDENCE

FCC ID: WIN-XW5000-07

Doc Number 57008048 Report 01 Issue 1 **August 2008**

Product Service

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TUV Product Service Ltd, Beijing Branch,
Unit 918, Landmark Tower 2, No.8 North Dongsanhuan Road, Beijing 100004, P.R. China

REPORT ON FCC CRF 47 Part 2:2007 & Part 27:2007 Testing of the Beijing Xinwei Telecom Technology Inc., Broadband Wireless Base Station McWiLL XW5000-07

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PREPARED FOR Beijing Xinwei Telecom Technology Inc.,
Xinwei Building, No.7 Zhongguancun Software Park,
No.8 Dongbeiwang West Road, Haidian District, Beijing China

PREPARED BY

Li Qun
Project Engineer

APPROVED BY

Zhang Xiaoying
Authorised Signatory

DATED 2008-08-06

ENGINEERING STATEMENT

The measurements shown in this report were made in accordance with the procedures described on test pages. All reported testing was carried out on a sample equipment to demonstrate limited compliance with FCC CRF 47 Part 2:2007 & Part 27:2007. The sample tested was found to comply with the requirements defined in the applied rules.

Test Engineers;

Li Qun

Product Service

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SECTION 1

REPORT SUMMARY

FCC CRF 47 Part 2: 2007 & Part 27: 2007 Testing of the Beijing Xinwei Telecom Technology Inc., Broadband Wireless Base Station McWiLL XW5000-07

1.1 STATUS

Equipment Under Test	Broadband Wireless Base Station McWiLL XW5000-07
Objective	To undertake measurements to determine the Equipment Under Test's (EUT's) compliance with the specification.
Name and Address of Client	Beijing Xinwei Telecom Technology Inc. Xinwei Building, No.7 Zhongguancun Software Park, No.8 Dongbeiwang West Road, Haidian District, Beijing China
Type	XW5000-07
Serial Number(s)	C510407110222
Declared Variants	None
FCC ID Number	WIN-XW5000-07
Test Specification/Issue/Date	FCC CFR 47 Part 2: 2007 FCC CFR 47 Part 27: 2007
Number of Items Tested	One
Start of Test **Finish of Test**	23 July 2008 28 July 2008
Related Documents	-ANSI C63.4: 2003 **-**EIA/TIA-603-C: 2004 - ITU-R Recommendation SM.329-10 (2003)

1.2 INTRODUCTION

The information contained within this report is intended to show limited verification of compliance of the Beijing Xinwei Telecom Technology Inc. Broadband Wireless access system McWiLL BS to the requirements of FCC Specification Part 2: 2007 & Part 27: 2007.

1.2.1 Declaration of Build Status

MAIN EUT	
MANUFACTURING DESCRIPTION	Broadband Wireless Base Station McWiLL XW5000-07 operating under full power output on the frequency range 698MHz-746MHz.
MANUFACTURER	Beijing Xinwei Telecom Technology Inc.
TYPE	XW5000-07
PARTL NUMBER	N/A
SERIAL NUMBER	C510407110222
HARDWARE VERSION	1.4.5.5
SOFTWARE VERSION	N/A
Operating Frequency Range	698MHz – 746MHz
Duplex Mode	Time Division Duplex (TDD)
Access Method	CS-OFDMA
MODULATION TYPE	QPSK, 8PSK QAM16, QAM64
CHANNEL BANDWIDTH	5MHz
OUTPUT POWER (mW or dBm)	42.90dBm(ERP)
ANTENNA GAIN	15dBi(Max.)
COUNTRY OF ORIGIN	China
INTERMEDIATE FREQUENCIES	None
FCC ID	WIN-XW5000-07
TECHNICAL DESCRIPTION (a brief description of the intended use and operation)	The Equipment Under Test (EUT) was a Broadband Wireless Base Station which provides broadband connections to Internet access service and voice service network.
POWER SUPPLY	
MANUFACTURING DESCRIPTION	The Broadband Wireless Base Station was powered by 24Vdc, 10.0A external power source which was not submitted with the BS.

TUV Product Service Ltd Beijing Branch formally certifies that the manufacturer's declaration as reproduced in this report is a true and accurate record of the original received from the applicant.

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1.3 BRIEF SUMMARY OF RESULTS

A brief summary of the tests carried out is shown below:

Test	FCC Specification	Test Description	Result
2.1	Part 2.1046 Part 27.50 (c)(3)	RF Power Output	Pass
2.2	Part 2.1049 Part 27.53(f)	Occupied Bandwidth	Pass
2.3	Part 2.1051 Part 27.53 (f)	Conducted Spurious Emissions	Pass
2.4	Part 2.1051 Part 27.53 (f)	Band Edge Compliance	Pass
2.5	Part 2.1053 Part 27.53 (f)	Radiated Spurious Emissions	Pass
2.6	Part 2.1055 Part 27.54	Frequency Stability	Pass

1.4 GENERAL INFORMATION

1.4.1 Information about the Testing Laboratory

Company Name:	TUV Product service Ltd Beijing Branch
Address:	Unit 918, Landmark Tower 2, No.8 North Dongsanhuan Road, Beijing 100004, P.R. China
Contact:	Zhang Xiaoying
Telephone No.:	86 10 - 65906186
Fax No.:	86 10 - 65906182
Email:	xiaoying.zhang@tuv-sud.cn

1.4.2 Applicant Details

Company Name:	Beijing Xinwei Telecom Technology Inc.
Address:	Xinwei Building, No.7 Zhongguancun Software Park, No.8 Dongbeiwang West Road, Haidian District, Beijing China

1.4.3 Manufacturer Details

Company Name:	Beijing Xinwei Telecom Technology Inc.
Address:	Xinwei Building, No.7 Zhongguancun Software Park, No.8 Dongbeiwang West Road, Haidian District, Beijing China

Product Service

1.4 GENERAL INFORMATION—continued

1.4.4 Technical Description

The Equipment Under Test (EUT) was Broadband Wireless Base Station working in the 698MHz – 746MHz band which provides broadband connections to Internet access service and voice service network. McWiLL BS was composed of eight RF converter boards, one base band processing board, one frequency synthesizer board and one power supplies board and with one Ethernet interface connected to the backbone network. It supports QPSK, 8PSK,16QAM, 64QAM modulation over a bandwidth of 5MHz.

1.4.5 Reference Specification

The Equipment Under Test (EUT) was Broadband Wireless Base Station working in the 698MHz – 746MHz band which provides broadband connections to Internet access service and voice service network, according to the specifications from the manufacturer, it should comply with the requirement of following standards:

FCC CFR 47 Part 2: 2007
FCC CFR 47 Part 27: 2007

All tests have been performed and recorded as per the above standard.

1.4.6 Test Configuration

The Broadband Wireless Base Station was powered by 24Vdc, 10.0A external power source and made in continuous transmitting mode under full power output on the frequencies of bottom channel(701MHz), middle channel(719MHz) and top channel(743MHz) by a console computer during the testing.

1.4.7 EUT Details

EUT	Serial Number		Hardware Version	Software Version
	Base Station (BS)			
	Base Transceiver Station (BTS)	Tower Top Amplifier(TTA)		
	C510407110222	C251808040064 C251808040062	1.4.5.5	

1.4.8 Description of Support Device

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

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.
1	Laptop	DELL	D610	Y9131A00
2	Laptop	DELL	PP17L	3915740949
3	Power supply	Shi Jiazhuang Guoyao Electronic	GYZ720-220S24C2	GY200612T010007006
4	External battery unit	--	INT 6FM100-B	INT0404151 INT0070125
5	GPS	--	MBGPS-27	J3037020200482

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1.4 GENERAL INFORMATION—continued

1.4.9 Test Environment

Enviroment	Temperature (°C)	Humidity (%)	Atmospheric Pressure (mbar)
Ambient	24	32.1	1006
Minimum Extreme	0		
Maximum Extreme	50		

Normal Supply Voltage (Vdc)	24
Minimum Extreme Voltage (Vdc)	20.4
Maximum Extreme Voltage (Vdc)	27.6

1.4.10 Description of Test Modes

For spurious emissions test, the device under QPSK modulation type and receiver antenna at vertical polarization was found as the worst case, so chosen for final test and record the result.
The test results presented in following section are tested from below modes:

Test mode	Modulation Type	Channel	Transmitter status
A	QPSK	B, M, T	TX
	8PSK	B, M, T	TX
	QAM16	B, M, T	TX
	QAM64	B, M, T	TX
B	QPSK	B, M, T	TX
C	--	B, M, T	CW

Where B: Bottom channel; M: Middle channel; T: Top channel;
TX: Continuous transmitting; CW: Carrier Signal

1.5 TEST CONDITIONS

The EUT was set-up simulating a typical user installation at the Test Laboratory, as listed in Section 1.2.1 and tested in accordance with the applicable specification.

For all tests, the EUT was powered by 24VDC 10.0A external power source

1.6 DEVIATIONS FROM THE STANDARD

Not Applicable

1.7 MODIFICATION RECORD

Not Applicable

1.8 ALTERNATIVE TEST SITE

Testing has been performed under the following site accreditations:

FCC Registration No.612767

The State Radio Spectrum Monitoring and Testing Center
No.80 Beilishi Road Xicheng District Beijing, China

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SECTION 2

TEST RESULTS

FCC CRF 47 Part 2: 2007 & Part 27: 2007 Testing of the Beijing Xinwei Telecom Technology Inc., Broadband Wireless Base Station McWiLL XW5000-07

2.1 RF Power Output

2.1.1 Specification Reference

FCC 47 CFR Part 2, Section 2.1046
FCC 47 CFR Part 27, Section 27.50 (c)(3)

Per 27.50 (c) (3), Fixed and base station transmitting a signal with an emission bandwidth greater than 1MHz must not exceed an ERP of 1000 watts/MHz and an antenna height of 305m HAAT, except that antenna heights greater than 305 m HAAT are permitted if power levels are reduced below 1000 watts/MHz ERP in accordance with Table 3 of section 27.50 (c).

2.1.2 Equipment Under Test

Broadband Wireless Base Station McWiLL XW5000-07 on frequency 698-746MHz working in test mode A described in section 1.4.10.

2.1.3 Date of Test

23 Jul. 2008

2.1.4 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

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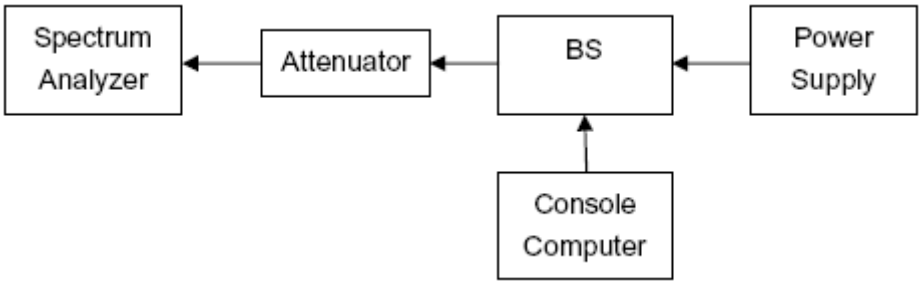
2.1.5 Test Procedure

The EUT was connected to a Spectrum Analyzer via the main RF connector, and through an appropriate Attenuator. Diversity RF connectors were connected to 50 Ohm match load. The EUT was controlled to transmit maximum power by a Console Computer. Measure and record the maximum channel power of the EUT by the Spectrum Analyzer.

The main settings of the Signal Analyzer were as below:
- Measurement bandwidth (RBW): 30 kHz



2.1.6 Test Results

All test modes were considered for this test. All typical frequency points were considered for this test.

Test Mode	Transmitter Output Power Level(ERP) (dBm)		
	CH Bottom (701MHz)	CH Middle (719MHz)	CH Top (743MHz)
QPSK	42.76	42.88	42.34
8PSK	42.74	42.90	42.37
QAM16	42.74	42.89	42.44
QAM64	42.75	42.90	42.48
Limit	5000W/5MHz(67dBm/5MHz)(ERP)		
Conclusion	Complies		
Measurement Uncertainty	±0.7dB		

Note: P(ERP)=P(Channel)+Antenna Gain(dBi) —2.15

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2.2 Occupied Bandwidth

2.2.1 Specification Reference

FCC 47 CFR Part 2, Section 2.1049
FCC 47 CFR Part 27, Section 27.53 (f)

Per 2.1049, The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission.

Per 27.53 (f), for operations in the 698–746 MHz band, 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.

Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

2.2.2 Equipment under Test

Broadband Wireless Base Station McWiLL XW5000-07 on frequency 698-746MHz working in test mode A described in section 1.4.10.

2.2.3 Date of Test

23 Jul. 2008

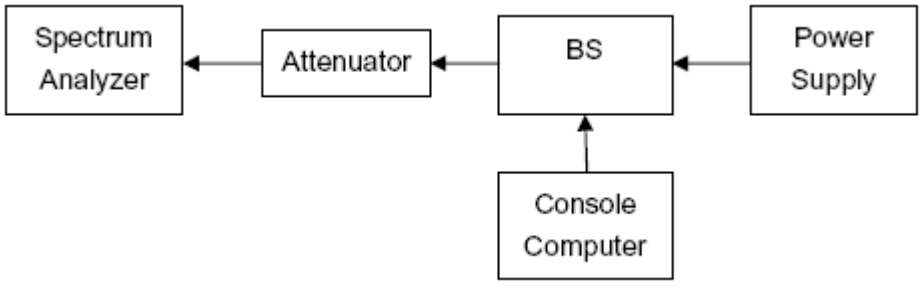
2.2.4 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.2.5 Test Procedure

The EUT was connected to a Signal Analyzer via the main RF connector, and through an appropriate Attenuator. Diversity RF connectors were connected to 50 Ohm match load. The EUT was controlled to transmit maximum power by a Console Computer. Measure and record the occupied bandwidth of the EUT by the Signal Analyzer.

The main settings of the Signal Analyzer were as below:
- Measurement bandwidth (RBW): 30 kHz



2.2.6 Test Results

All test modes were considered for this test. All typical frequency points were considered for this test.

Test Mode	Occupied Bandwidth (99% Power bandwidth) (MHz)		
	CH Bottom (701MHz)	CH Middle (719MHz)	CH Top (743MHz)
QPSK	4.7122	4.6988	4.7116
8PSK	4.6979	4.7021	4.7309
QAM16	4.6981	4.6956	4.7194
QAM64	4.7104	4.7119	4.7964
Limit	5MHz (Supplier's declaration)		
Conclusion	Complies		
Measurement Uncertainty	--		

The test plot for Occupied Bandwidth please refer to section 4.1 in this report.

2.3 Conducted Spurious Emissions

2.3.1 Specification Reference

FCC 47 CFR Part 2, Section 2.1051
FCC 47 CFR Part 27.53 (f)

According to 47 CFR Part 2 section 2.1051 and Part 27 section 27.53(f), the power of any emissions outside the licensee's frequency bands of operation must be attenuated below the transmitter power (P in watts) by at least 43 +10 lg (P) dB. Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 100kHz or greater.

The limit is calculated to be P (W) - {43 dB + 10 lg [P (W)]} = 10 lg [1000 P (W)] (dBm) - 43 dB - 10 lg [P (W)) = 30 dBm - 43 dB = -13 dBm.

2.3.2 Equipment under Test

Broadband Wireless Base Station McWiLL XW5000-07 on frequency 698-746MHz working in test mode A described in section 1.4.10.

2.3.3 Date of Test

23 Jul. 2008

2.3.4 Test Equipment Used

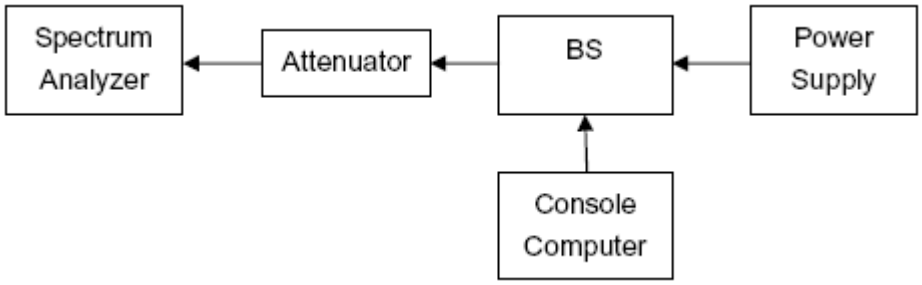
The major items of test equipment used for the above tests are identified in Section 3.1.

2.3.5 Test Procedure

The EUT was connected to a Signal Analyzer via the main RF connector, and through an appropriate Attenuator. Diversity RF connectors were connected to 50 Ohm match load. The EUT was controlled to transmit maximum power by a Console Computer. Measure and record the maximum unwanted emissions of the EUT by the Signal Analyzer.

According to 47CFR part 27.53(f), the main settings of the Signal Analyzer were as below:
- Measurement bandwidth (RBW): 100 kHz
- Sweep width (Span): 30MHz to 10th harmonic included

Alternatively, according to ITU SM.329-10,
- Measurement bandwidth (RBW) for 30 MHz up to 1 GHz: 100 kHz
- Measurement bandwidth (RBW) for 1 GHz up to 10th harmonic included: 1 MHz



2.3.6 Test Results

All test modes were considered for this test. All typical frequency points were considered for this test.

Test Mode	Frequency by plot range	Spurious emissions (Reference to plot in the annex A)		
		CH Bottom (701MHz)	CH Middle (719MHz)	CH Top (743MHz)
QPSK	30MHz ~ 1GHz	Plot13	Plot16	Plot19
	1GHz ~ 5GHz	Plot14	Plot17	Plot20
	5GHz ~8GHz	Plot15	Plot18	Plot21
8PSK	30MHz ~ 1GHz	Plot22	Plot25	Plot28
	1GHz ~ 5GHz	Plot23	Plot26	Plot29
	5GHz ~ 8GHz	Plot24	Plot27	Plot30
QAM16	30MHz ~ 1GHz	Plot31	Plot34	Plot37
	1GHz ~ 5GHz	Plot32	Plot35	Plot38
	5GHz ~ 8GHz	Plot33	Plot36	Plot39
QAM64	30MHz ~ 1GHz	Plot40	Plot43	Plot46
	1GHz ~ 5GHz	Plot41	Plot44	Plot47
	5GHz ~ 8GHz	Plot42	Plot45	Plot48
Limit		-13dBm		
Conclusion		Complies		
Measurement uncertainty		±0.7dB		

The test plot for Conducted Spurious Emissions please refer to section 4.2 in this report.

2.4 Band Edge Compliance

2.4.1 Specification Reference

FCC 47 CFR Part 2, Section 2.1051
FCC 47 CFR Part 27.53 (f)

According to 47 CFR Part 2 section 2.1051 and Part 27 section 27.53(f), the power of any emissions outside the licensee's frequency bands of operation must be attenuated below the transmitter power (P in watts) by at least 43 +10 lg (P) dB. Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 100kHz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

The limit is calculated to be P (W) - {43 dB + 10 lg [P (W)]} = 10 lg [1000 P (W)] (dBm) - 43 dB - 10 lg [P (W)) = 30 dBm - 43 dB = -13 dBm.

2.4.2 Equipment under Test

Broadband Wireless Base Station McWiLL XW5000-07 on frequency 698-746MHz working in test mode A described in section 1.4.10.

2.4.3 Date of Test

23 Jul. 2008

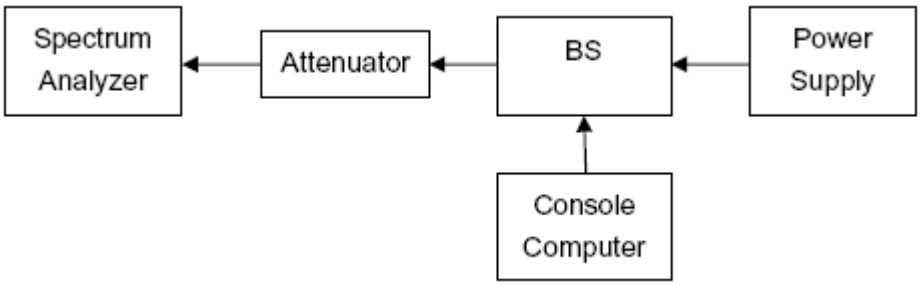
2.4.4 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.4.5 Test Procedure

The EUT was connected to a Signal Analyzer via the main RF connector, and through an appropriate Attenuator. Diversity RF connectors were connected to 50 Ohm match load. The EUT was controlled to transmit maximum power by a Console Computer. Measure and record the maximum band edge emissions of the EUT by the Signal Analyzer.

The main settings of the Signal Analyzer were as below:
- Measurement bandwidth (RBW): 30 kHz
- Center frequency (CF): frequency point of the licensee's band block
- Sweep width (Span): at least 5 MHz



2.4.6 Test Results

All test modes were considered for this test. Only channel bottom, channel middle and channel top operating frequency points were performed for this test.

Test Mode	Band Edge Power – P(W) (dBm)					
	CH Bottom (699MHz)		CH Middle (721MHz)		CH Top (745MHz)	
	Lower	Upper	Lower	Upper	Lower	Upper
QPSK	-20.38	-18.88	-18.59	-18.55	-15.00	14.34
8PSK	-20.19	-19.00	-18.73	-18.34	-18.16	-17.02
QAM16	-21.18	-19.56	-18.53	-18.28	-14.92	-14.19
QAM64	-20.34	--19.00	18.59	-18.27	-14.72	-14.09
Limit	-13dBm					
Conclusion	Complies					
Measurement uncertainty	±0.7dB					

The test plot for band edge compliance please refer to section 4.3 in this report.

2.5 Radiated Spurious Emissions

2.5.1 Specification Reference

FCC 47 CFR Part 2, Section 2.1053
FCC 47 CFR Part 27.53 (f)

According to 47 CFR Part 2 section 2.1053 and Part 27 section 27.53(f), the power of any emissions outside the licensee's frequency bands of operation must be attenuated below the transmitter power (P in watts) by at least 43 +10 lg (P) dB. Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 100kHz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

The limit is calculated to be P (W) - {43 dB + 10 lg [P (W)]} = 10 lg [1000 P (W)] (dBm) - 43 dB - 10 lg [P (W)) = 30 dBm - 43 dB = -13 dBm.

2.5.2 Equipment under Test

Broadband Wireless Base Station McWiLL XW5000-07 on frequency 698-746MHz working in test mode B described in section 1.4.10.

2.5.3 Date of Test

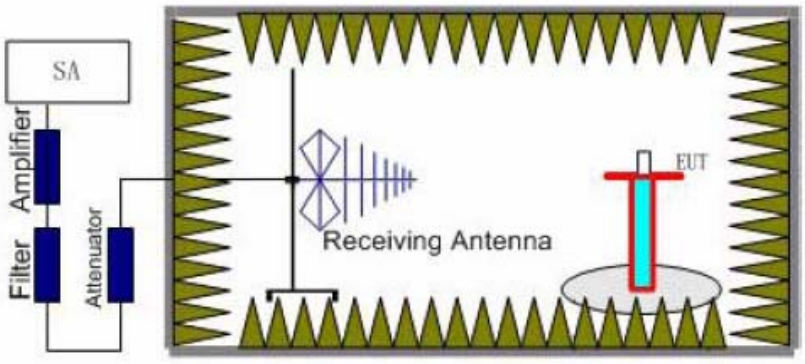
28 Jul. 2008

2.5.4 Test Equipment Used

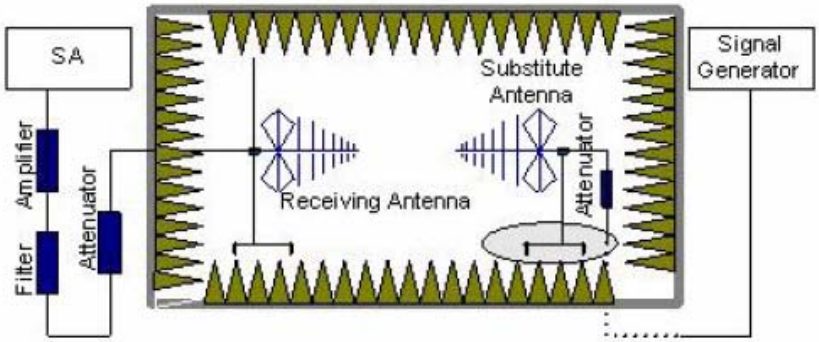
The major items of test equipment used for the above tests are identified in Section 3.1.

