

FC

Test Report

Product Name	ASUS Transformer Pad
Model No	TF700T, TF0070T
FCC ID.	MSQTF700T

Applicant	ASUSTeK COMPUTER INC.
Address	No. 15, Li-Te Rd., Peitou, Taipei, Taiwan, R.O.C.

Date of Receipt	Feb. 20, 2012
Issue Date	March 20, 2012
Report No.	122365R-RFUSP42V01
Report Version	V1.0



The test results relate only to the samples tested.

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This report must not be used to claim product endorsement by NVLAP any agency of the U.S. Government

Test Report Certification

Issue Date: March 20, 2012

Report No.: 122365R-RFUSP42V01


Accredited by NIST (NVLAP)

NVLAP Lab Code: 200533-0

Product Name	ASUS Transformer Pad
Applicant	ASUSTeK COMPUTER INC.
Address	No. 15, Li-Te Rd., Peitou, Taipei, Taiwan, R.O.C.
Manufacturer	1. PEGATRON CORPORATION Taoyuan Mfg 2. Protek (Shanghai) Limited. 3. Tech-Com(Shanghai) Computer Co.Ltd. 4. Wistron InfoComm(Kunshan) Co., Ltd.
Model No.	TF700T, TF0070T
FCC ID.	MSQTF700T
EUT Rated Voltage	AC 100-240V, 50-60Hz
EUT Test Voltage	AC 120V/60Hz
Trade Name	ASUS
Applicable Standard	FCC CFR Title 47 Part 15 Subpart C: 2010 ANSI C63.4: 2003
Test Result	Complied

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Attachment 1: EUT Test Photographs

Attachment 2: EUT Detailed Photographs

1. GENERAL INFORMATION

1.1. EUT Description

Product Name	ASUS Transformer Pad
Trade Name	ASUS
Model No.	TF700T, TF0070T
FCC ID.	MSQTF700T
Frequency Range	2412-2462MHz for 802.11b/g/n-20BW
Number of Channels	802.11b/g/n-20MHz: 11
Data Speed	802.11b: 1-11Mbps, 802.11g: 6-54Mbps, 802.11n: up to 72.2Mbps
Type of Modulation	802.11b:DSSS (DBPSK, DQPSK, CCK) 802.11g/n:OFDM (BPSK, QPSK, 16QAM, 64QAM)
Antenna Type	PIFA Antenna
Antenna Gain	Refer to the table "Antenna List"
Channel Control	Auto
Power Adapter	MFR: Delta, M/N: ADP-18BW A Input: 100-240V, 50-60Hz 0.5A Output: 15V $\overline{\text{---}}$ 1.2A or 5V $\overline{\text{---}}$ 2A
USB Cable	Non-Shielded, 1.5m
Contain Module	Azurewave / AW-NH665

Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	ASUS	TF700T BT/WiFi Antenna	PIFA	3.2 dBi for 2.4 GHz

Note:

1. The antenna of EUT is conform to FCC 15.203.

802.11b/g/n-20MHz Center Frequency of Each Channel:

Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
Channel 01:	2412 MHz	Channel 02:	2417 MHz	Channel 03:	2422 MHz	Channel 04:	2427 MHz
Channel 05:	2432 MHz	Channel 06:	2437 MHz	Channel 07:	2442 MHz	Channel 08:	2447 MHz
Channel 09:	2452 MHz	Channel 10:	2457 MHz	Channel 11:	2462 MHz		

Note:

1. The EUT is an ASUS Transformer Pad with a built-in 2.4GHz WLAN and Bluetooth transceiver, this report for WLAN.
2. The EUT is including two models for different marketing requirement, TF0070T is the 2nd model name used for tender projects. Two models are all identical except model number.
3. Regarding to the operation frequency, the lowest, middle and highest frequency are selected to perform the test.
4. Lowest and highest data rates are tested in each mode. Only worst case is shown in the report. (802.11b is 1Mbps 、802.11g is 6Mbps 、802.11n(20M-BW) is 7.2Mbps and)
5. These tests are conducted on a sample for the purpose of demonstrating compliance of 802.11b/g/n transmitter with Part 15 Subpart C Paragraph 15.247 of spread spectrum devices.
6. The radiation measurements are performed in X, Y, Z axis positioning. Only the worst case is shown in the report.