Product Service

2.5.5 Test Procedure



Step 1



Step 2

Step1:
The measurement is carried out in the fully anechoic chamber. EUT was placed on a 2.4 meter high non-conductive table at a 3 meter test distance from the test receive antenna. A receiving antenna was placed on the antenna mast 3 meters from the EUT. The height of receiving antenna is 2.4m and varies in certain range to find the maximum power value. The EUT shall be set to continuous transmitting mode under maximum output power. The measurement is carried out using a spectrum analyzer or receiver. The spectrum analyzer scans from 30MHz to 8GHz (higher than the 10th harmonic of the carrier). The peak detector is used and RBW is set to 1MHz on spectrum analyzer. Then the antenna height and turn table rotation is adjusted till the maximum power value is founded on spectrum analyzer or receiver. A notch filter is necessary in the band near to the carrier frequency. A high pass filter is needed to avoid the distortion of the testing equipment in the band above the carrier frequency.

Step 2:
A log-periodic antenna or double-ridged wave guide horn antenna shall be substituted in place of the EUT. The log-periodic antenna will be driven by a signal generator and the level will be adjusted till the same power value on the spectrum analyzer or receiver. The level of the spurious emissions can be calculated through the level of the signal generator, cable loss, the gain of the substitution antenna and the reading of the spectrum analyzer or receiver.

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2.5.5 Test Procedure--continued

Calculation procedure:
The data of cable loss, antenna gain and air loss has been calibrated in full testing frequency range before the testing.

The power of the Radiated Spurious Emissions is calculated by adding the cable loss, antenna gain and air loss. The basic equation with a sample calculation is as followed:
$P=P_R+L_C+L_A-G$
Where P: Power of the Radiated Spurious Emissions (dBm)
P_R: reading of the receiver (dBm)
L_C: Cable Lose (dB)
L_A: Air loss (dB)
G: Antenna Gain (dBi)
Assumed the reading of the receiver is -60dBm. A cable lose of 10dB, an air lose of 30dB and an antenna gain of 11dBi are added.
$P=P_R+L_C+L_A-G=-60+10+30-11=-31dBm$

2.5.6 Test Results

Only the result for worst case were recorded for this test. All typical frequency points were considered for this test.

Test Mode	Frequency by plot range	Spurious emissions		
		CH Bottom (699MHz)	CH Middle (721MHz)	CH Top (745MHz)
QPSK	30MHz ~ 3GHz	Plot61	Plot63	Plot65
	3GHz ~8GHz	Plot62	Plot64	Plot66
Limit		-13dBm		
Conclusion		Complies		
Measurement uncertainty		30MHz～100MHz 3.96dB 100MHz～1000MHz 3.90dB 1000MHz～18000MHz 3.64dB		

The test plot for band edge compliance please refer to section 4.4 in this report.

2.6 Frequency Stability

2.6.1 Specification Reference

FCC 47 CFR Part 2, Section 2.1055
FCC 47 CRF Part 27, Section 27.54

According to 47 CFR Part 2 section 2.1055 and Part 27 section 27.54, the frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

2.6.2 Equipment under Test

Broadband Wireless Base Station McWiLLXW5000-07 on frequency 698-746MHz working in test mode C described in section 1.4.10.

2.6.3 Date of Test

24 Jul. 2008

2.6.4 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

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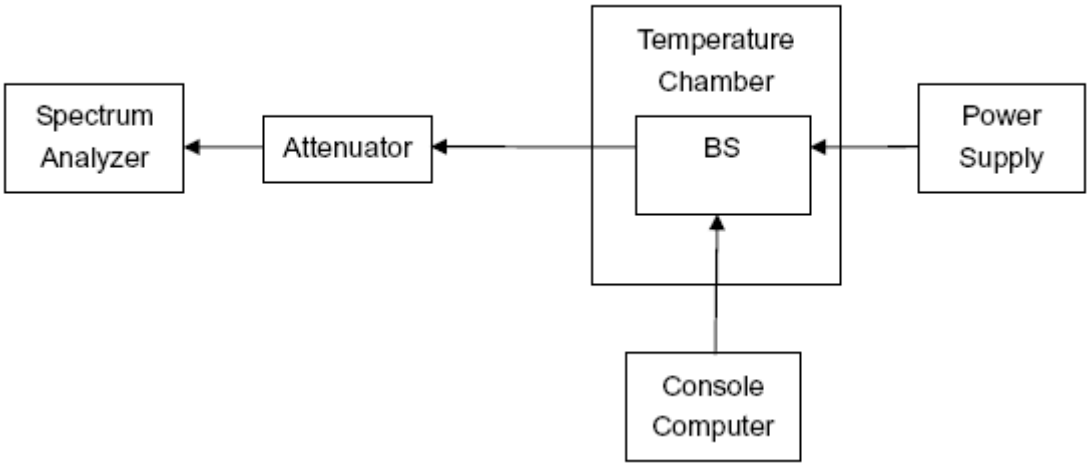
2.6.5 Test Procedure

According to 47 CFR Part 2 section 2.1055, the frequency stability shall be measured with variation of ambient temperature from -30°C to +50°C.

Frequency measurements shall be made at the extremes of the specified temperature range and at intervals of not more than 10 ° C through the range. A period of time sufficient to stabilize all of the components of the oscillator circuit at each temperature level shall be allowed prior to frequency measurement.

The frequency stability shall be measured with variation of primary supply voltage from 85 to 115 percent of the nominal value for other than hand carried battery equipment.

The EUT was connected to a Signal Analyzer via the main RF connector, and through an appropriate Attenuator. Diversity RF connectors were connected to 50 Ohm match load. The EUT was controlled to transmit carrier signal by a Console Computer. Measure and record the frequency error of the EUT by the Signal Analyzer.



2.6.6 Test Results

All test modes were considered for this test. All typical frequency points were considered for this test.

Test conditions		Frequency error (Hz / ppm)		
Voltage(V)	**Temp(°C)**	**CH B**	**CH M**	**CH T**
24Vdc	**0**	45/0.06	40/0.06	47/0.06
	10	-48/-0.07	-32/-0.04	48/0.06
	20	38/0.05	52/0.07	60/0.08
	30	-45/-0.06	51/0.07	51/0.07
	40	-30/-0.04	-32/-0.04	-30/-0.04
	50	44/0.06	23/0.03	36/0.05
85% Rated (20.4Vdc)	**20**	33/0.05	42/0.06	-32/-0.04
115% Rated (27.6Vdc)	**20**	-54/-0.08	31/0.04	34/0.05
Measurement uncertainty		--		

Note: the EUT can't operate normally below 0 °C

SECTION 3

TEST EQUIPMENT

FCC CRF 47 Part 2: 2007 & Part 27: 2007 Testing of the Beijing Xinwei Telecom Technology Inc., Broadband Wireless Base Station McWiLL XW5000-07

Product Service

3.1 Test Equipment

List of absolute measuring and other principal items of test equipment.

Item	Instrument	Manufacturer	Type No.	Serial No.	Cal. Date
1	Spectrum Analyzer	Agilent	E4440A	MY46186900	2008-05-23
2	Power Probe	Agilent	8485A	MY41091233	2007-08-20
3	30dB Attenuator	Weinschel	2	BL9589	TU
4	Temperature Chamber	Wuxi Jinhua	GDW-225	00595	O/P MON
5	Test Receiver	Rohde & Schwarz	ESI 40	100015	2007-08-20
6	Ultra log test antenna	R&S	HL562	100016	2007-09-20
7	Double-Ridged Waveguide Horn Antenna	Rohde & Schwarz	HF 906	100030	2007-09-20
8	Antenna master	FRANKONIA	MA 260	--	TU
9	Relay Switch Unit	R&S	331.1601.31	338965002	TU
10	Signal generator	R&S	SMR 20	100086	2007-08-20
11	Full- Anechoic Chamber	FRANKONIA	12.65mx8.03m x7.50m	--	2007-09-24
12	Digital Multimeter	FLUKE	179	91820401	2008-01-04
13	Thermo-Hygrometer	AZ Instruments	8705	9151655	2007-12-10

TU Traceability Unscheduled
O/P MON Output Monitored

Product Service

SECTION 4

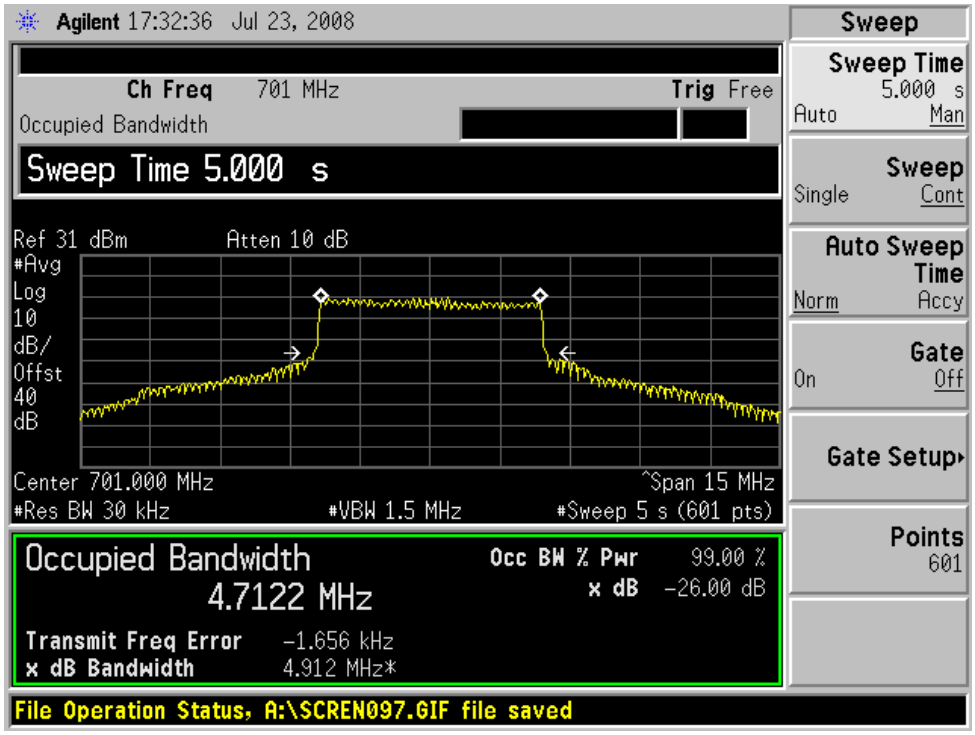
TEST RESULTS REPRESENTED BY PLOTS

FCC CRF 47 Part 2: 2007 & Part 27: 2007 Testing of the Beijing Xinwei Telecom Technology Inc., Broadband Wireless Base Station McWiLL XW5000-07

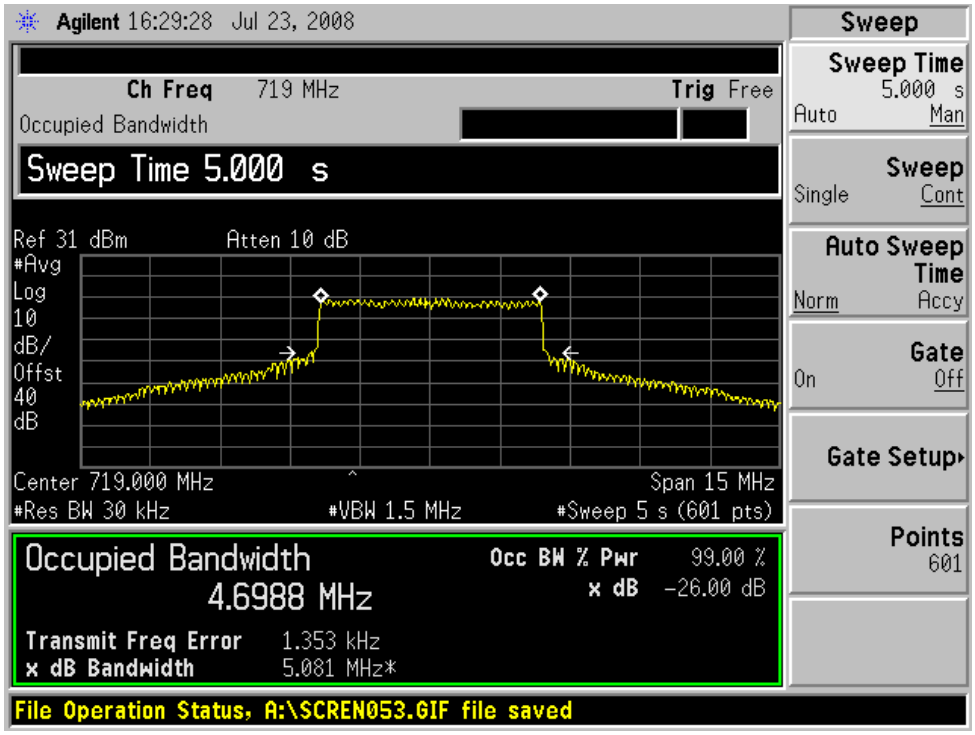
Product Service

4.1 Occupied Bandwidth

Modulation Mode: QPSK
Channel Bandwidth: 5MHz



Plot 1 Occupied Bandwidth on CH Bottom

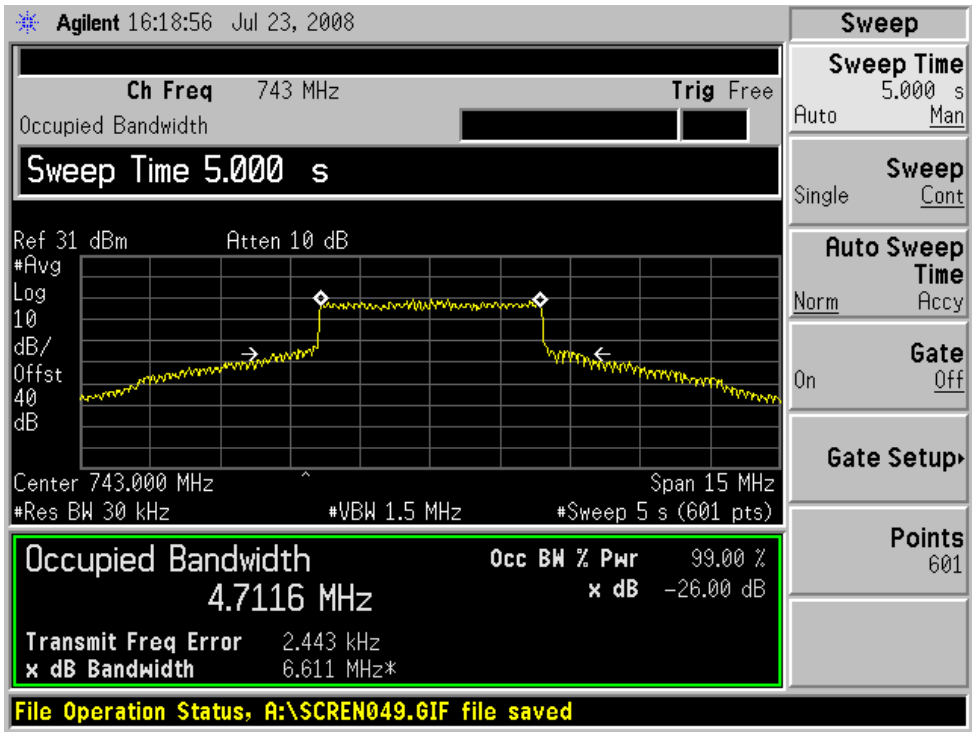


Plot 2 Occupied Bandwidth on CH Middle

Product Service

4.1 Occupied Bandwidth-continued

Modulation Mode: QPSK
Channel Bandwidth: 5MHz

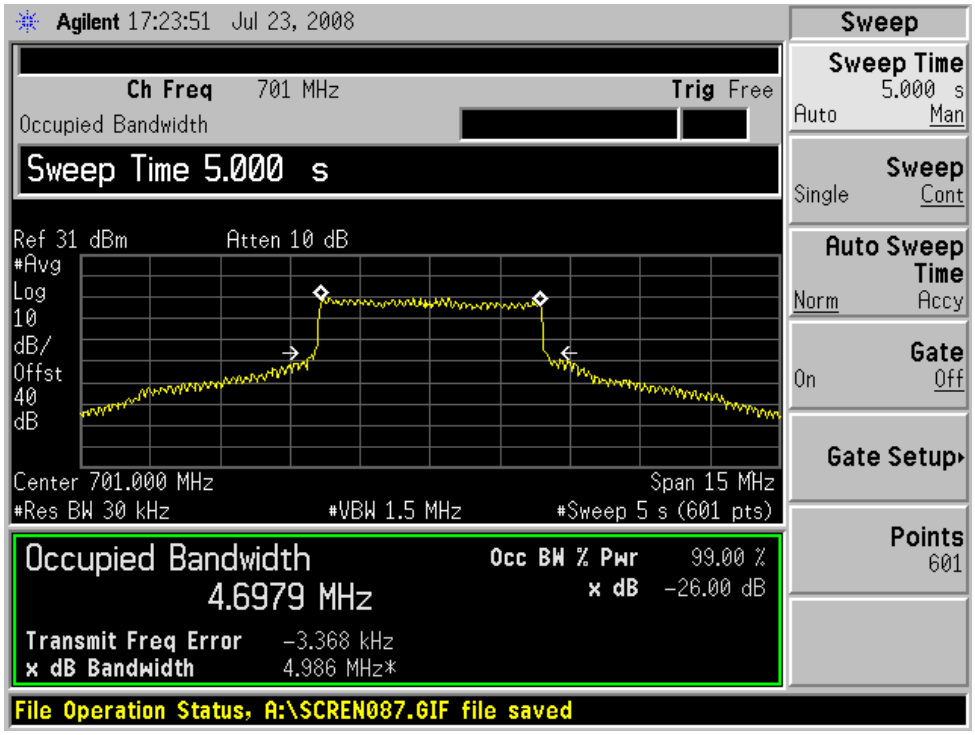


Plot 3 Occupied Bandwidth on CH Top

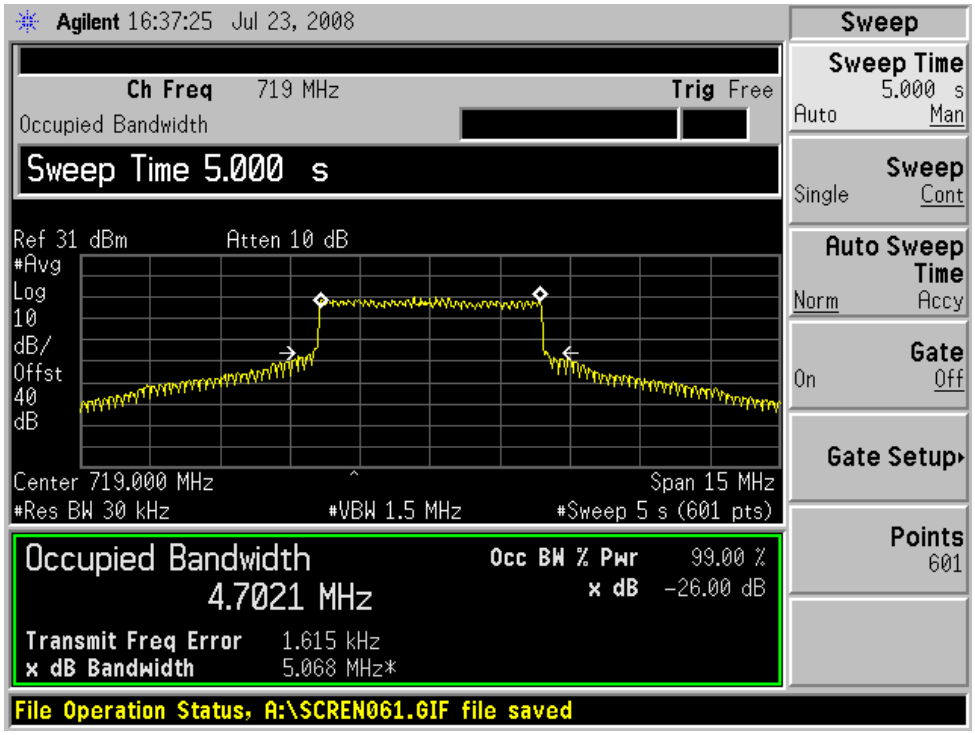
Product Service

4.1 Occupied Bandwidth-continued

Modulation Mode: 8PSK
Channel Bandwidth: 5MHz



Plot 4 Occupied Bandwidth on CH Bottom

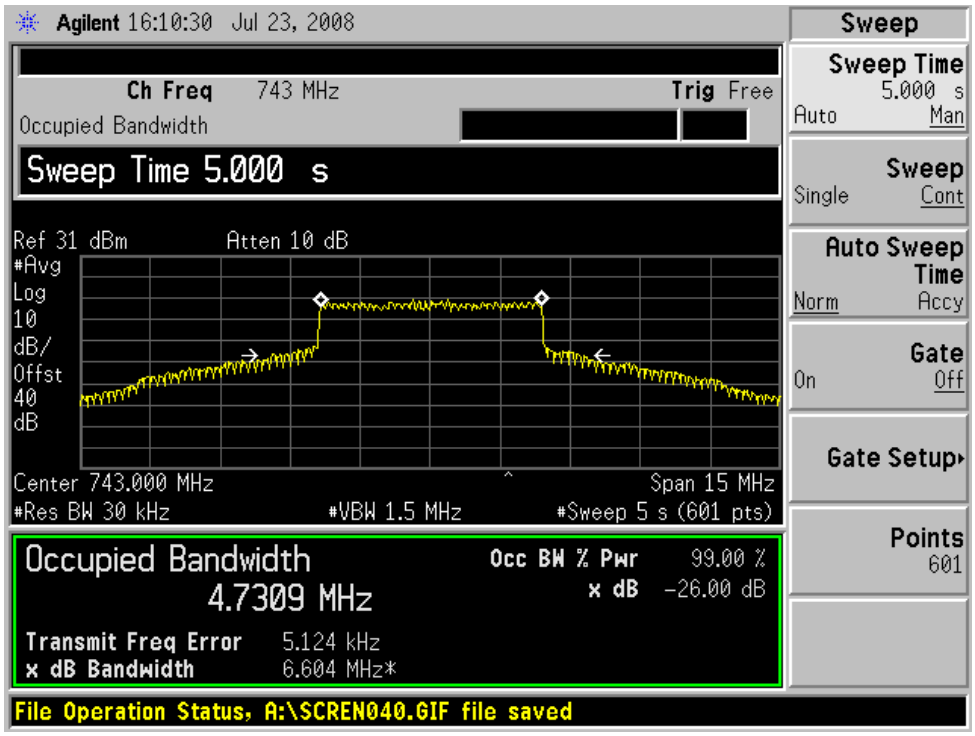


Plot 5 Occupied Bandwidth on CH Middle

Product Service

4.1 Occupied Bandwidth-continued

Modulation Mode: 8PSK
Channel Bandwidth: 5MHz

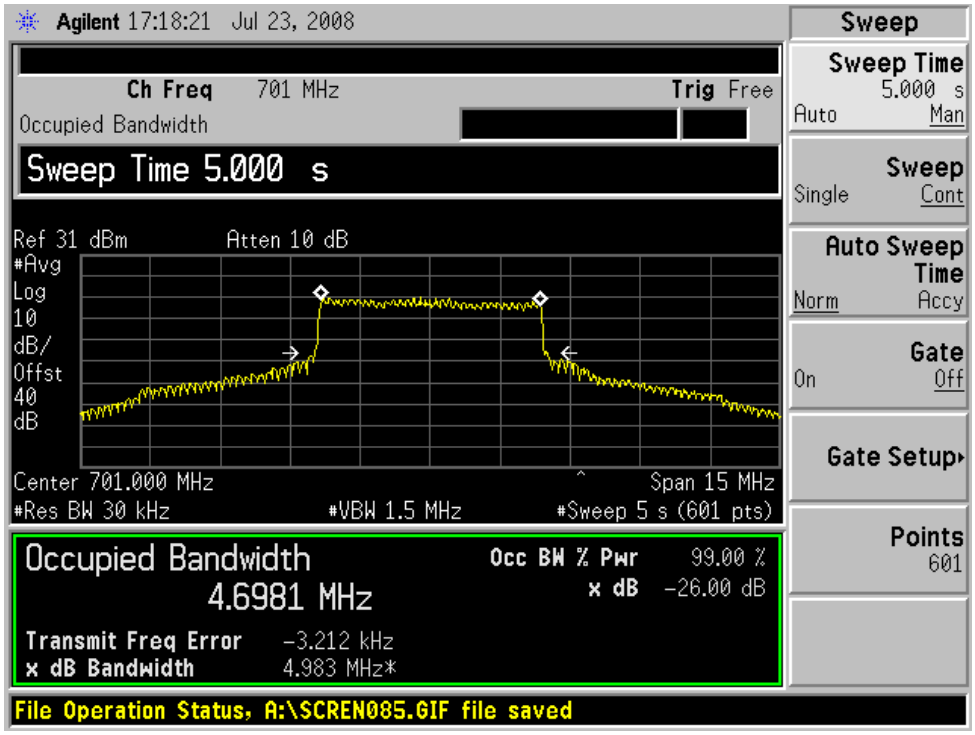


Plot 6 Occupied Bandwidth on CH Top

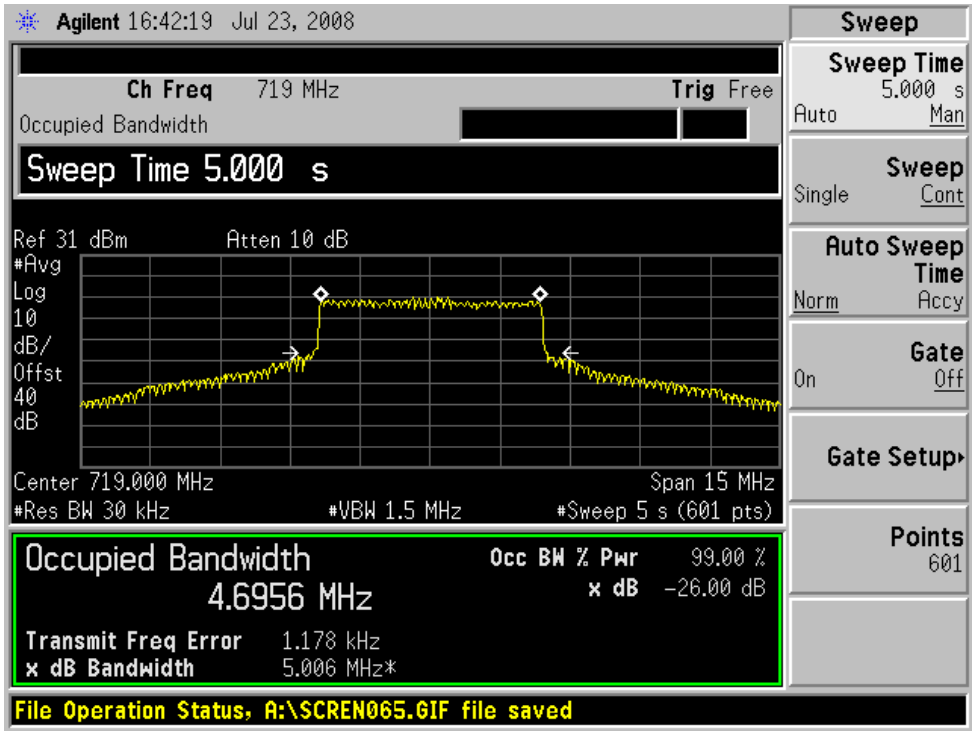
Product Service

4.1 Occupied Bandwidth-continued

Modulation Mode: QAM16
Channel Bandwidth: 5MHz



Plot 7 Occupied Bandwidth on CH Bottom

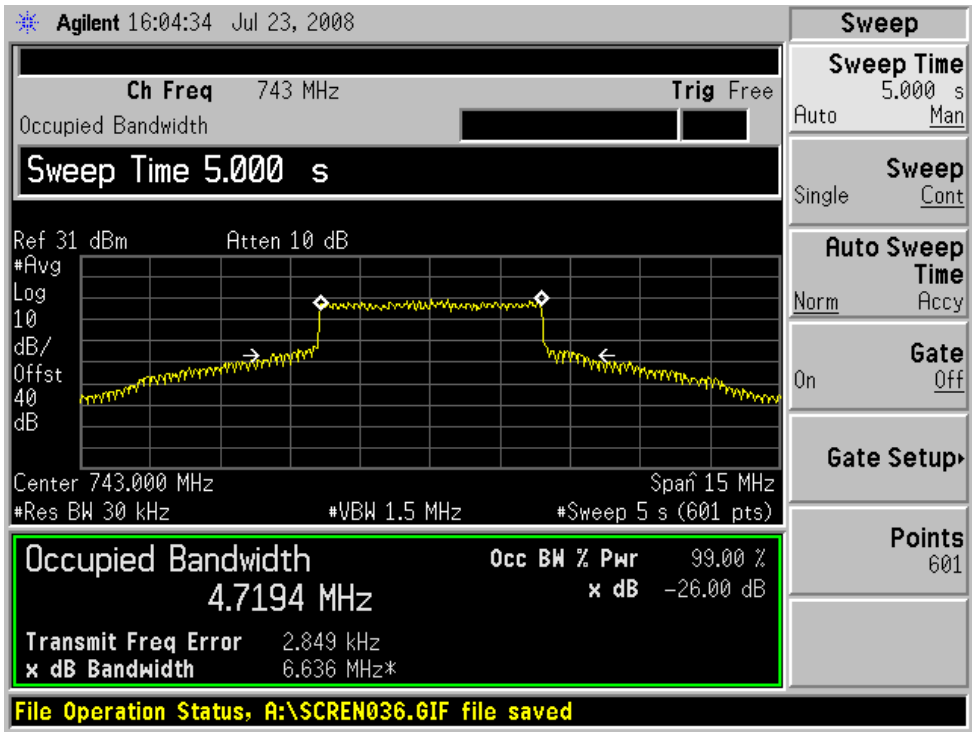


Plot 8 Occupied Bandwidth on CH Middle

Product Service

4.1 Occupied Bandwidth-continued

Modulation Mode: QAM16
Channel Bandwidth: 5MHz

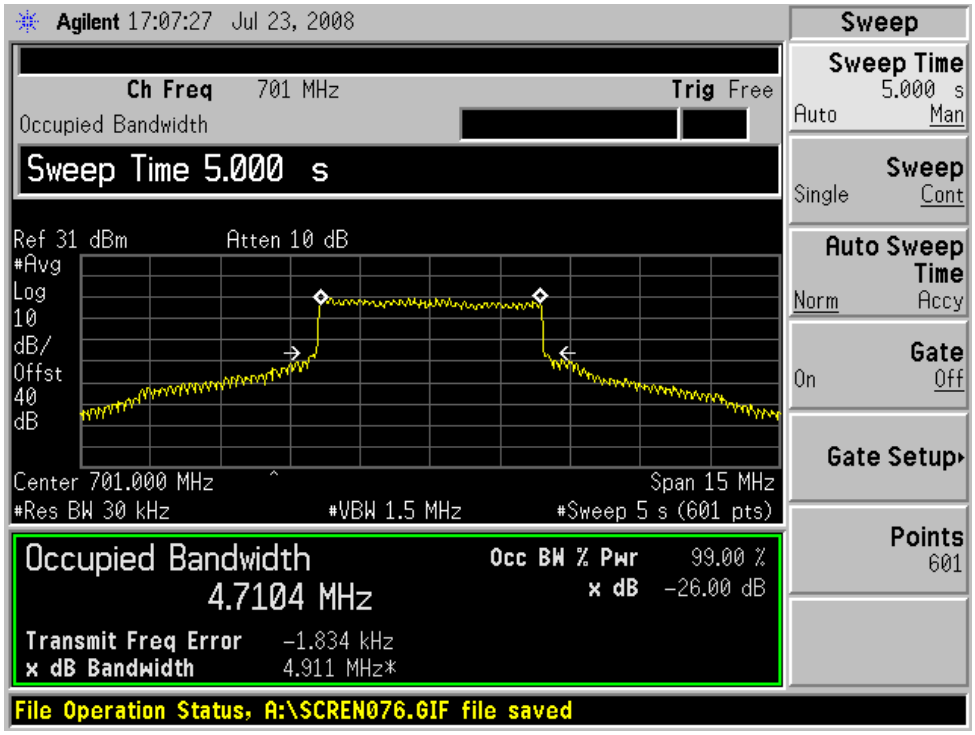


Plot 9 Occupied Bandwidth on CH Top

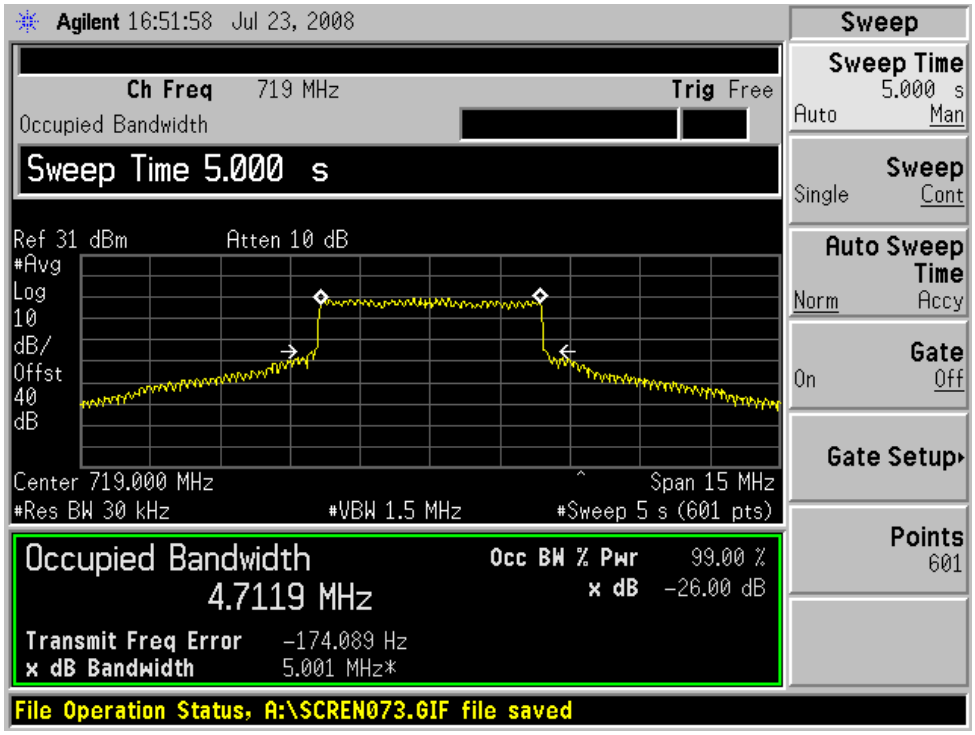
Product Service

4.1 Occupied Bandwidth-continued

Modulation Mode: QAM64
Channel Bandwidth: 5MHz



Plot 10 Occupied Bandwidth on CH Bottom

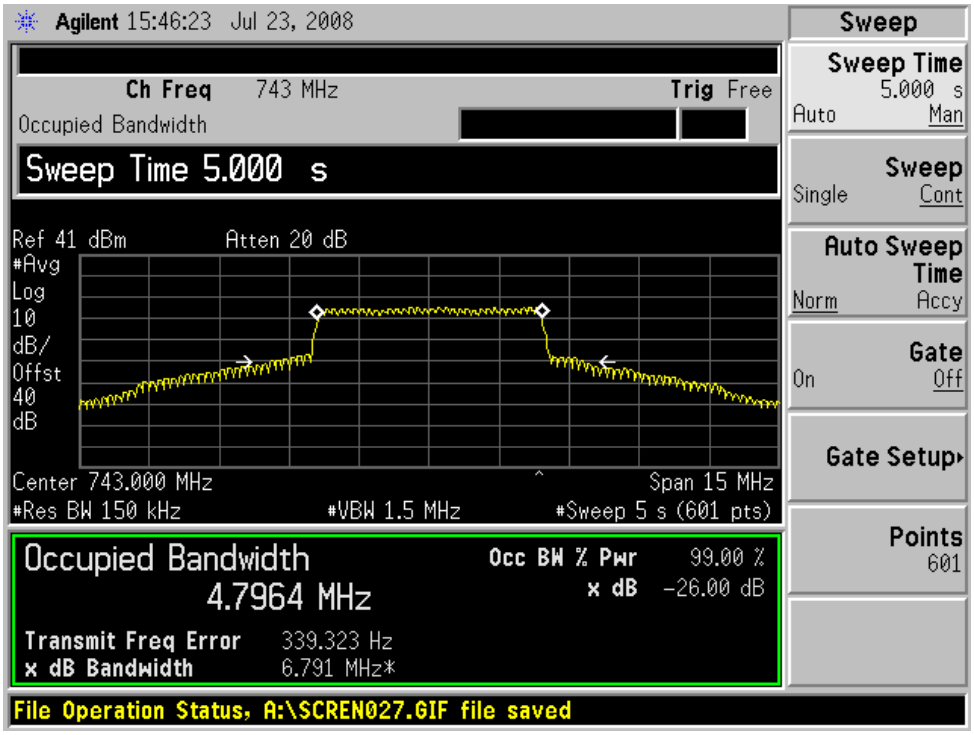


Plot 11 Occupied Bandwidth on CH Middle

Product Service

4.1 Occupied Bandwidth-continued

Modulation Mode: QAM64
Channel Bandwidth: 5MHz

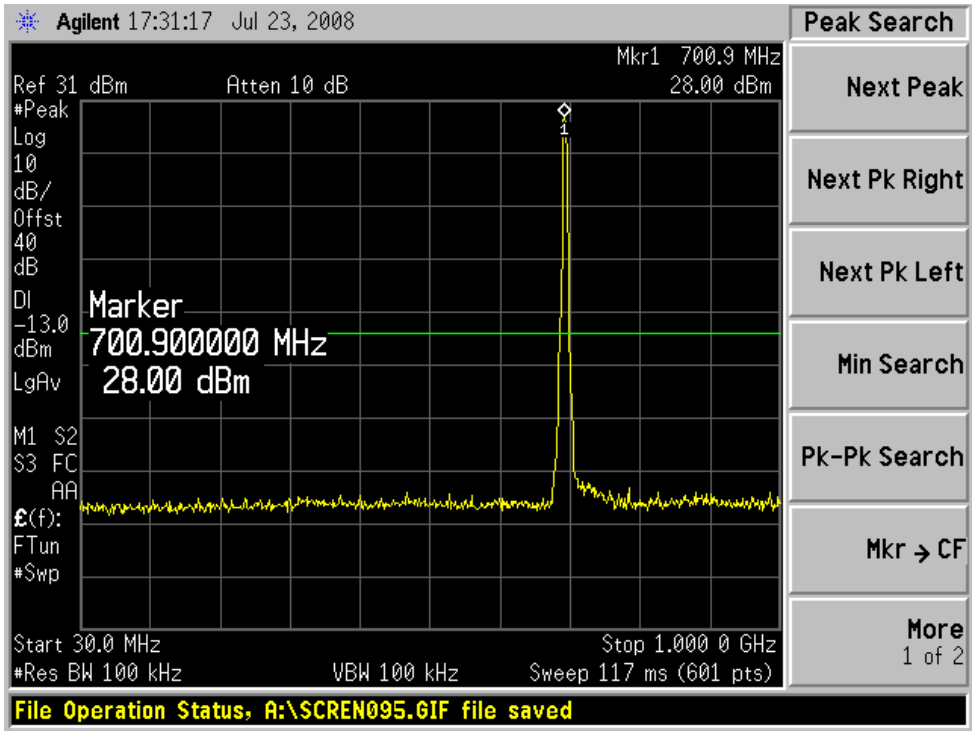


Plot 12 Occupied Bandwidth on CH Top

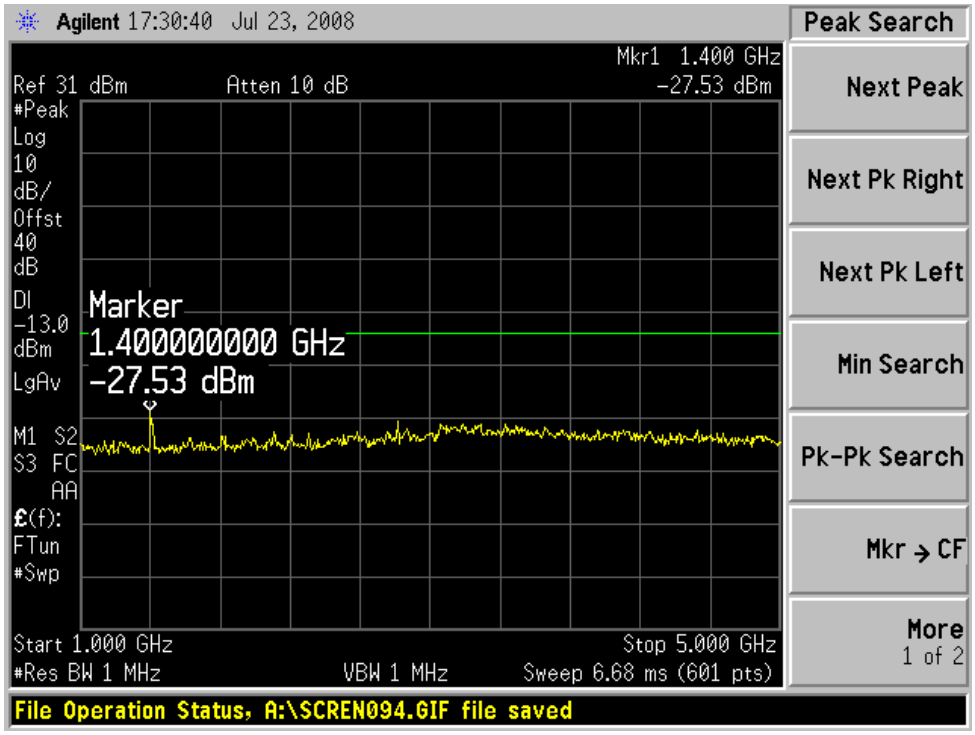
Product Service

4.2 Conducted Spurious Emissions

Modulation Mode: QPSK
Channel Bandwidth: 5MHz



Plot 13 30MHz ~ 1GHz spurious emissions on CH Bottom
Note: The emission beyond the limit is that on operating frequency.

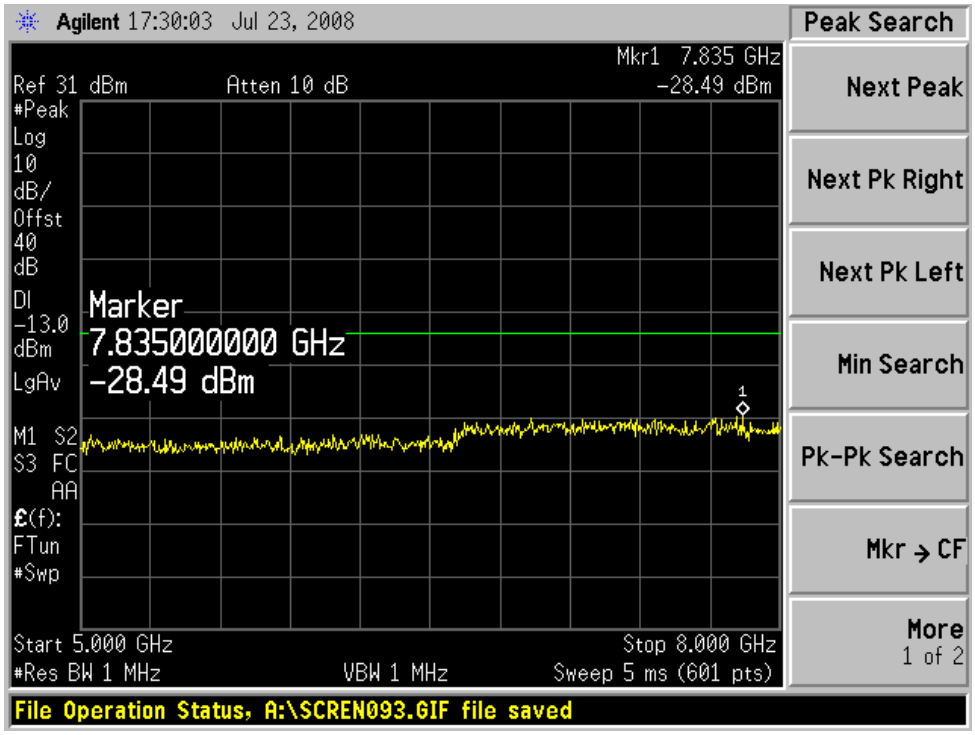


Plot 14 1GHz ~ 5GHz spurious emissions on CH Bottom

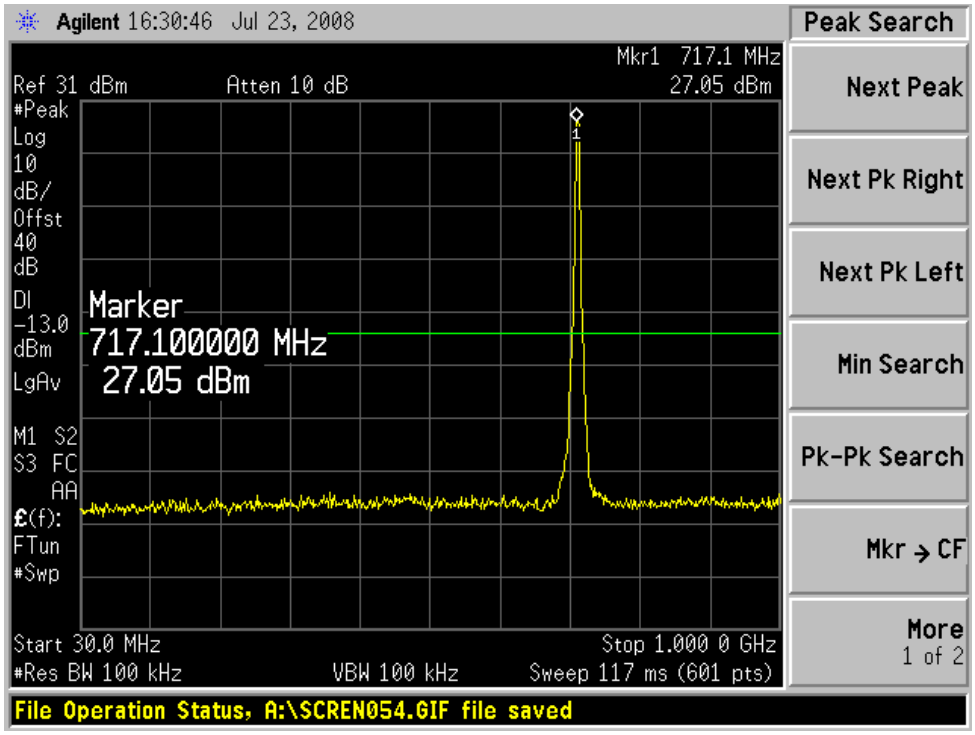
Product Service

4.2 Conducted Spurious Emissions-continued

Modulation Mode: QPSK
Channel Bandwidth: 5MHz



Plot 15 5GHz ~ 8GHz spurious emissions on CH Bottom

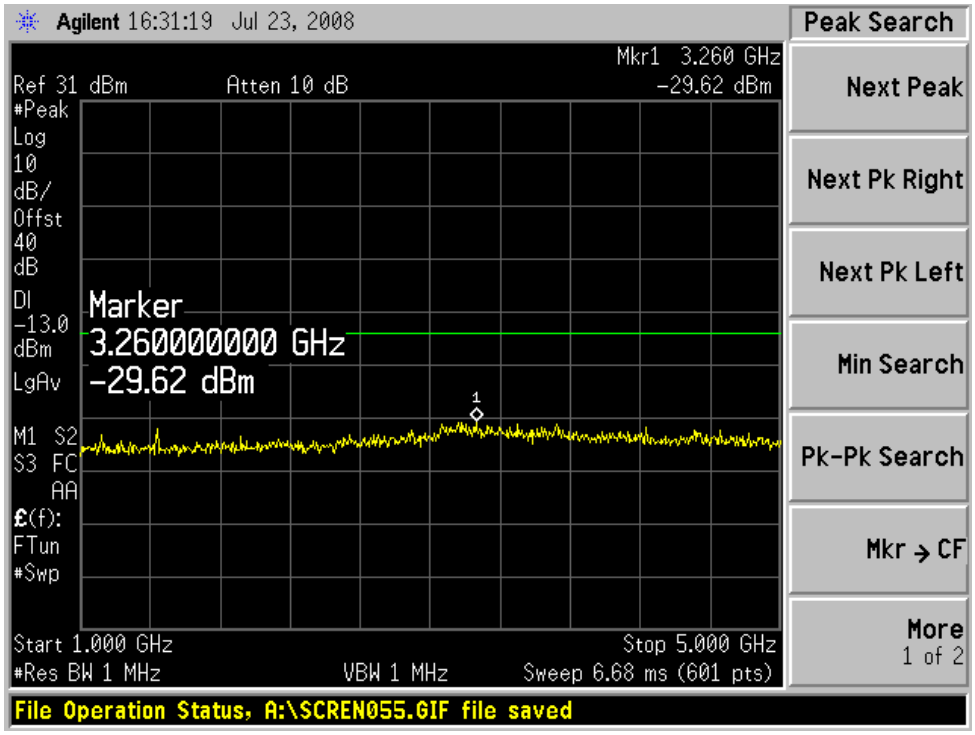


Plot 16 30MHz ~ 1GHz spurious emissions on CH Middle
Note: The emission beyond the limit is that on operating frequency.