Test Mode:	Mode 1: Transmit (802.11b 1Mbps)
	Mode 2: Transmit (802.11g 6Mbps)
	Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)

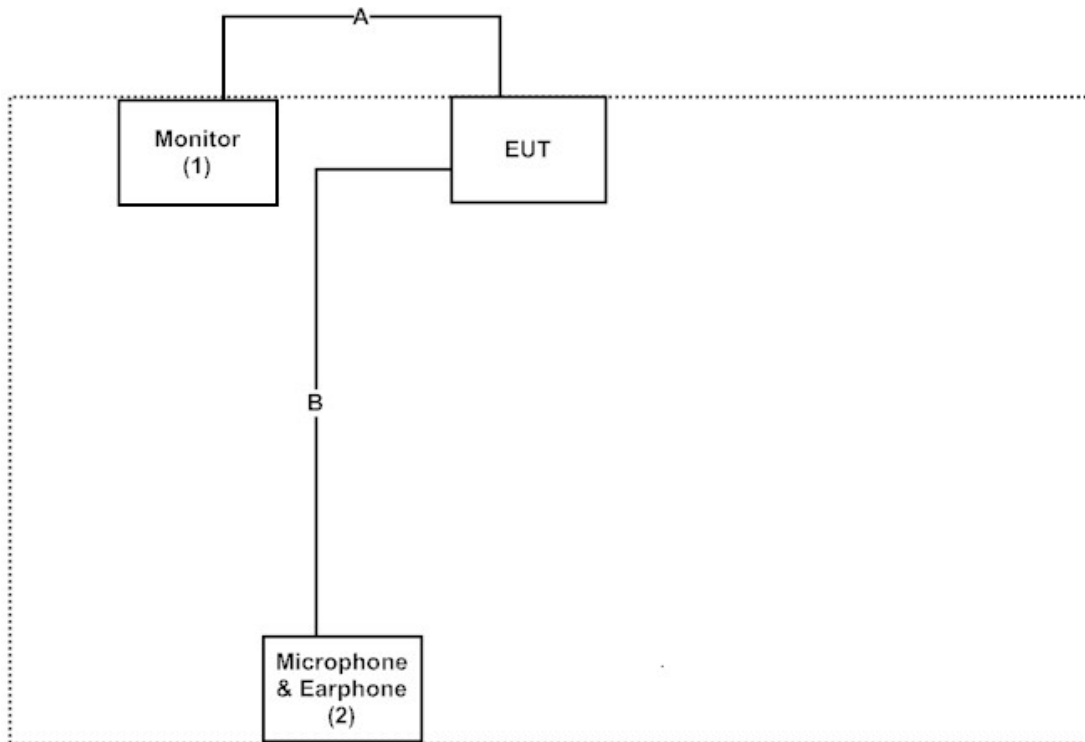
1.3. Tested System Details

The types for all equipment, plus descriptions of all cables used in the tested system (including inserted cards) are:

	Product	Manufacturer	Model No.	Serial No.	Power Cord
1	Monitor	LG	W2261VT	907YHPB07296	Non-Shielded, 1.8m
2	Microphone & Earphone	Ergotech	ET-E201	N/A	N/A

Signal Cable Type	Signal cable Description
A	HDMI Cable
B	Microphone & Earphone Cable

1.4. Configuration of Tested System



1.5. EUT Exercise Software

- (1) Setup the EUT as shown in Section 1.4
- (2) Execute software “BCM4329 (v3.0.0)” on the EUT.
- (3) Configure the test mode, the test channel, and the data rate.
- (4) Press “OK” to start the continuous Transmit.
- (5) Verify that the EUT works properly.

1.6. Test Facility

Ambient conditions in the laboratory:

Items	Required (IEC 68-1)	Actual
Temperature (°C)	15-35	20-35
Humidity (%RH)	25-75	50-65
Barometric pressure (mbar)	860-1060	950-1000

The related certificate for our laboratories about the test site and management system can be downloaded from

Quietek Corporation's Web Site: <http://www.quietek.com/tw/ctg/cts/accreditations.htm>

The address and introduction of Quietek Corporation's laboratories can be founded in our Web site:

<http://www.quietek.com/>

Site Description: File on
Federal Communications Commission
FCC Engineering Laboratory
7435 Oakland Mills Road
Columbia, MD 21046
Registration Number: 92195

Accreditation on NVLAP
NVLAP Lab Code: 200533-0

Site Name: Quietek Corporation
Site Address: No.5-22, Ruishukeng,
Linkou Dist. New Taipei City 24451,
Taiwan, R.O.C.
TEL: 886-2-8601-3788 / FAX : 886-2-8601-3789
E-Mail : service@quietek.com

FCC Accreditation Number: TW1014

2. Conducted Emission

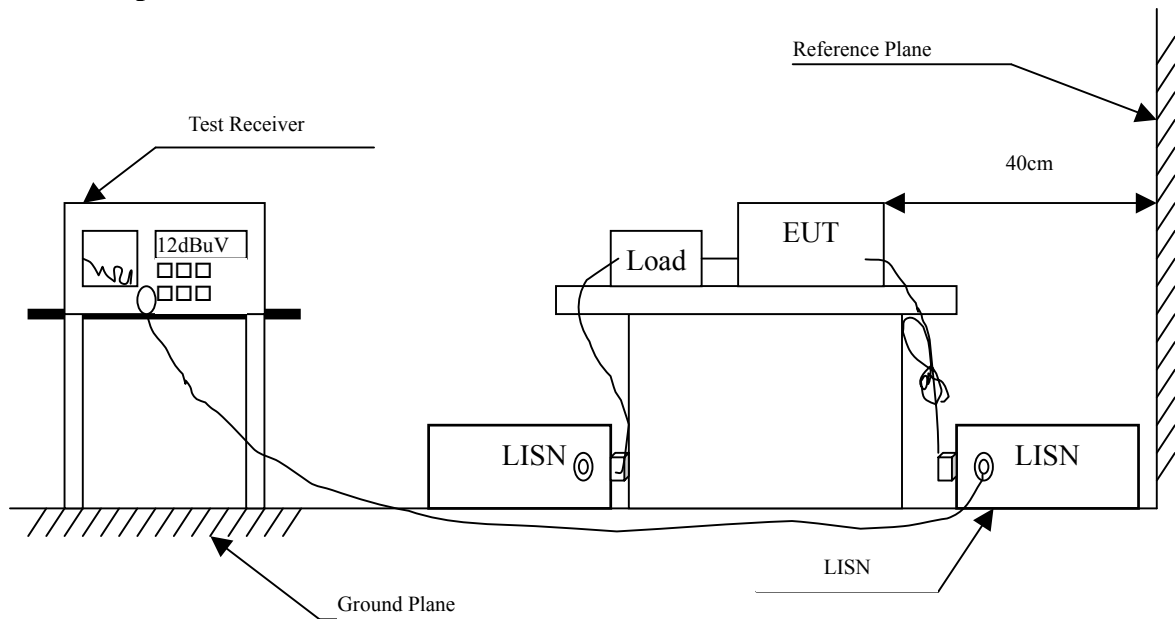
2.1. Test Equipment

	Equipment	Manufacturer	Model No. / Serial No.	Last Cal.	Remark
X	Test Receiver	R & S	ESCS 30 / 825442/018	Sep., 2011	
X	Artificial Mains Network	R & S	ENV4200 / 848411/10	Feb., 2012	Peripherals
X	LISN	R & S	ESH3-Z5 / 825562/002	Feb., 2012	EUT
	DC LISN	Schwarzbeck	8226 / 176	Mar, 2012	EUT
X	Pulse Limiter	R & S	ESH3-Z2 / 357.8810.52	Feb., 2012	
	No.1 Shielded Room				

Note:

1. All equipments are calibrated every one year.
2. The test instruments marked by “X” are used to measure the final test results.