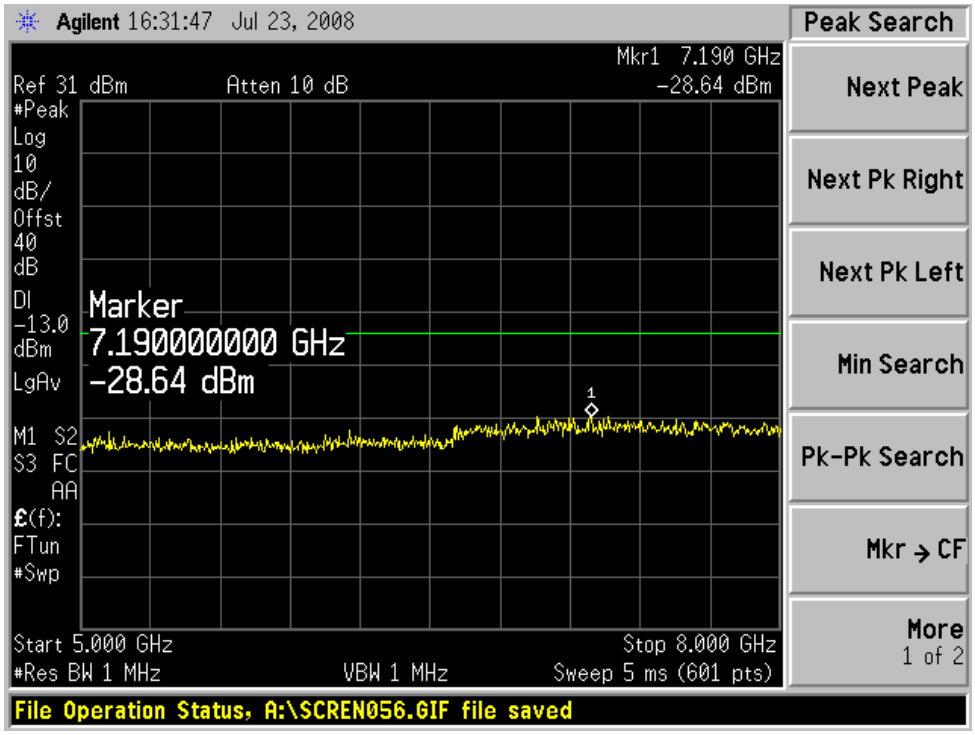
Product Service

4.2 Conducted Spurious Emissions-continued

Modulation Mode: QPSK
Channel Bandwidth: 5MHz



Plot 17 1GHz ~ 5GHz spurious emissions on CH Middle

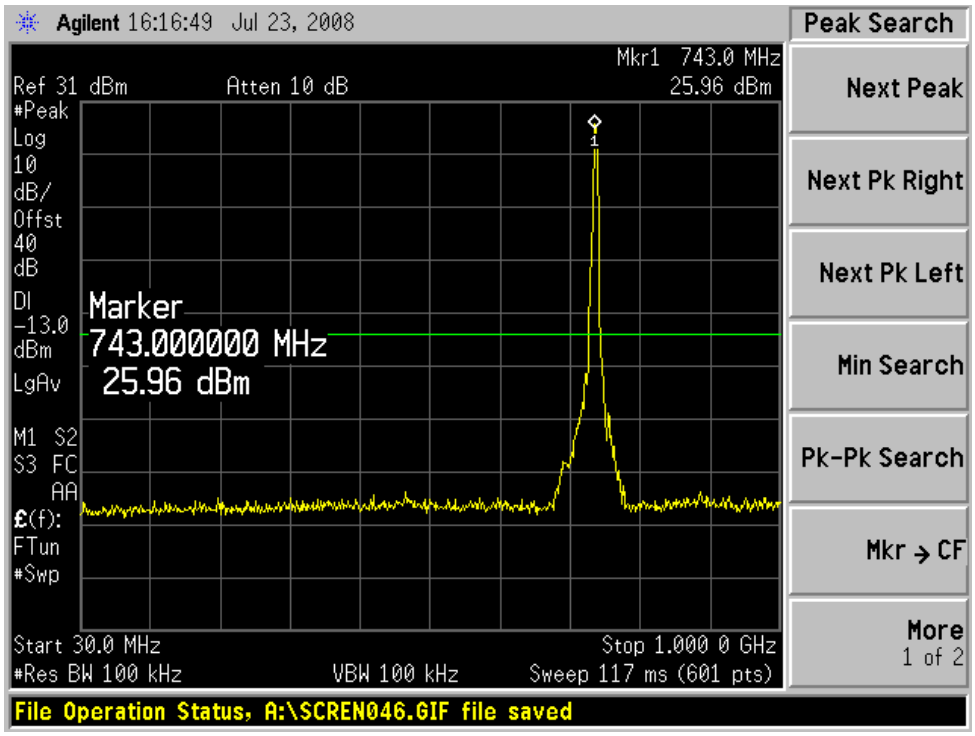


Plot 18 5GHz ~ 8GHz spurious emissions on CH Middle

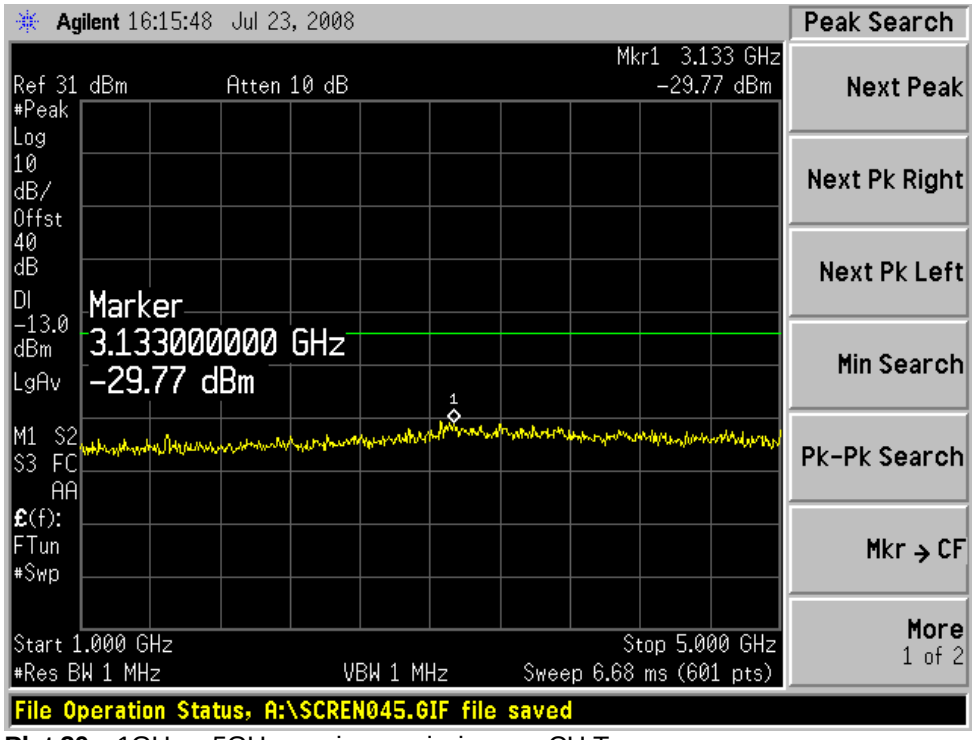
Product Service

4.2 Conducted Spurious Emissions-continued

Modulation Mode: QPSK
Channel Bandwidth: 5MHz



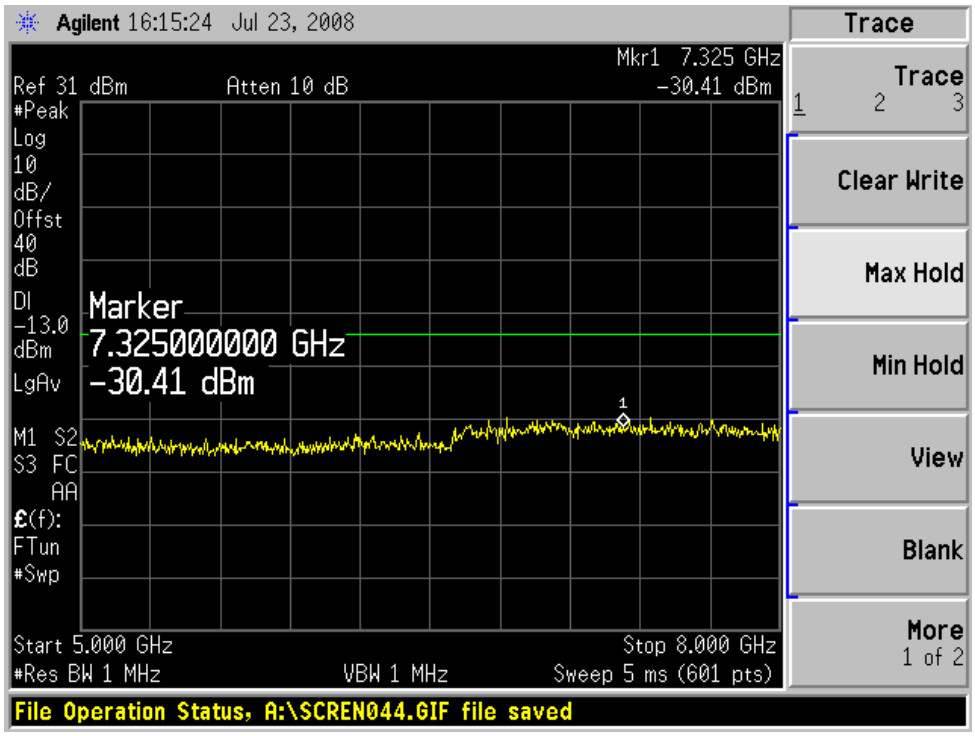
Plot 19 30MHz ~ 1GHz spurious emissions on CH Top
Note: The emission beyond the limit is that on operating frequency.



Plot 20 1GHz ~ 5GHz spurious emissions on CH Top

4.2 Conducted Spurious Emissions-continued

Modulation Mode: QPSK
Channel Bandwidth: 5MHz

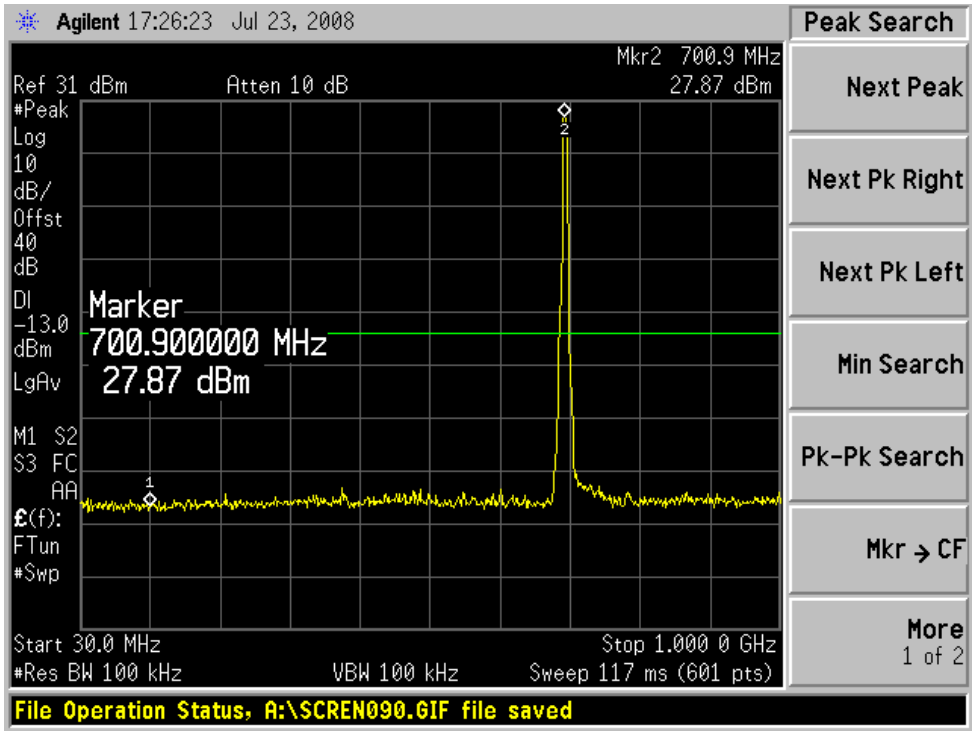


Plot 21 5GHz ~ 8GHz spurious emissions on CH Top

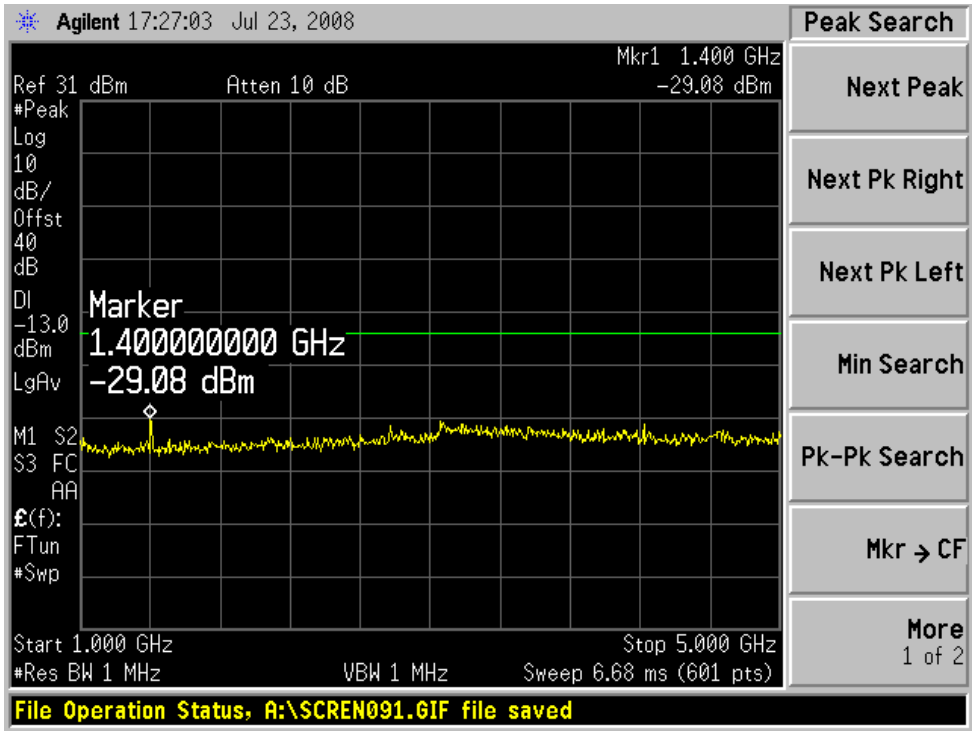
Product Service

4.2 Conducted Spurious Emissions-continued

Modulation Mode: 8PSK
Channel Bandwidth: 5MHz



Plot 22 30MHz ~ 1GHz spurious emissions on CH Bottom
Note: The emission beyond the limit is that on operating frequency.

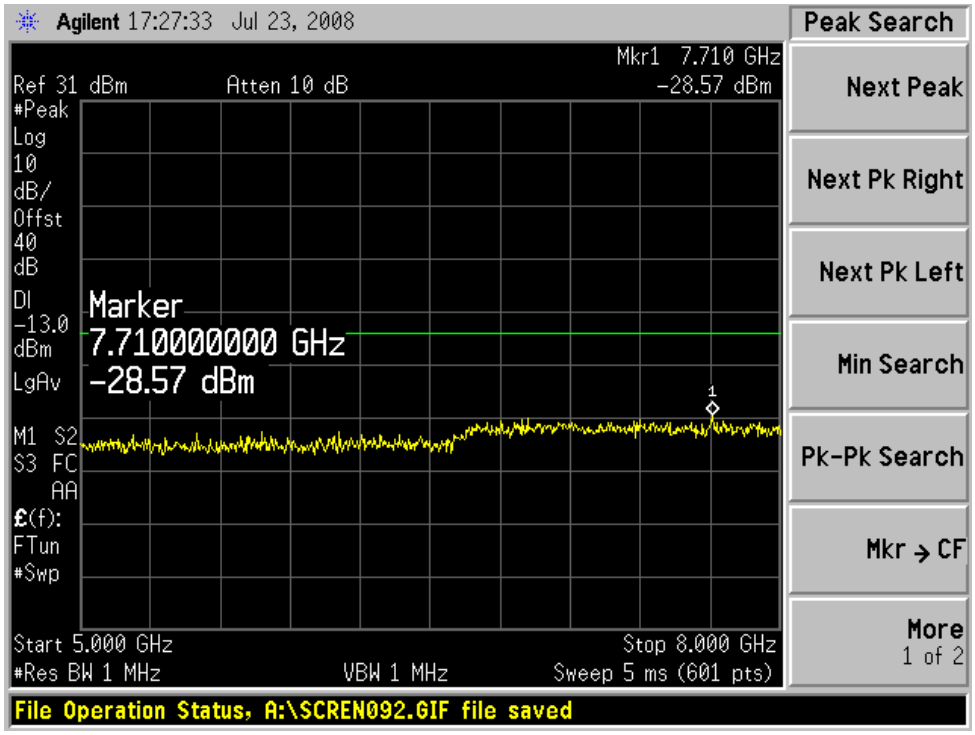


Plot 23 1GHz ~ 5GHz spurious emissions on CH Bottom

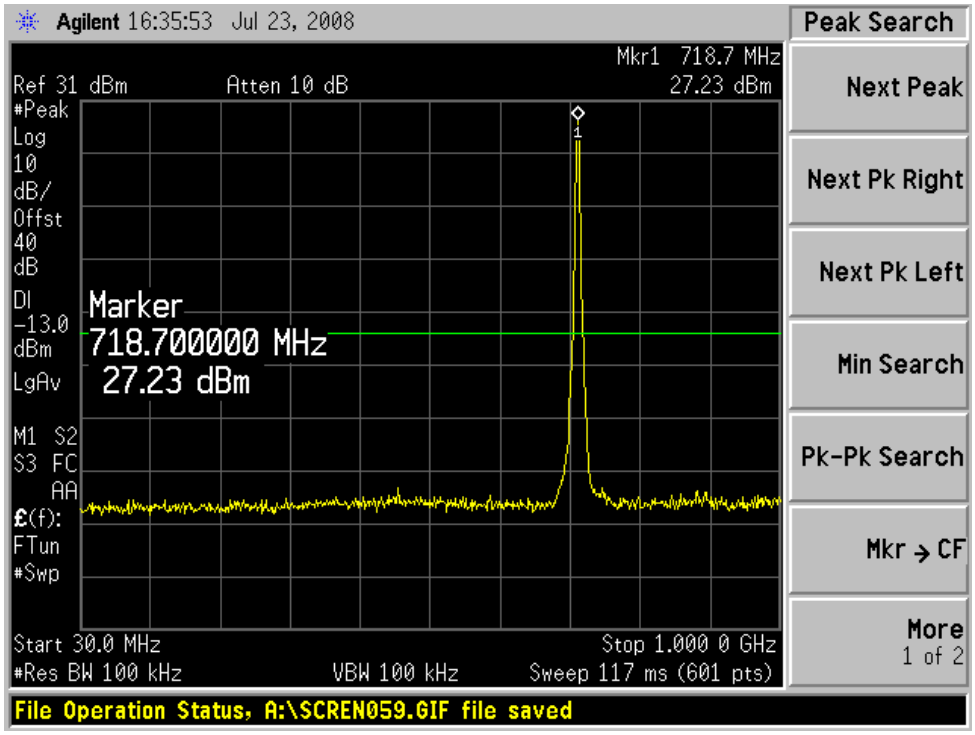
Product Service

4.2 Conducted Spurious Emissions-continued

Modulation Mode: 8PSK
Channel Bandwidth: 5MHz



Plot 24 5GHz ~ 8GHz spurious emissions on CH Bottom

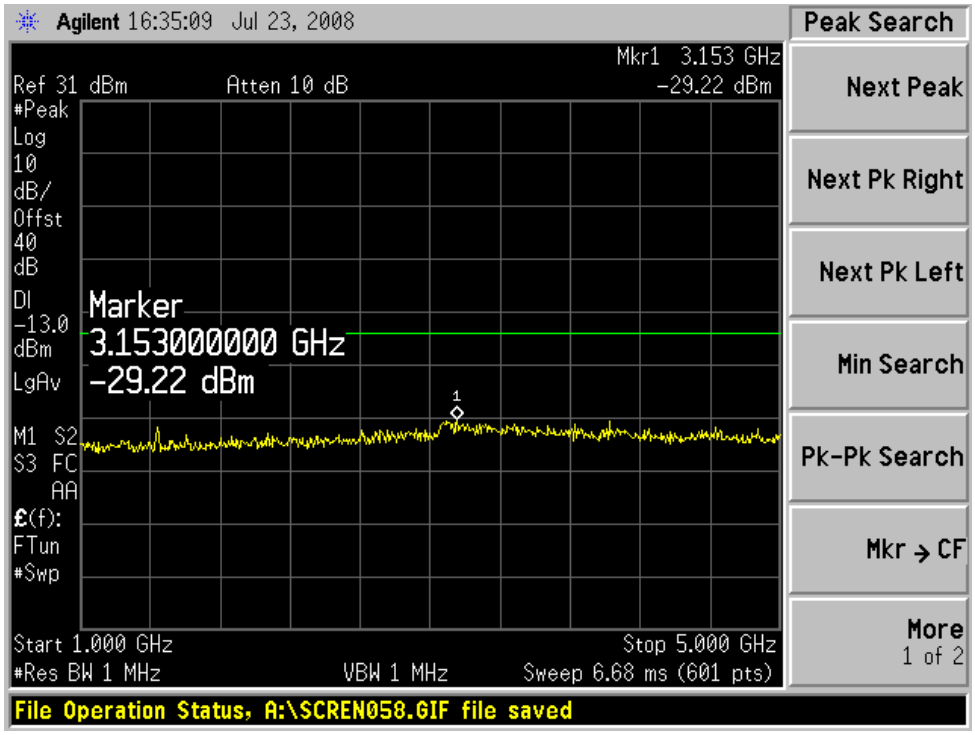


Plot 25 30MHz ~ 1GHz spurious emissions on CH Middle
Note: The emission beyond the limit is that on operating frequency.

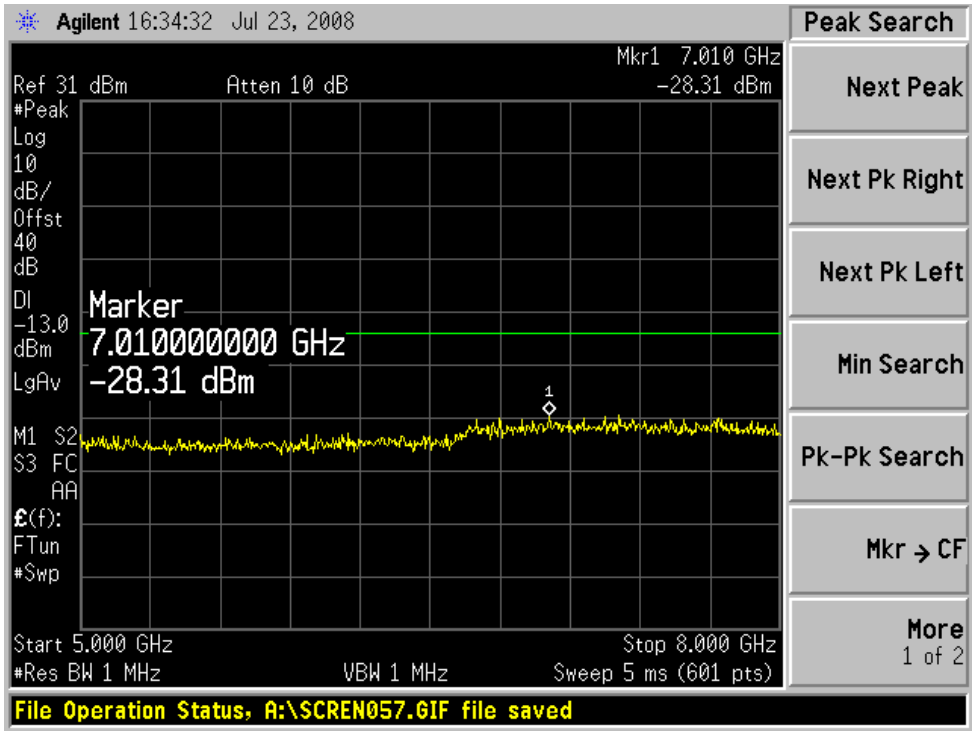
Product Service

4.2 Conducted Spurious Emissions-continued

Modulation Mode: 8PSK
Channel Bandwidth: 5MHz



Plot 26 1GHz ~ 5GHz spurious emissions on CH Middle

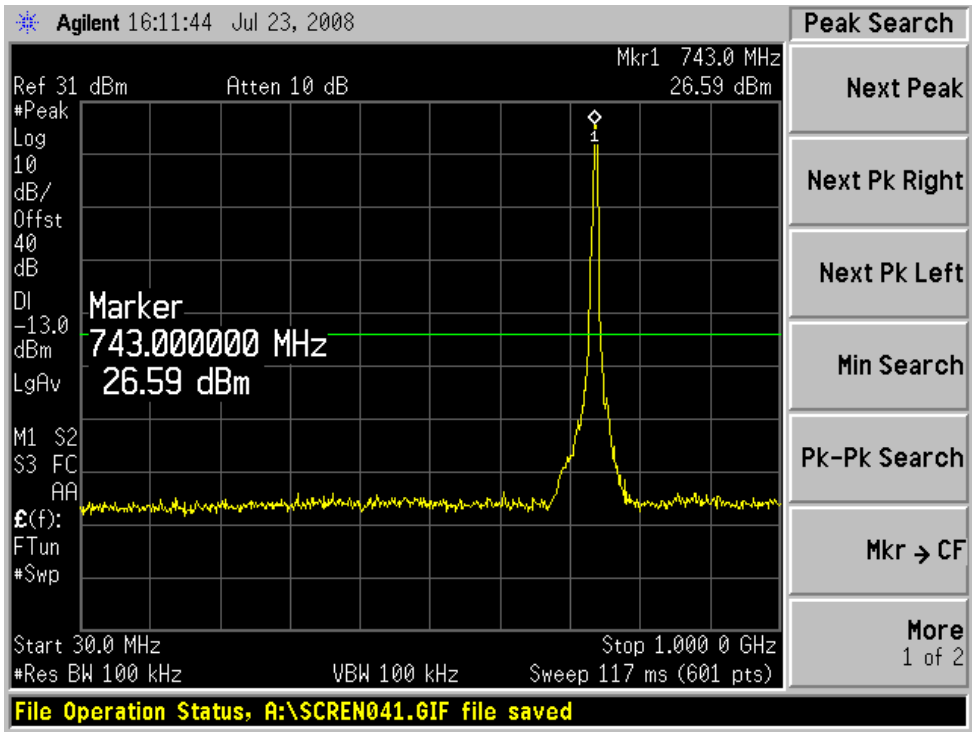


Plot 27 5GHz ~ 8GHz spurious emissions on CH Middle

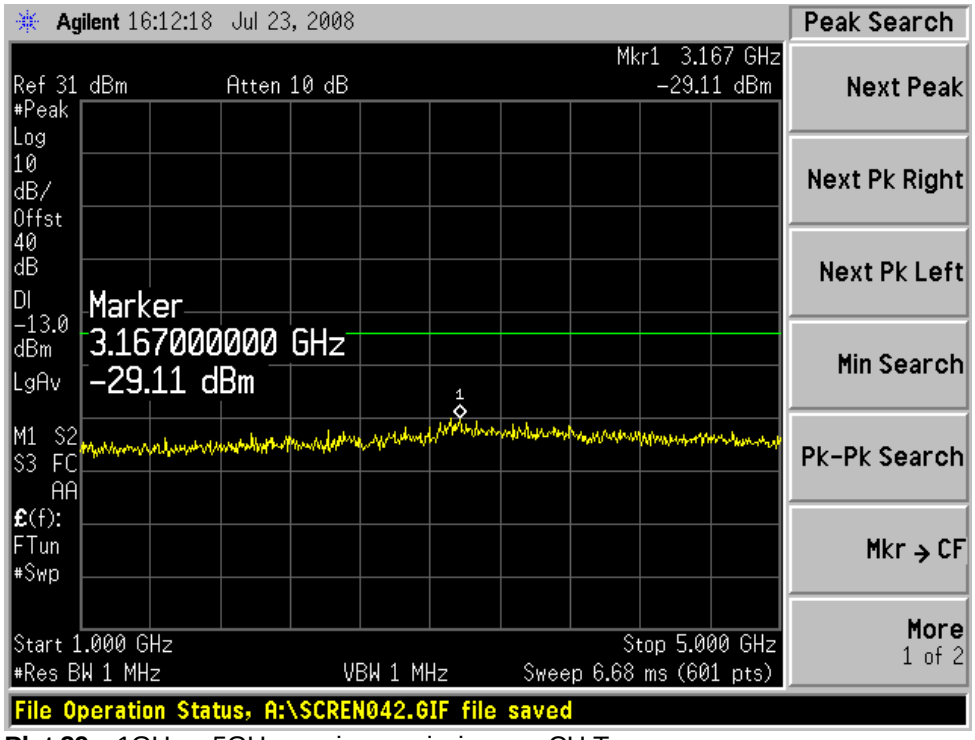
Product Service

4.2 Conducted Spurious Emissions-continued

Modulation Mode: 8PSK
Channel Bandwidth: 5MHz



Plot 28 30MHz ~ 1GHz spurious emissions on CH Top
Note: The emission beyond the limit is that on operating frequency.

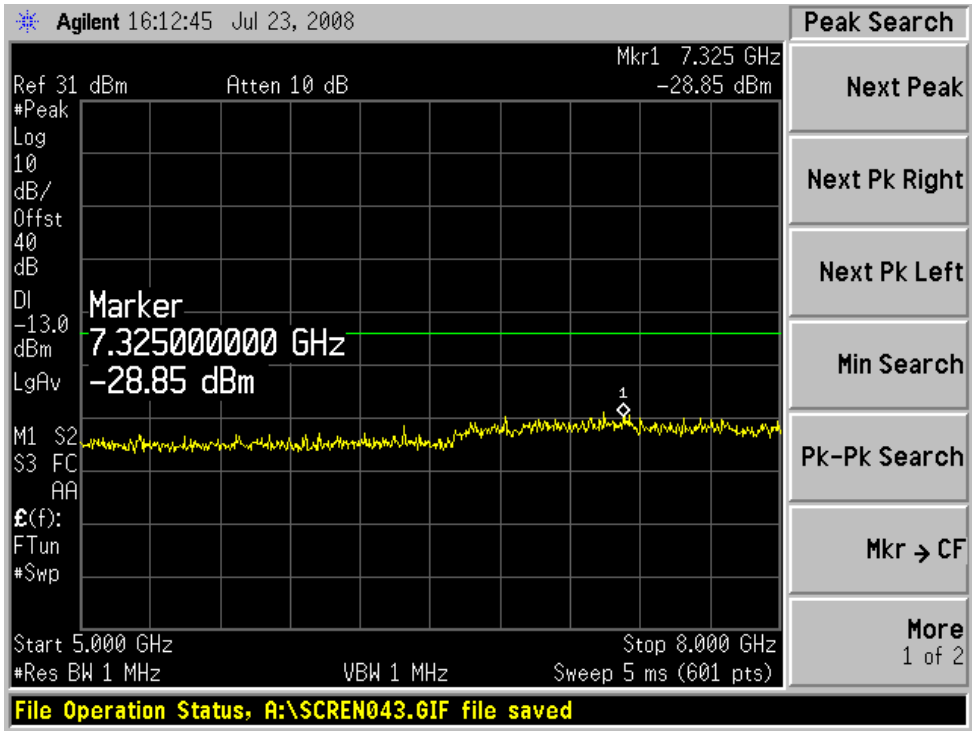


Plot 29 1GHz ~ 5GHz spurious emissions on CH Top

Product Service

4.2 Conducted Spurious Emissions-continued

Modulation Mode: 8PSK
Channel Bandwidth: 5MHz

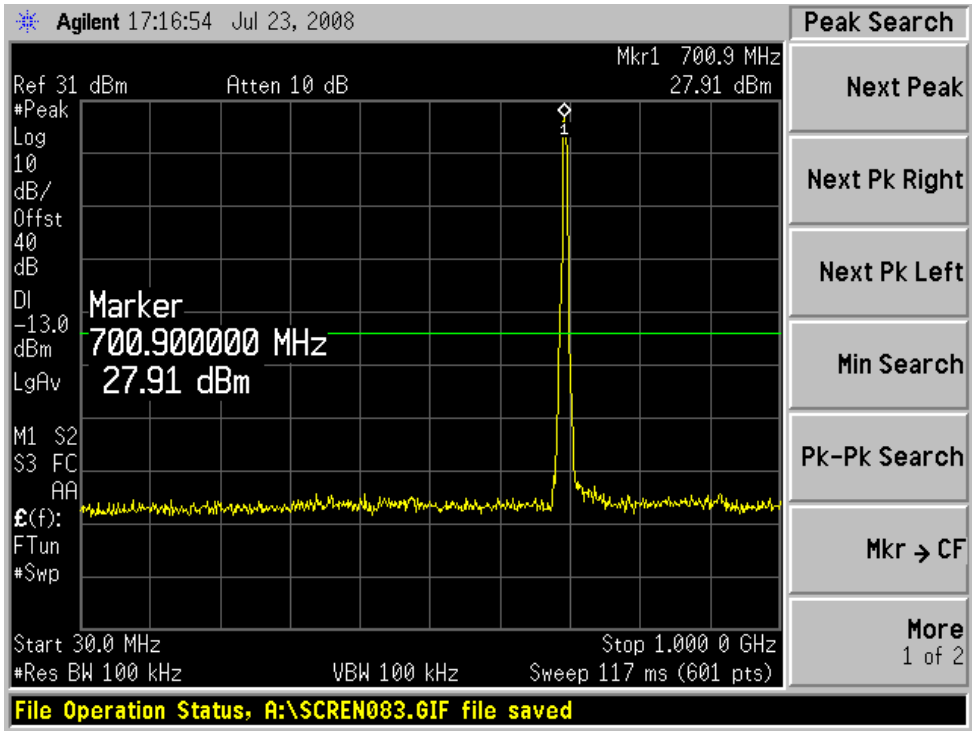


Plot 30 5GHz ~ 8GHz spurious emissions on CH Top

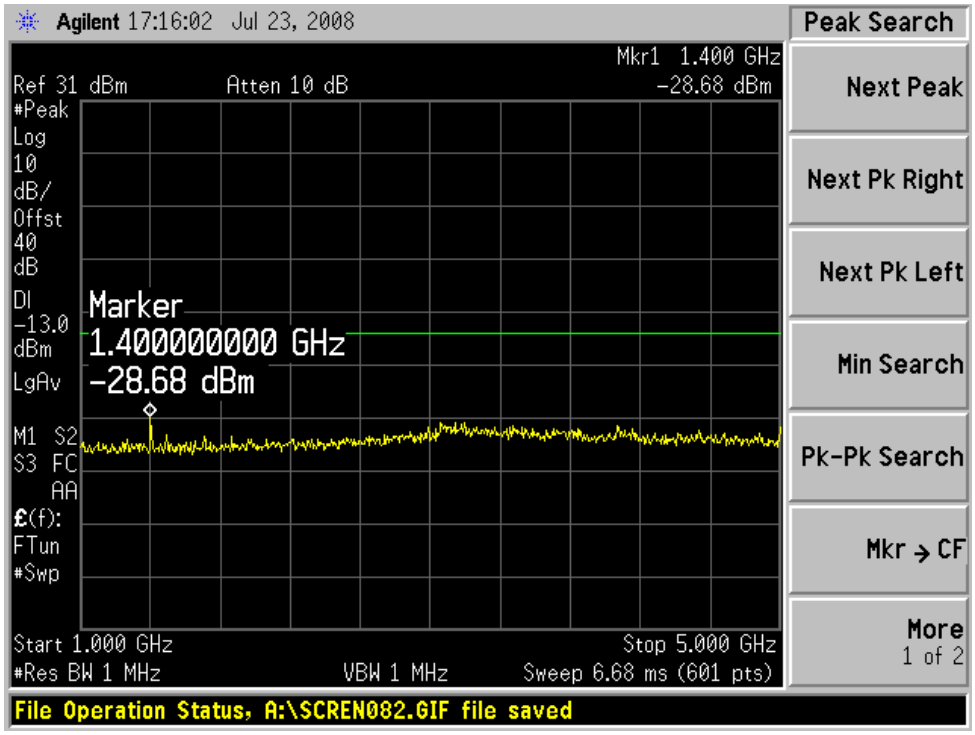
Product Service

4.2 Conducted Spurious Emissions-continued

Modulation Mode: QAM16
Channel Bandwidth: 5MHz



Plot 31 30MHz ~ 1GHz spurious emissions on CH Bottom
Note: The emission beyond the limit is that on operating frequency.

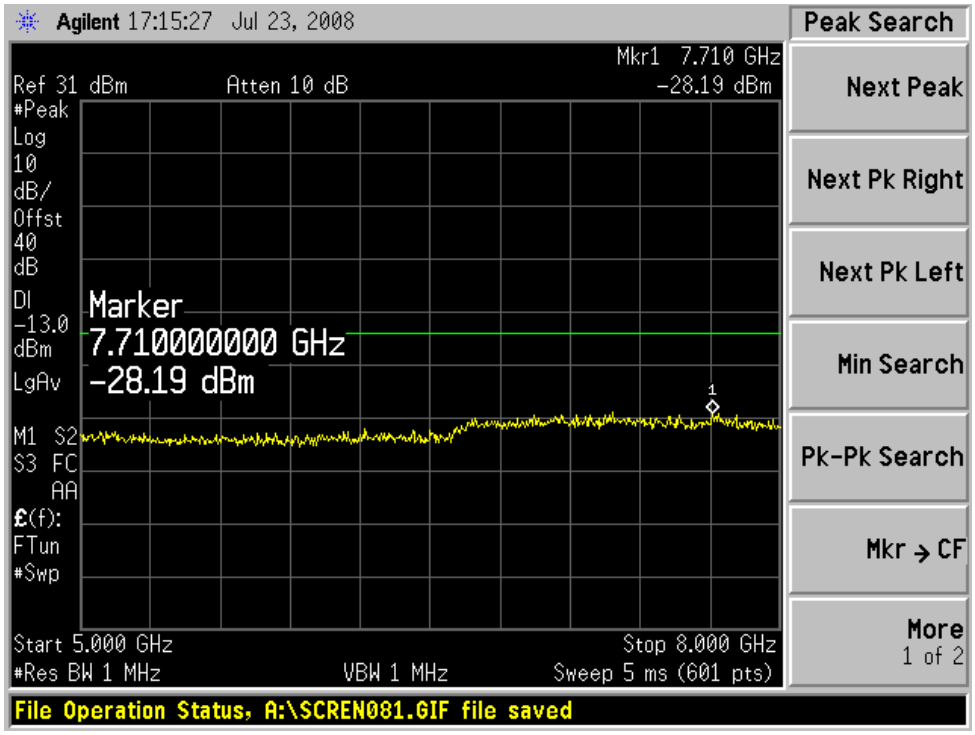


Plot 32 1GHz ~ 5GHz spurious emissions on CH Bottom

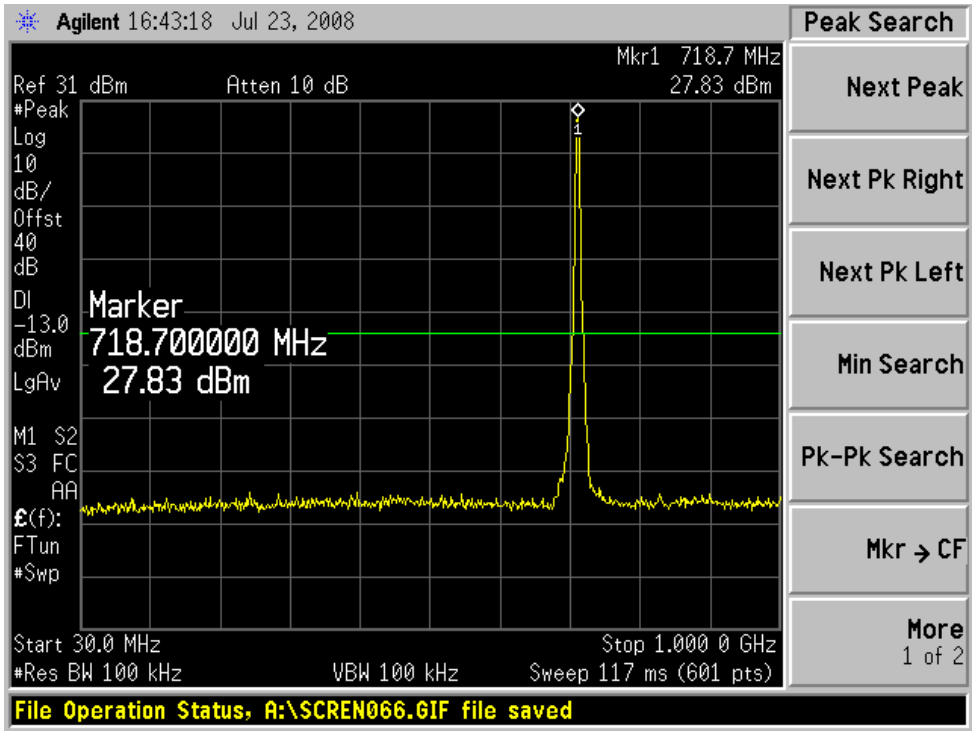
Product Service

4.2 Conducted Spurious Emissions-continued

Modulation Mode: QAM16
Channel Bandwidth: 5MHz



Plot 33 5GHz ~ 8GHz spurious emissions on CH Bottom

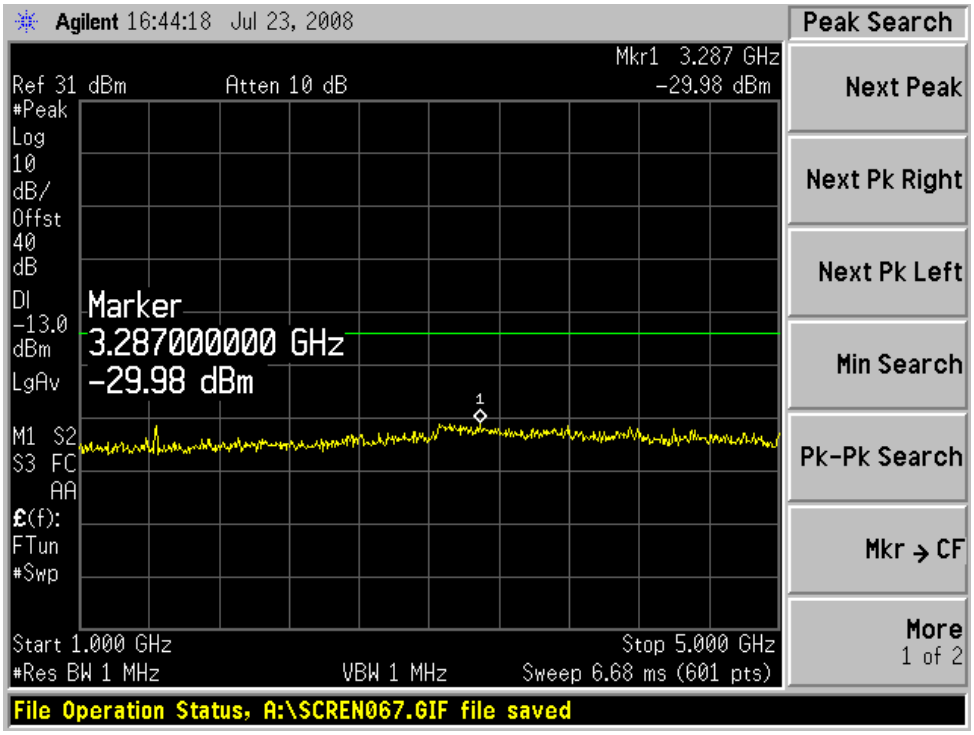


Plot 34 30MHz ~ 1GHz spurious emissions on CH Middle
Note: The emission beyond the limit is that on operating frequency.