2.2. Test Setup



2.3. Limits

FCC Part 15 Subpart C Paragraph 15.207 (dBuV) Limit		
Frequency MHz	Limits	
	QP	AVG
0.15 - 0.50	66-56	56-46
0.50-5.0	56	46
5.0 - 30	60	50

2.4. Test Procedure

The EUT and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50 ohm /50uH coupling impedance for the measuring equipment. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm /50uH coupling impedance with 50ohm termination. (Please refers to the block diagram of the test setup and photographs.)

Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.4: 2003 on conducted measurement.

Conducted emissions were invested over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9kHz.

2.5. Uncertainty

± 2.26 dB

2.6. Test Result of Conducted Emission

Product : ASUS Transformer Pad
 Test Item : Conducted Emission Test
 Power Line : Line 1
 Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2437MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV	Margin dB	Limit dBuV
Line 1					
Quasi-Peak					
0.193	9.840	29.030	38.870	-25.901	64.771
0.232	9.840	22.880	32.720	-30.937	63.657
0.298	9.840	22.360	32.200	-29.571	61.771
0.494	9.840	31.500	41.340	-14.831	56.171
1.170	9.850	24.790	34.640	-21.360	56.000
6.287	9.914	7.980	17.894	-42.106	60.000
Average					
0.193	9.840	14.440	24.280	-30.491	54.771
0.232	9.840	19.140	28.980	-24.677	53.657
0.298	9.840	15.930	25.770	-26.001	51.771
0.494	9.840	20.850	30.690	-15.481	46.171
1.170	9.850	7.660	17.510	-28.490	46.000
6.287	9.914	-0.960	8.954	-41.046	50.000

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. "■" means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

Product : ASUS Transformer Pad
 Test Item : Conducted Emission Test
 Power Line : Line 2
 Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2437MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV	Margin dB	Limit dBuV
Line 2					
Quasi-Peak					
0.197	9.840	23.210	33.050	-31.607	64.657
0.318	9.840	28.450	38.290	-22.910	61.200
0.478	9.840	31.620	41.460	-15.169	56.629
0.982	9.840	8.370	18.210	-37.790	56.000
2.130	9.860	26.580	36.440	-19.560	56.000
5.529	9.903	10.110	20.013	-39.987	60.000
Average					
0.197	9.840	8.750	18.590	-36.067	54.657
0.318	9.840	12.870	22.710	-28.490	51.200
0.478	9.840	21.110	30.950	-15.679	46.629
0.982	9.840	2.880	12.720	-33.280	46.000
2.130	9.860	8.370	18.230	-27.770	46.000
5.529	9.903	10.100	20.003	-29.997	50.000

Note:

1. All Reading Levels are Quasi-Peak and average value.
2. "■" means the worst emission level.
3. Measurement Level = Reading Level + Correct Factor

3. Peak Power Output

3.1. Test Equipment

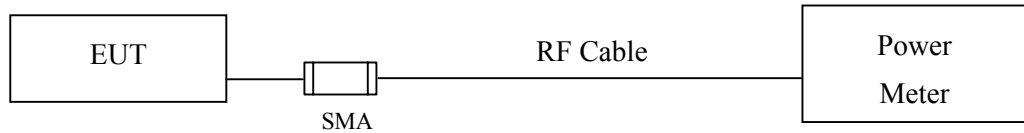
	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
X	Power Meter	Anritsu	ML2495A/6K00003357	May, 2011
X	Power Sensor	Anritsu	MA2411B/0738448	Jun, 2011
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2011
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2011
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2011

Note:

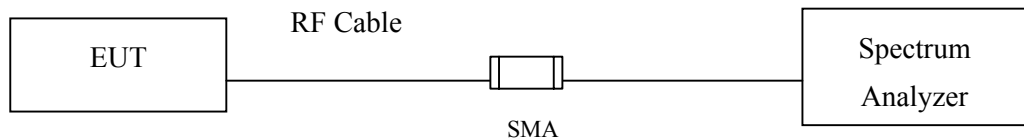
1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
2. The test instruments marked with “X” are used to measure the final test results.