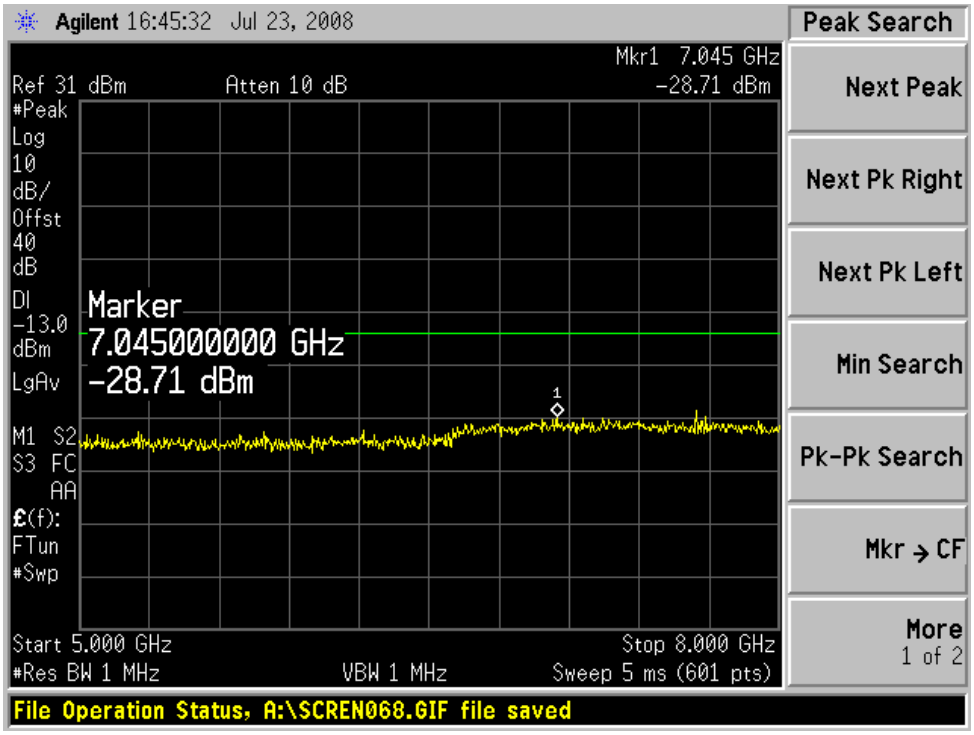
Product Service

4.2 Conducted Spurious Emissions-continued

Modulation Mode: QAM16
Channel Bandwidth: 5MHz



Plot 35 1GHz ~ 5GHz spurious emissions on CH Middle

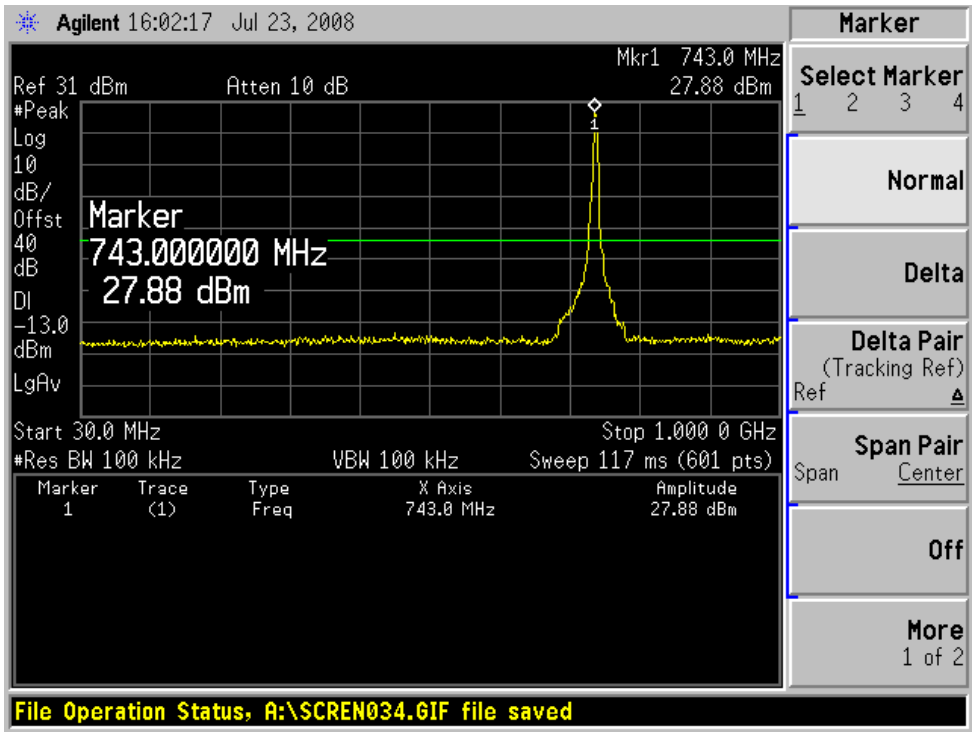


Plot 36 5GHz ~ 8GHz spurious emissions on CH Middle

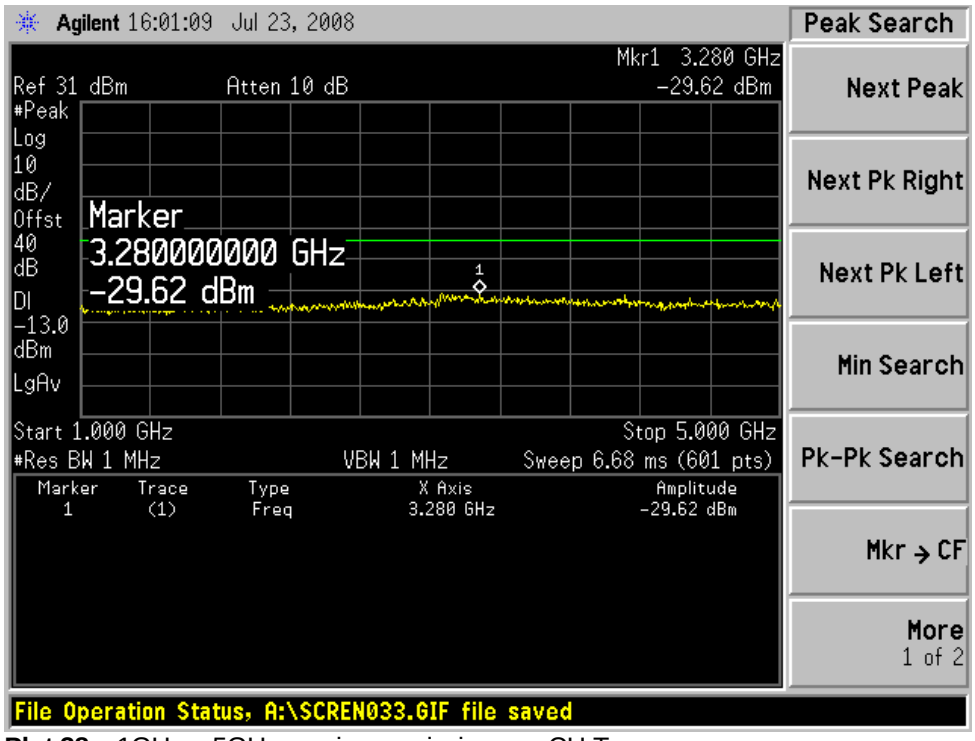
Product Service

4.2 Conducted Spurious Emissions-continued

Modulation Mode: QAM16
Channel Bandwidth: 5MHz



Plot 37 30MHz ~ 1GHz spurious emissions on CH Top
Note: The emission beyond the limit is that on operating frequency.

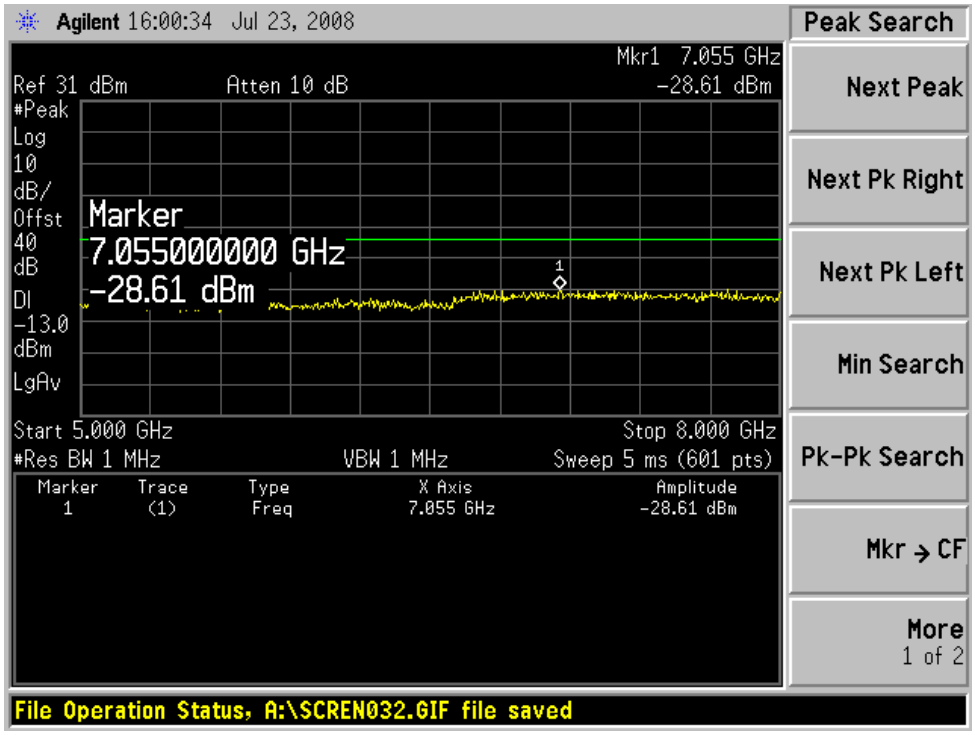


Plot 38 1GHz ~ 5GHz spurious emissions on CH Top

Product Service

4.2 Conducted Spurious Emissions-continued

Modulation Mode: QAM16
Channel Bandwidth: 5MHz

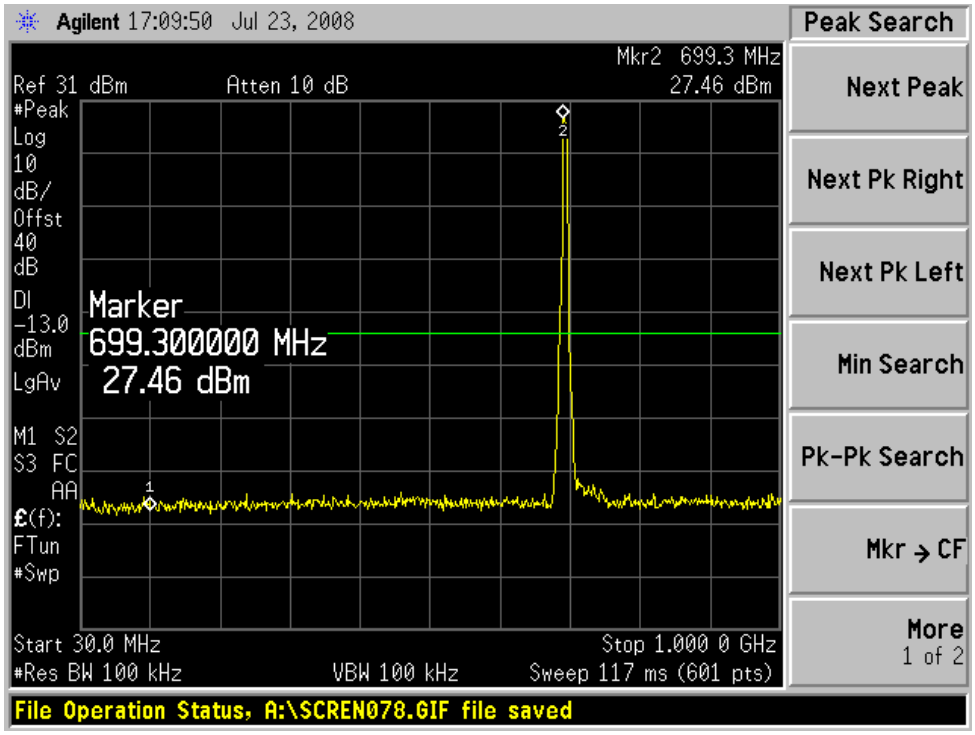


Plot 39 5GHz ~ 8GHz spurious emissions on CH Top

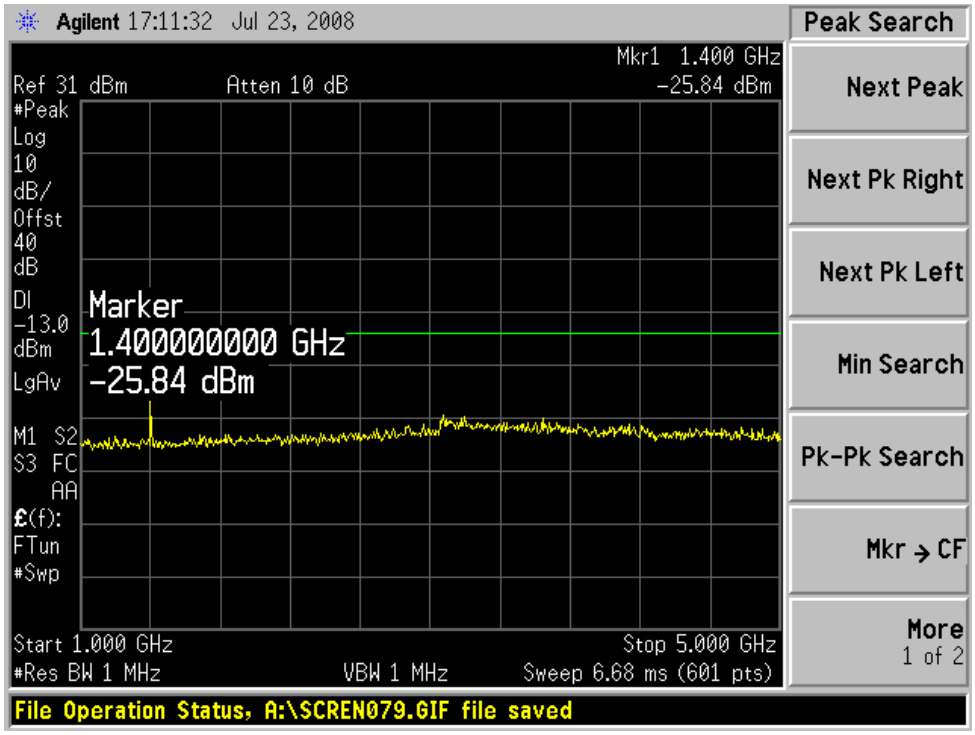
Product Service

4.2 Conducted Spurious Emissions-continued

Modulation Mode: QAM64
Channel Bandwidth: 5MHz



Plot 40 30MHz ~ 1GHz spurious emissions on CH Bottom
Note: The emission beyond the limit is that on operating frequency.

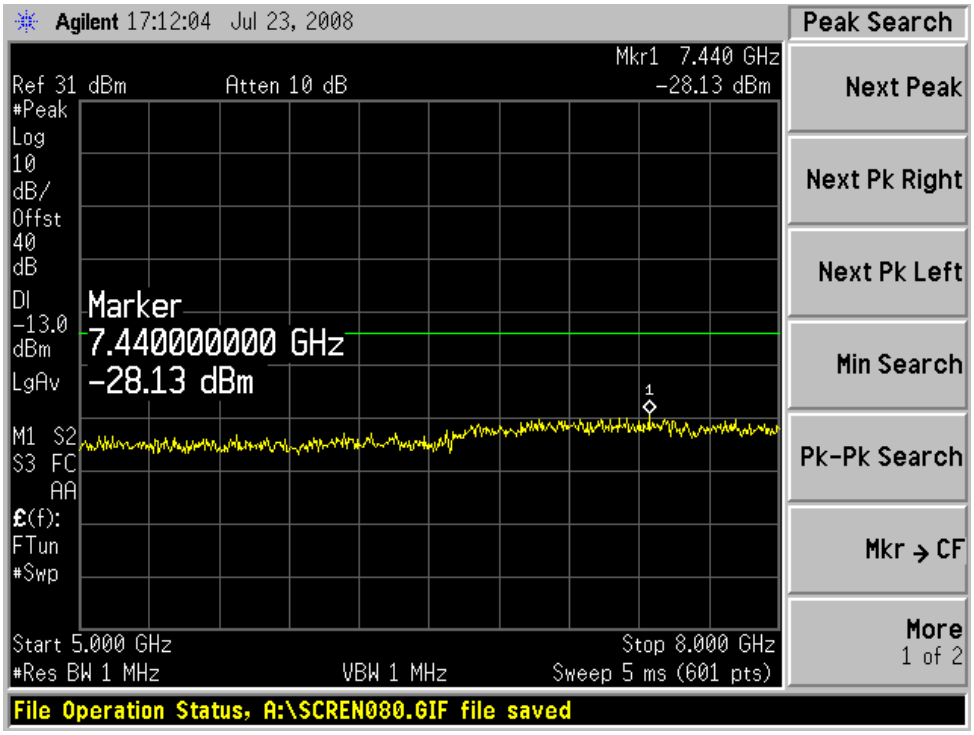


Plot 41 1GHz ~ 5GHz spurious emissions on CH Bottom

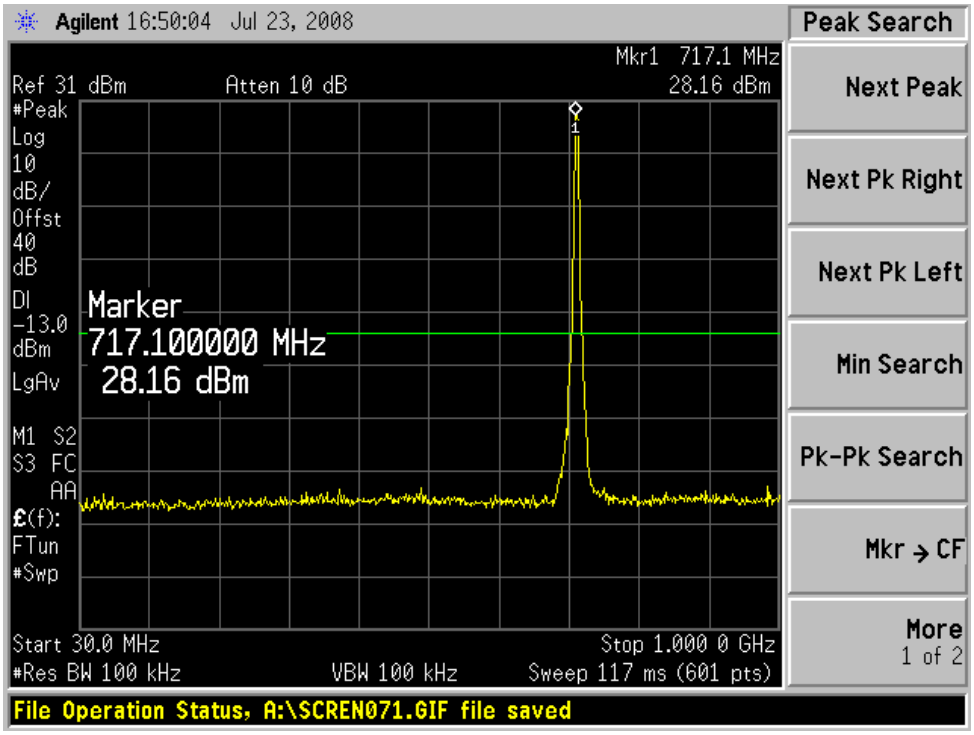
Product Service

4.2 Conducted Spurious Emissions-continued

Modulation Mode: QAM64
Channel Bandwidth: 5MHz



Plot 42 5GHz ~ 8GHz spurious emissions on CH Bottom

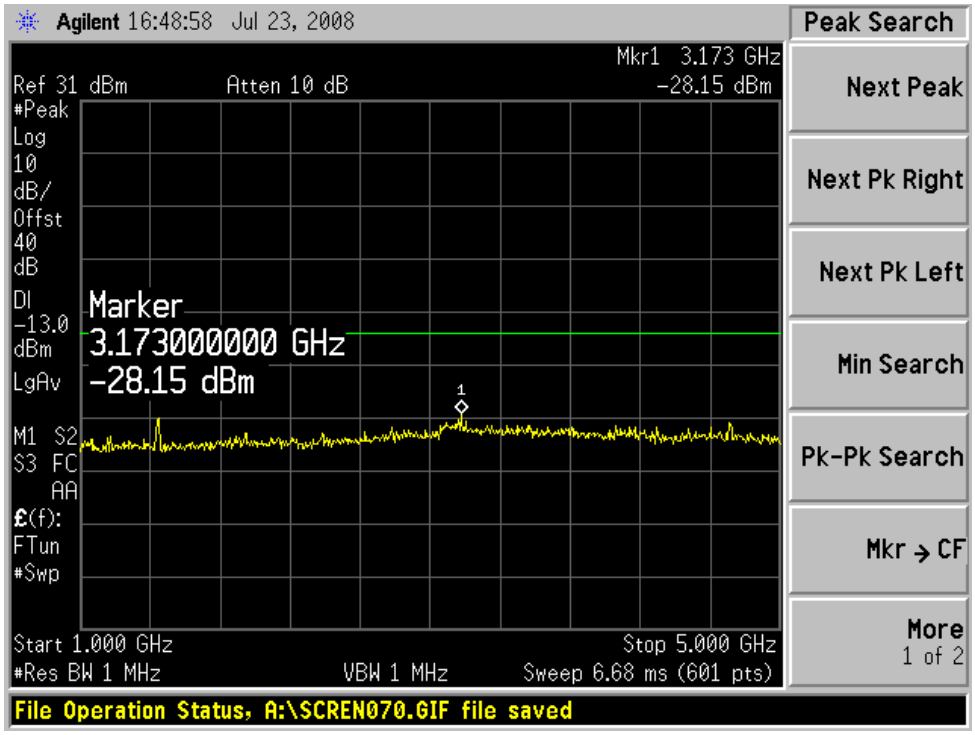


Plot 43 30MHz ~ 1GHz spurious emissions on CH Middle
Note: The emission beyond the limit is that on operating frequency.

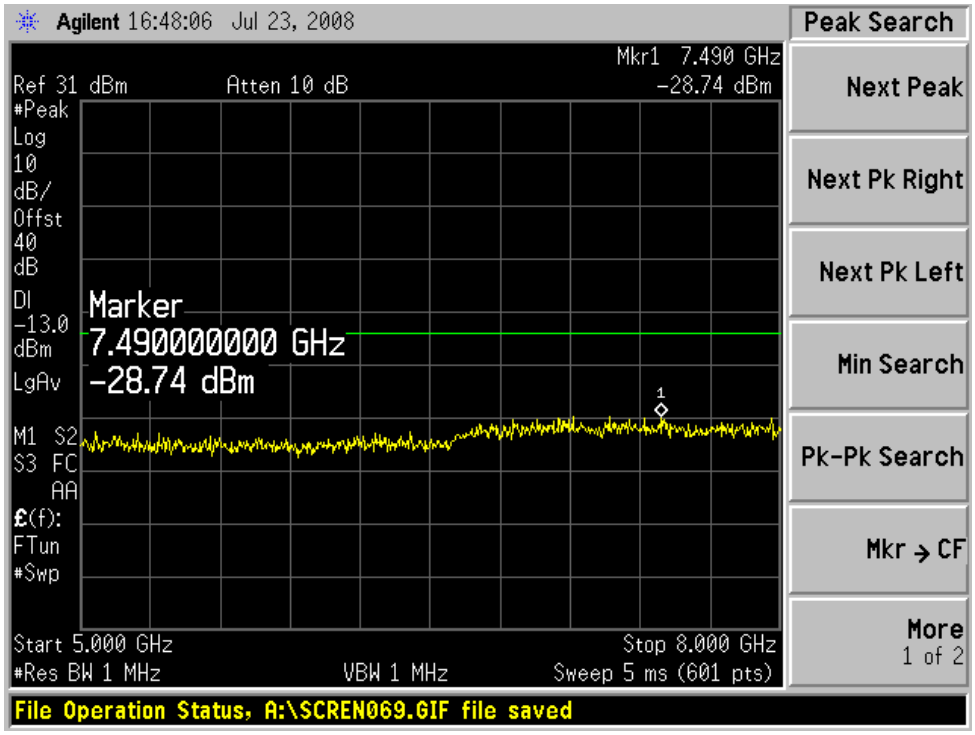
Product Service

4.2 Conducted Spurious Emissions-continued

Modulation Mode: QAM64
Channel Bandwidth: 5MHz



Plot 44 1GHz ~ 5GHz spurious emissions on CH Middle

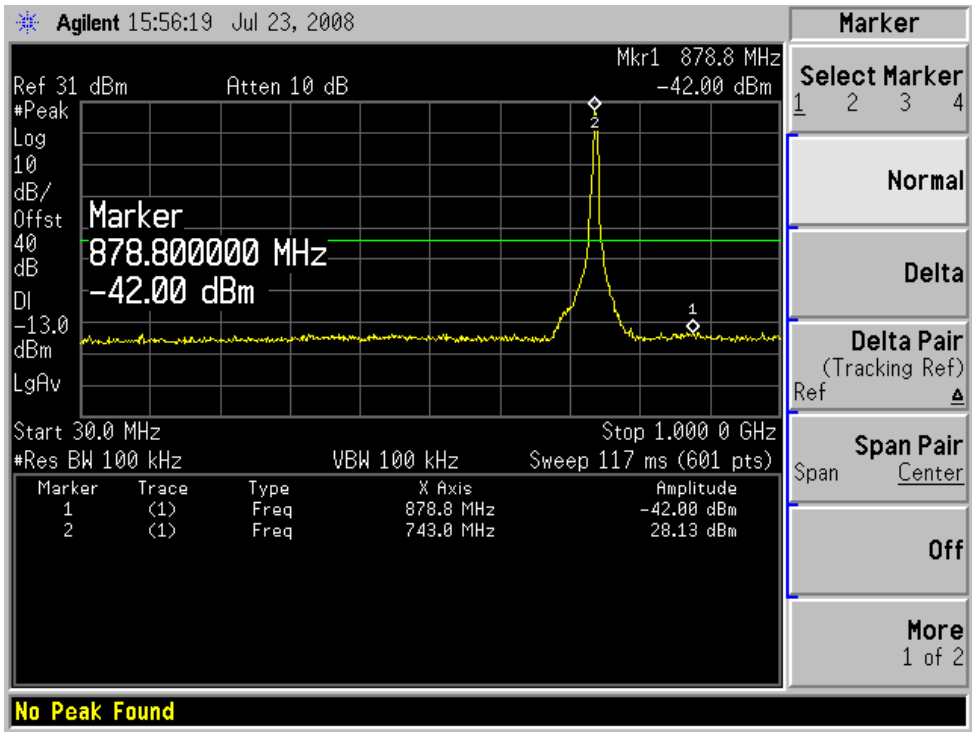


Plot 45 5GHz ~ 8GHz spurious emissions on CH Middle

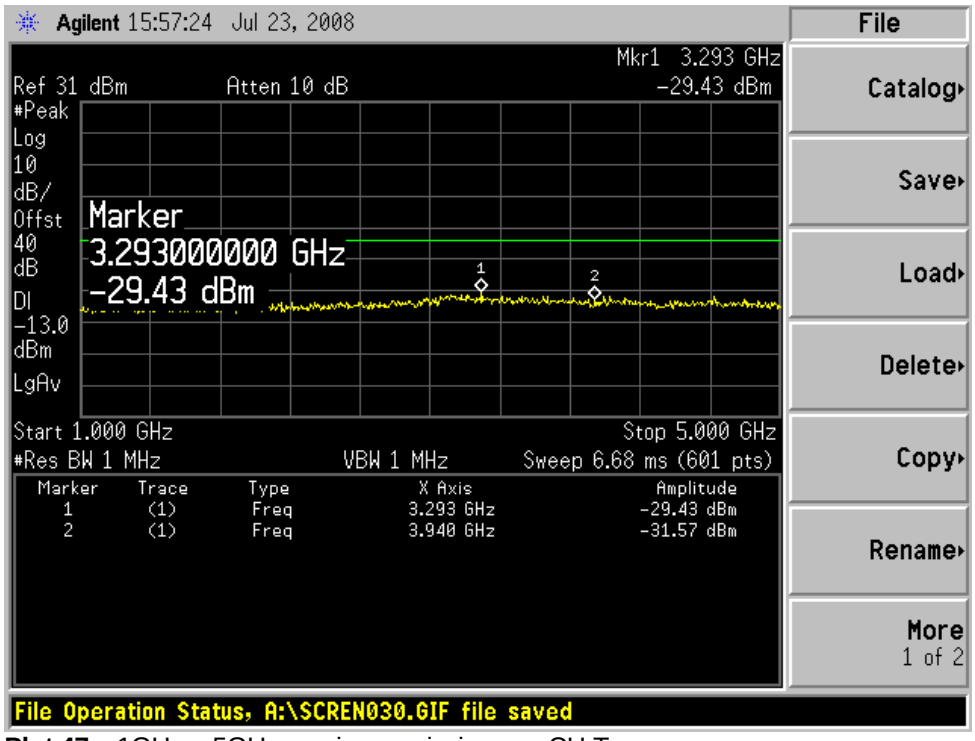
Product Service

4.2 Conducted Spurious Emissions-continued

Modulation Mode: QAM64
Channel Bandwidth: 5MHz



Plot 46 30MHz ~ 1GHz spurious emissions on CH Top
Note: The emission beyond the limit is that on operating frequency.

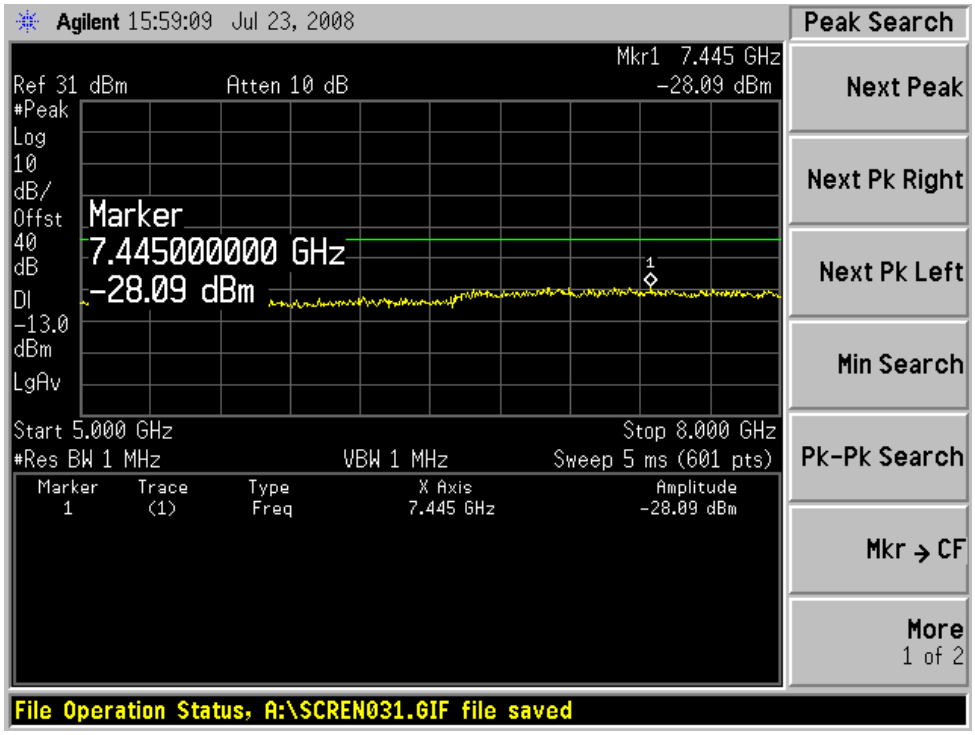


Plot 47 1GHz ~ 5GHz spurious emissions on CH Top

Product Service

4.2 Conducted Spurious Emissions-continued

Modulation Mode: QAM64
Channel Bandwidth: 5MHz

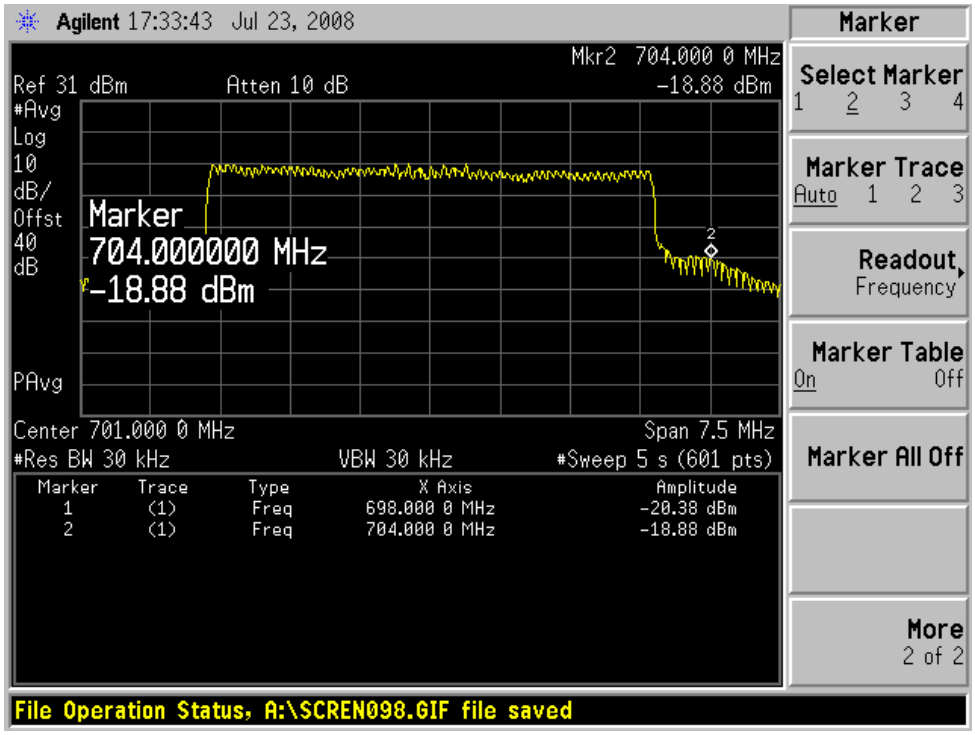


Plot 48 5GHz ~ 8GHz spurious emissions on CH Top

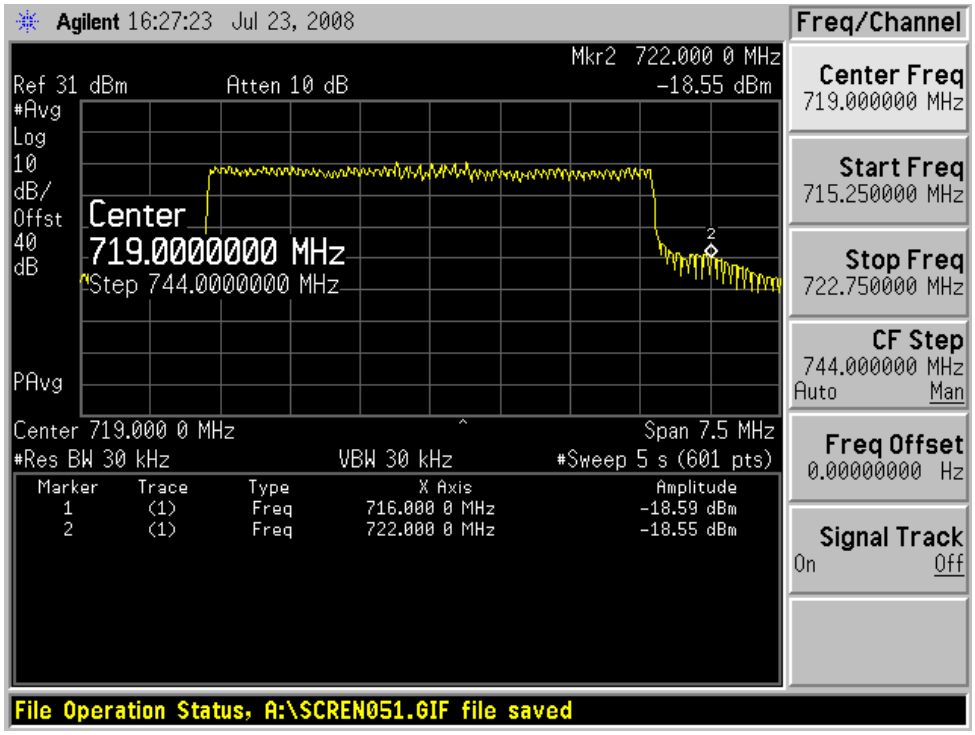
Product Service

4.3 Band Edge Compliance

Modulation Mode: QPSK
Channel Bandwidth: 5MHz



Plot 49 Occupied Bandwidth on CH Bottom

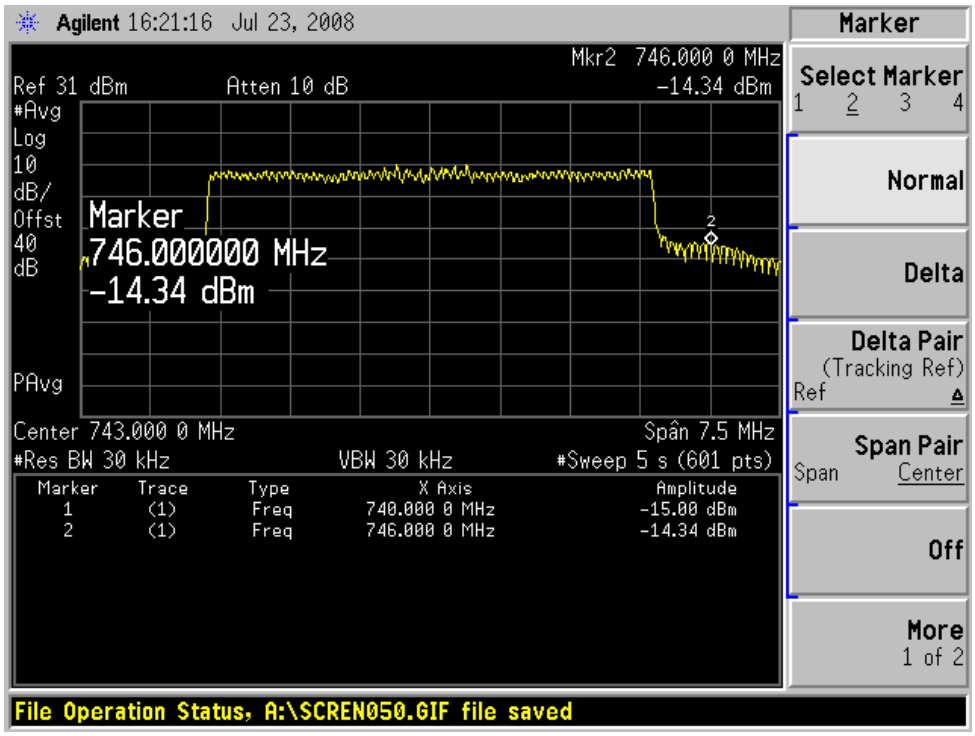


Plot 50 Occupied Bandwidth on CH Middle

Product Service

4.3 Band Edge Compliance-continued

Modulation Mode: QPSK
Channel Bandwidth: 5MHz

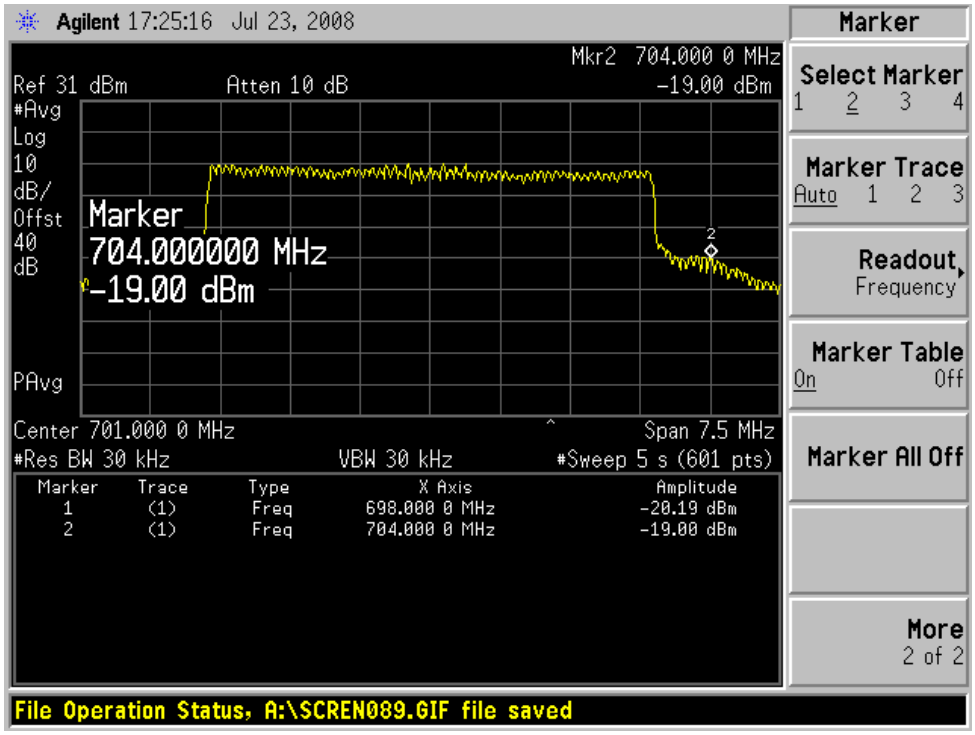


Plot 51 Occupied Bandwidth on CH Top

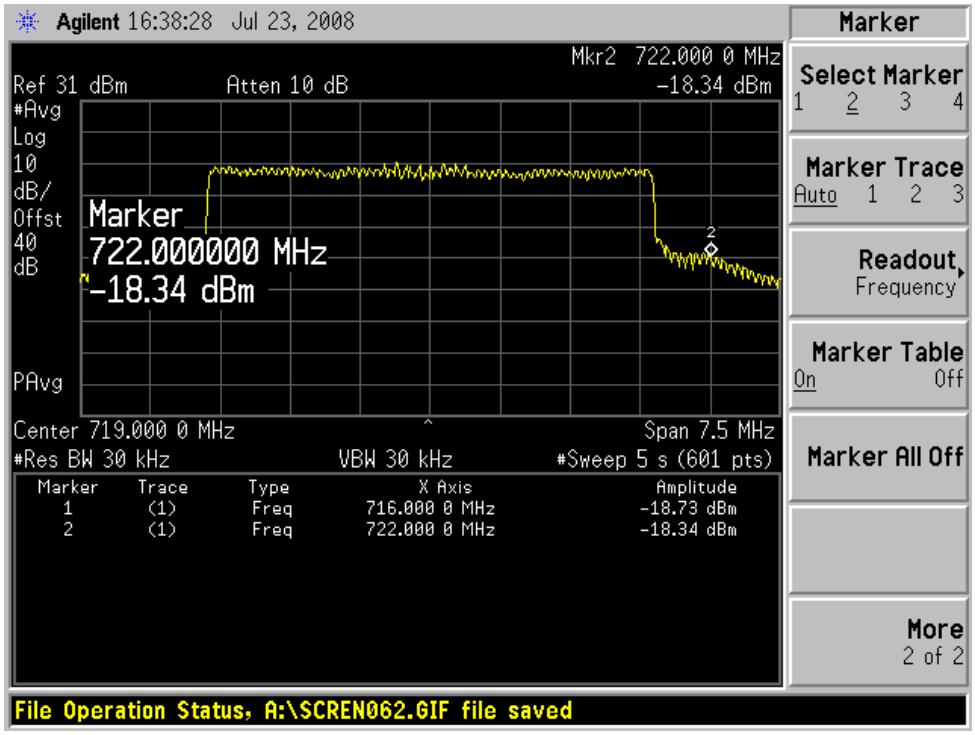
Product Service

4.3 Band Edge Compliance-continued

Modulation Mode: 8PSK
Channel Bandwidth: 5MHz



Plot 52 Occupied Bandwidth on CH Bottom

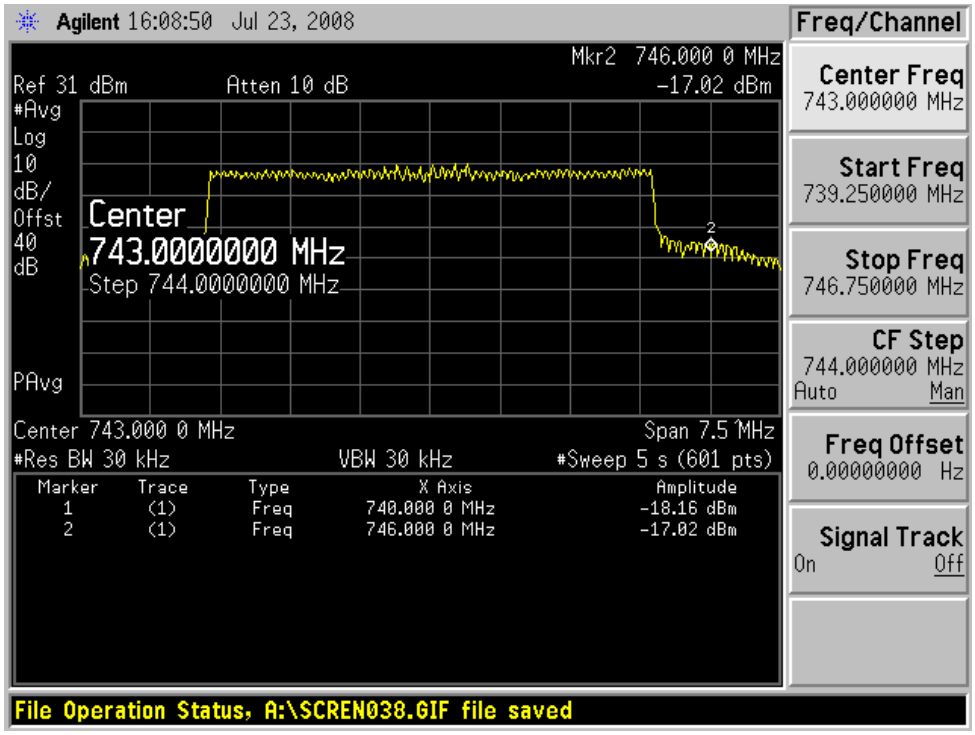


Plot 53 Occupied Bandwidth on CH Middle

Product Service

4.3 Band Edge Compliance-continued

Modulation Mode: 8PSK
Channel Bandwidth: 5MHz

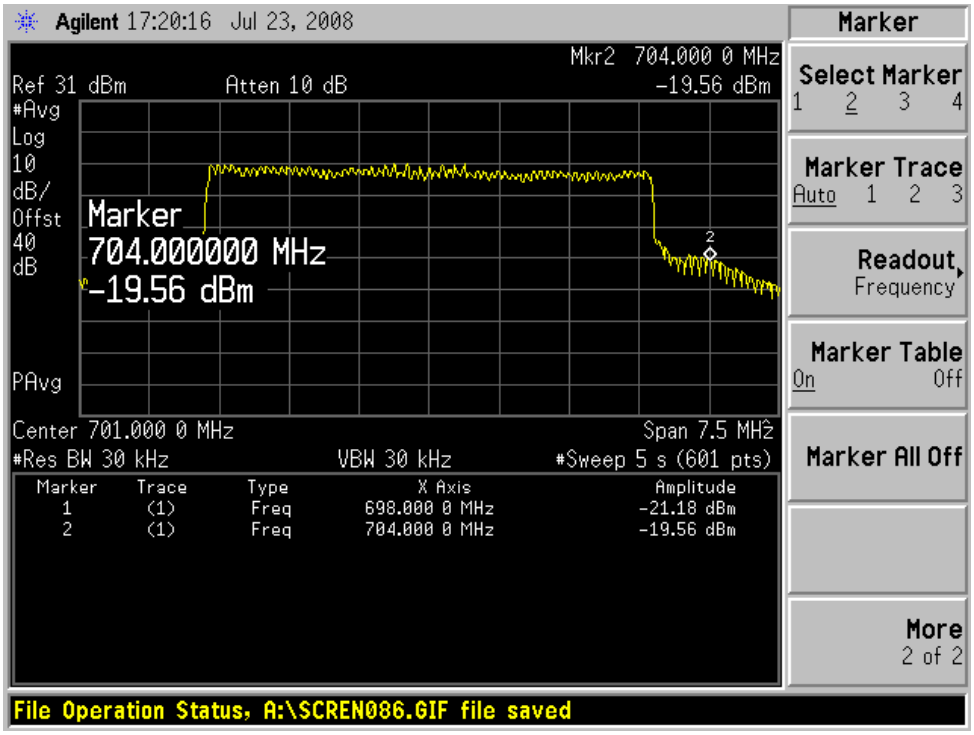


Plot 54 Occupied Bandwidth on CH Top

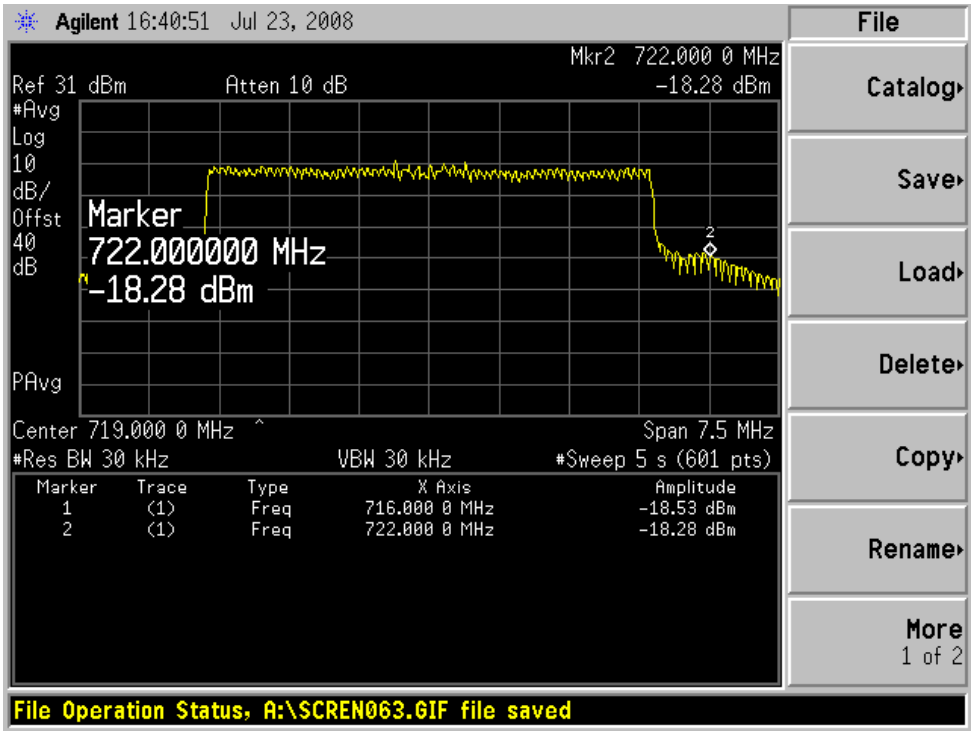
Product Service

4.3 Band Edge Compliance-continued

Modulation Mode: QAM16
Channel Bandwidth: 5MHz



Plot 55 Occupied Bandwidth on CH Bottom

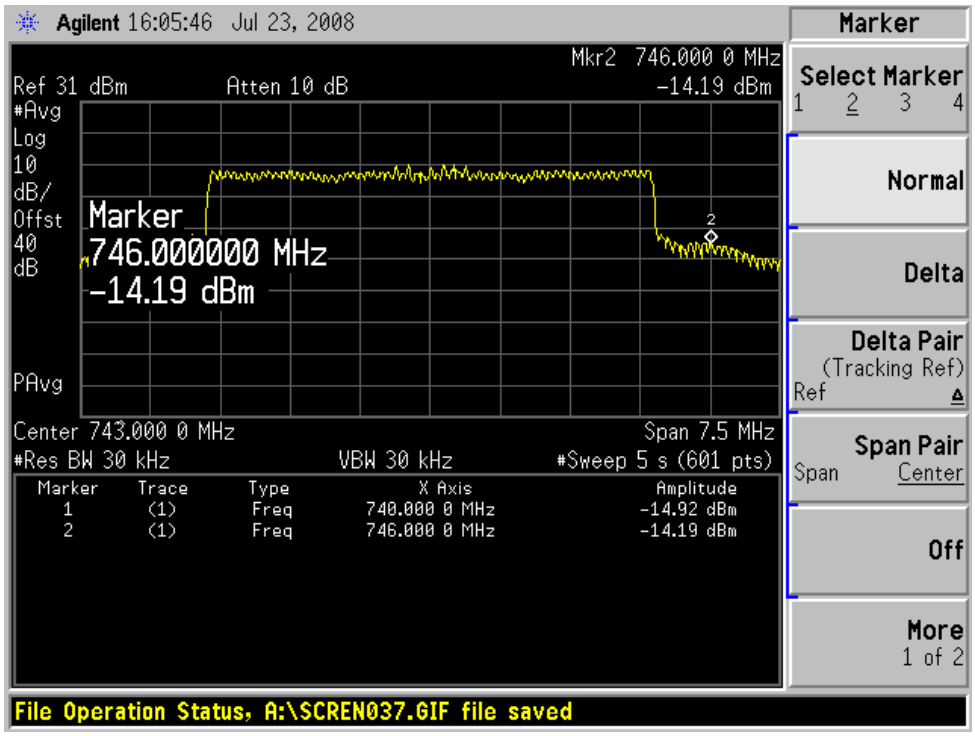


Plot 56 Occupied Bandwidth on CH Middle

Product Service

4.3 Band Edge Compliance-continued

Modulation Mode: QAM16
Channel Bandwidth: 5MHz

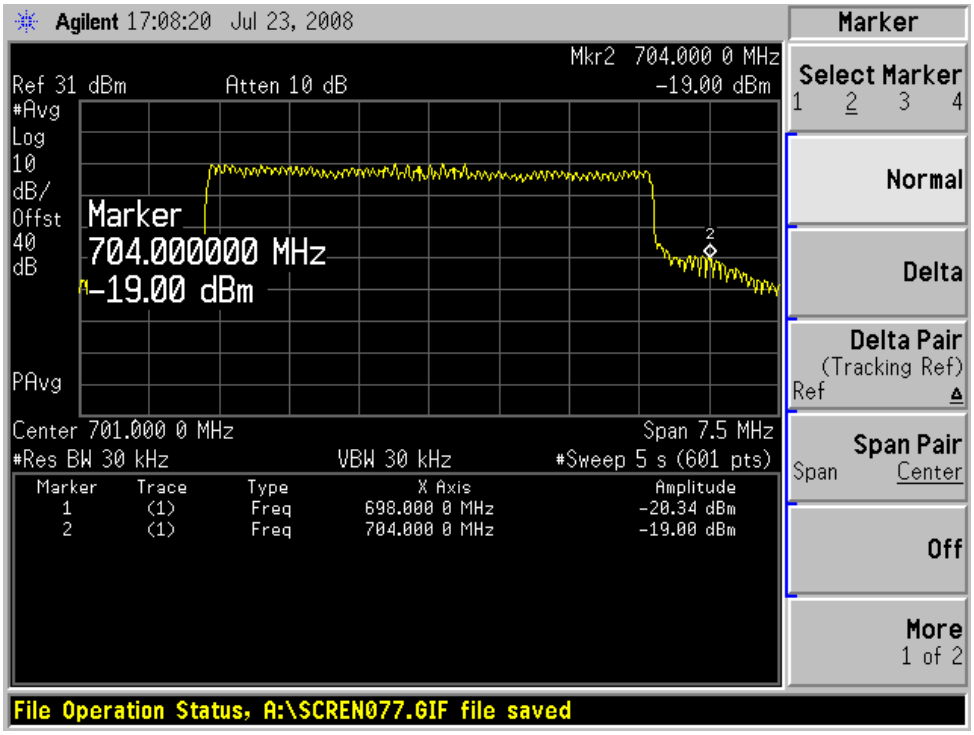