3.2. Test Setup

Average Power For different Data Rate (Mbps)



Peak Power Measurement



3.3. Limits

The maximum peak power shall be less 1 Watt.

3.4. Test Procedure

The EUT was tested according to DTS test procedure of Jan. 2012 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

3.5. Uncertainty

± 1.27 dB

3.6. Test Result of Peak Power Output

Product : ASUS Transformer Pad
 Test Item : Peak Power Output Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11b 1Mbps)

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)				Peak Power	Required Limit	Result
		1	2	5.5	11			
		Measurement Level (dBm)						
01	2412	13.19	--	--	--	13.50	<30dBm	Pass
06	2437	13.41	13.34	13.21	13.08	13.79	<30dBm	Pass
11	2462	13.41	--	--	--	13.91	<30dBm	Pass

Note:

1. Peak Power Output Value = Reading value on Spectrum Analyzer + cable loss
(Use the spectrum analyzer's integrated channel power measurement function)
2. Average Power for different data rate = Reading value on Power Meter + cable loss

Figure Channel 1:

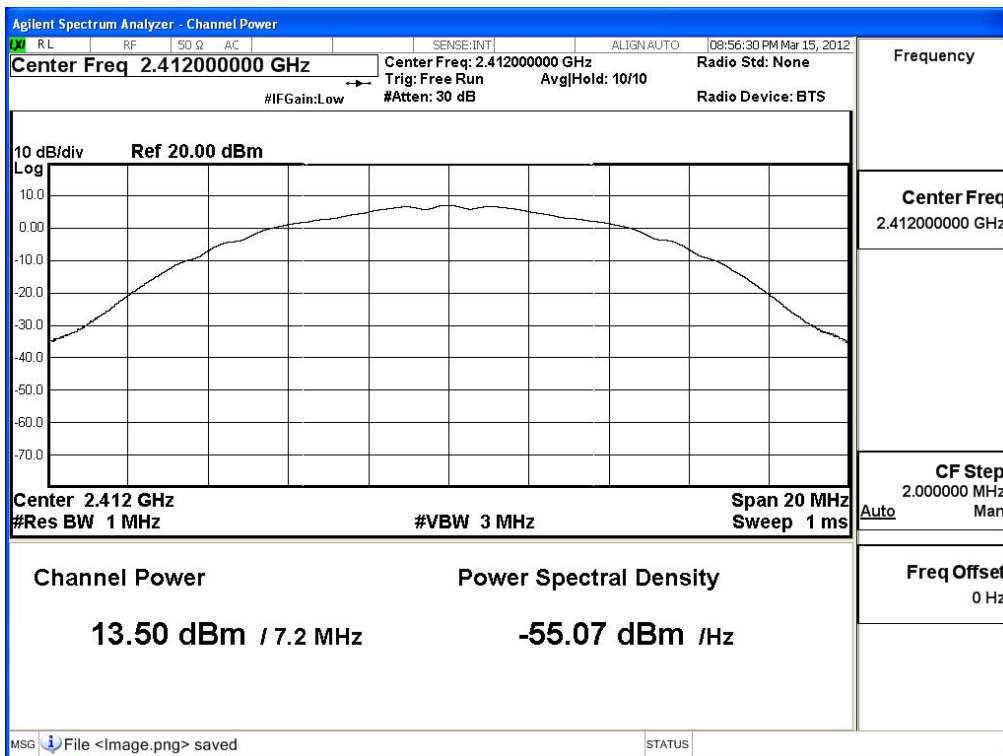


Figure Channel 6:

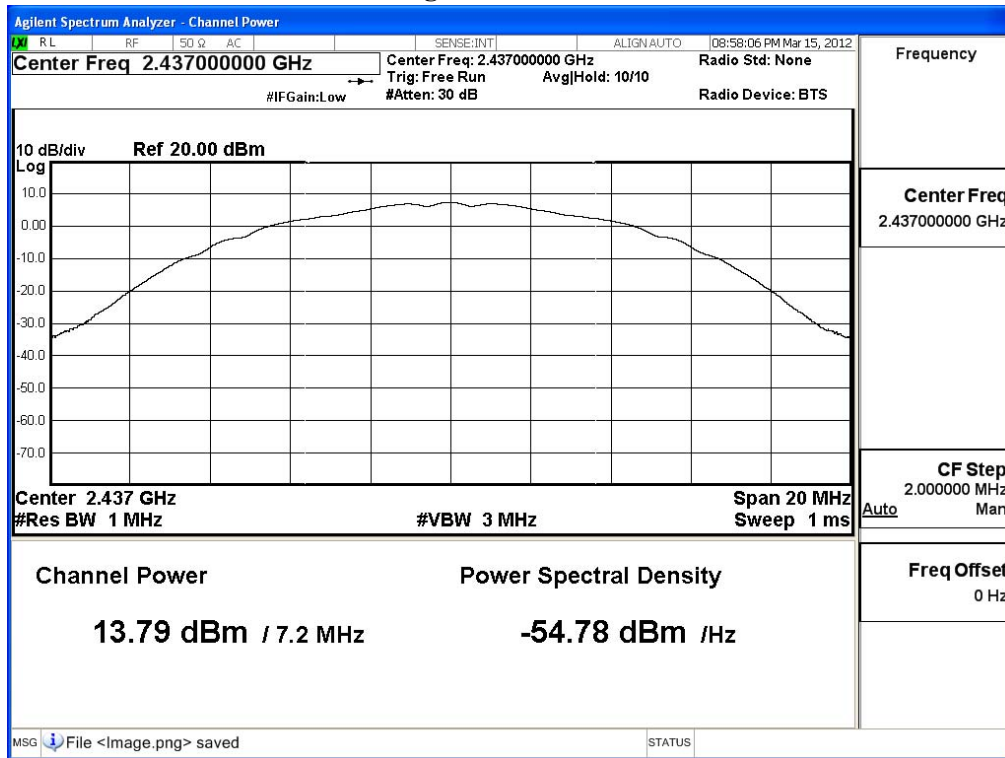
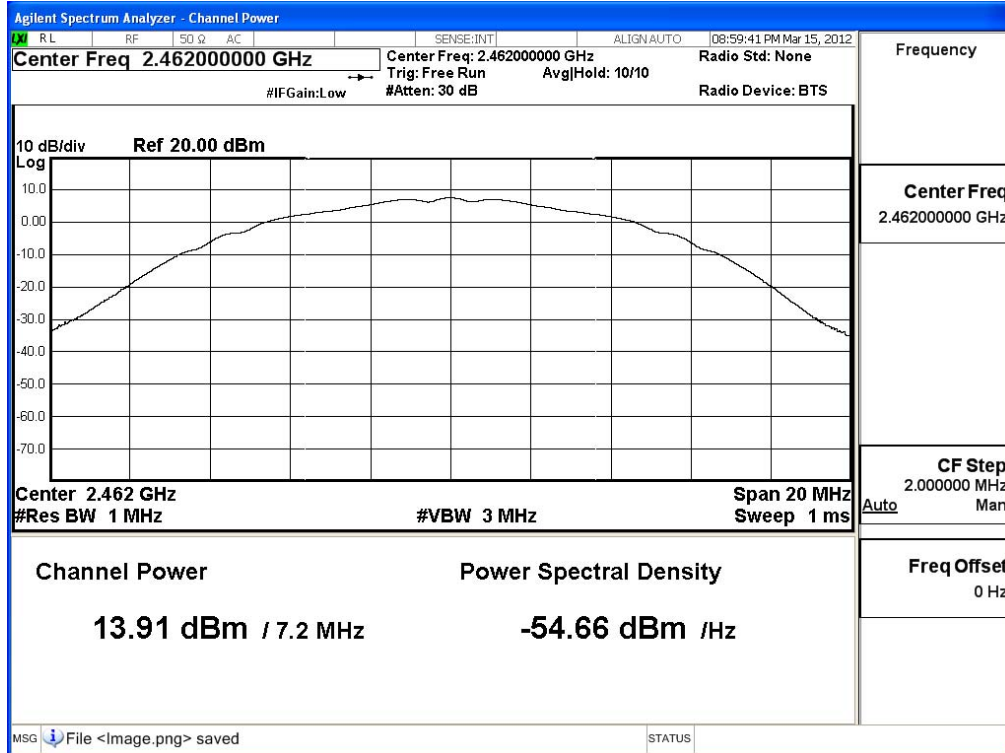