Plot 57 Occupied Bandwidth on CH Top

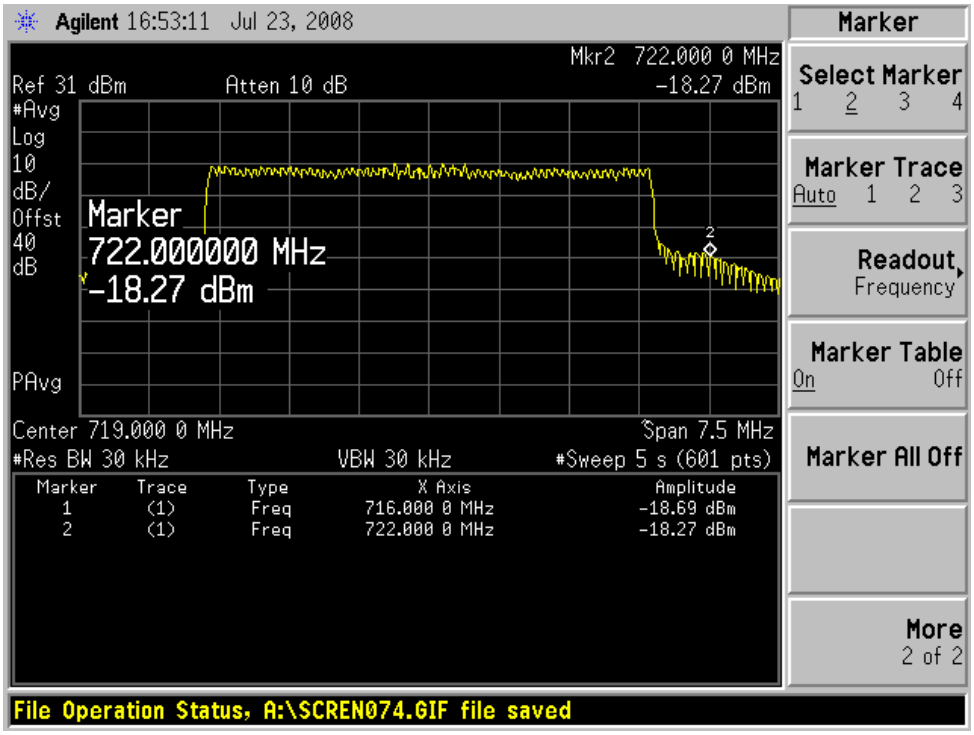
Product Service

4.3 Band Edge Compliance-continued

Modulation Mode: QAM64
Channel Bandwidth: 5MHz



Plot 58 Occupied Bandwidth on CH Bottom

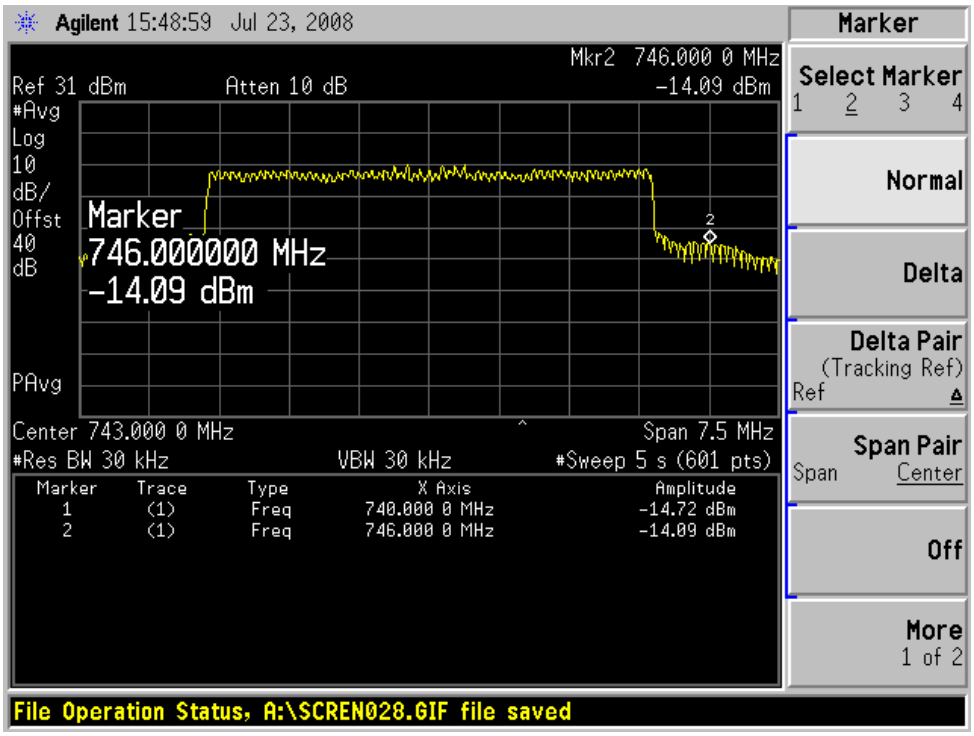


Plot 59 Occupied Bandwidth on CH Middle

Product Service

4.3 Band Edge Compliance-continued

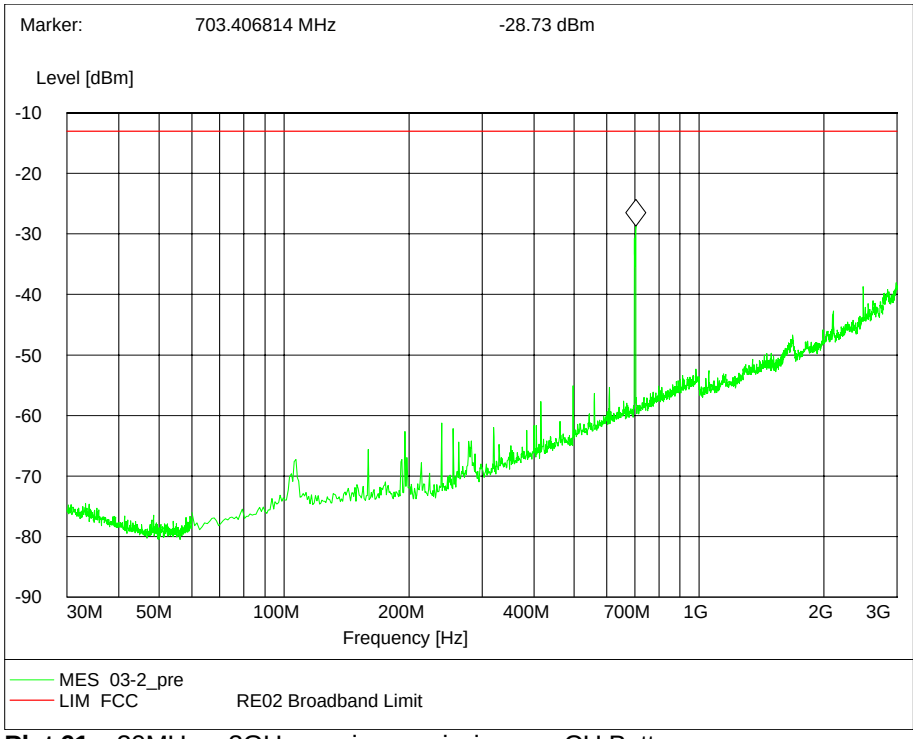
Modulation Mode: QAM64
Channel Bandwidth: 5MHz



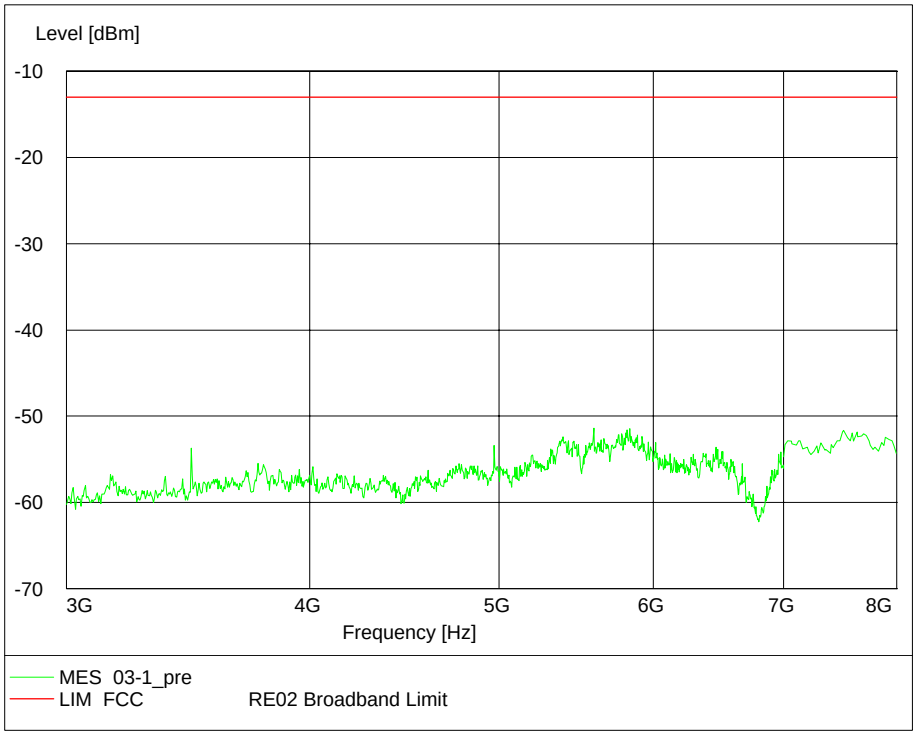
Plot 60 Occupied Bandwidth on CH Top

4.4 Radiated Spurious Emissions

Modulation Mode: QPSK
Channel Bandwidth: 5MHz



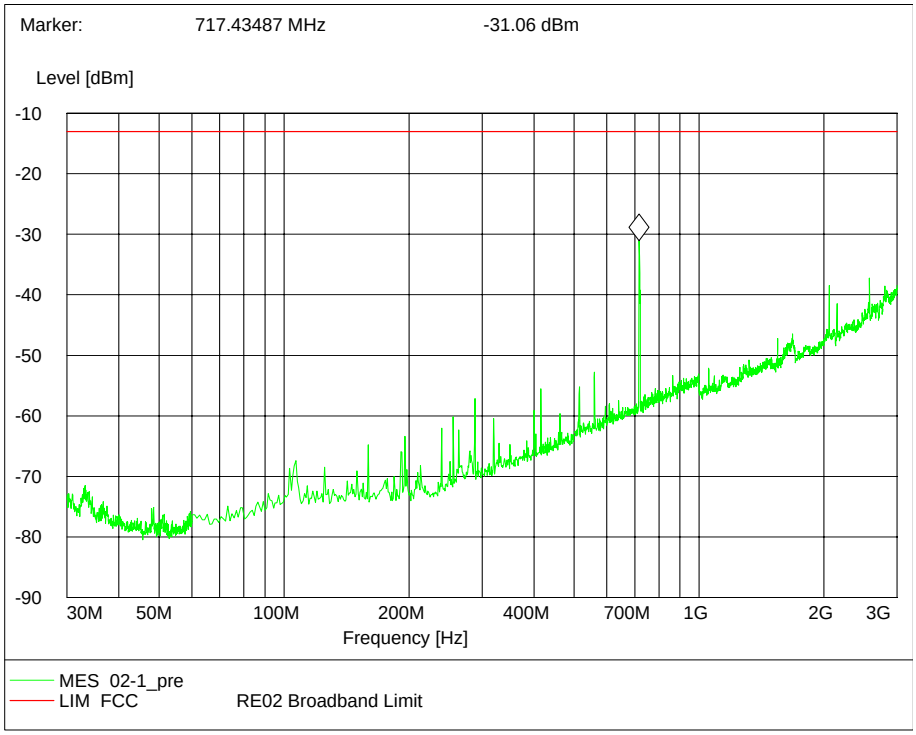
Plot 61 30MHz ~ 3GHz spurious emissions on CH Bottom



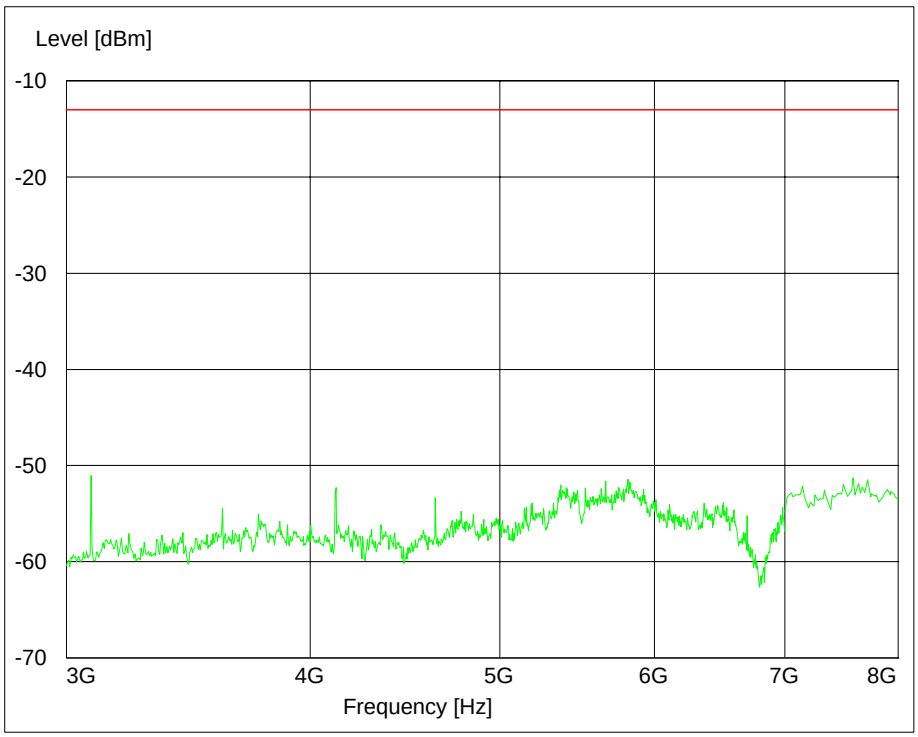
Plot 62 3GHz ~ 8GHz spurious emissions on CH Bottom

4.4 Radiated Spurious Emissions-continued

Modulation Mode: QPSK
Channel Bandwidth: 5MHz



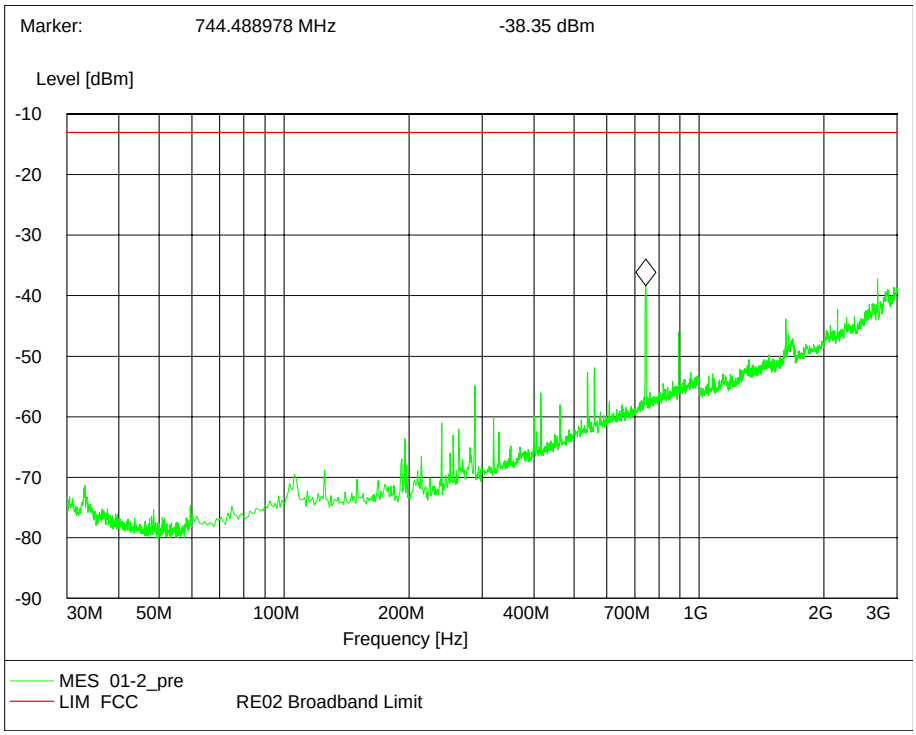
Plot 63 30MHz ~ 3GHz spurious emissions on CH Middle



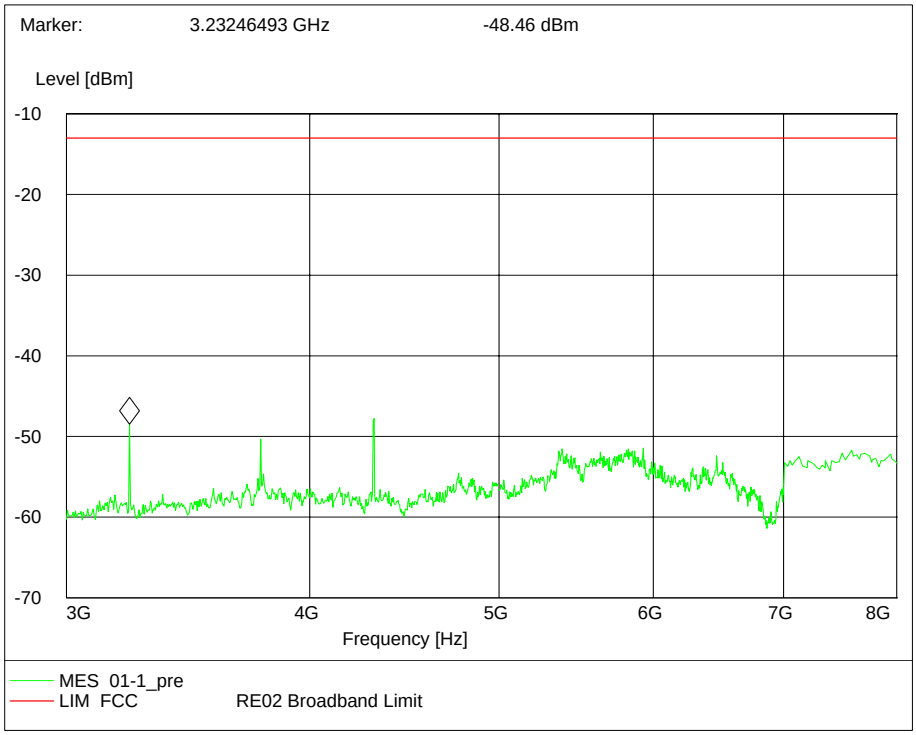
Plot 64 5GHz ~ 8GHz spurious emissions on CH Middle

4.4 Radiated Spurious Emissions-continued

Modulation Mode: QPSK
Channel Bandwidth: 5MHz



Plot 65 30MHz ~ 3GHz spurious emissions on CH Top



Plot 66 3GHz ~ 8GHz spurious emissions on CH Top

SECTION 5

DISCLAIMERS AND COPYRIGHT

FCC CRF 47 Part 2: 2007 & Part 27: 2007 Testing of the Beijing Xinwei Telecom Technology Inc., Broadband Wireless Base Station McWiLL XW5000-07

5.1 DISCLAIMER AND COPYRIGHT

This report relates only to the actual item/items tested.

APPENDIX

Appendix1 test setup