Figure Channel 11:



Product : ASUS Transformer Pad
 Test Item : Peak Power Output Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11g 6Mbps)

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Peak Power	Required Limit	Result
		6	9	12	18	24	36	48	54			
		Measurement Level (dBm)										
01	2412	12.03	--	--	--	--	--	--	--	18.6	<30dBm	Pass
06	2437	12.21	12.14	12.08	11.97	11.91	11.84	11.73	11.67	18.89	<30dBm	Pass
11	2462	12.19	--	--	--	--	--	--	--	19.17	<30dBm	Pass

Note:

1. Peak Power Output Value = Reading value on Spectrum Analyzer + cable loss
(Use the spectrum analyzer's integrated channel power measurement function)
2. Average Power for different data rate = Reading value on Power Meter + cable loss

Figure Channel 1:

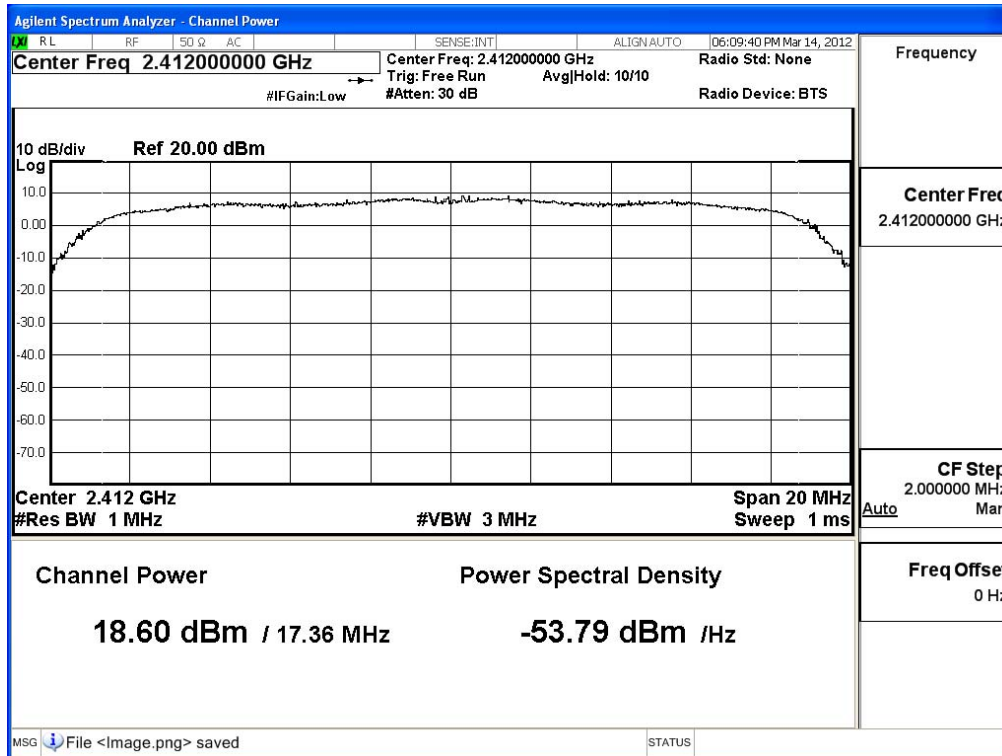


Figure Channel 6:

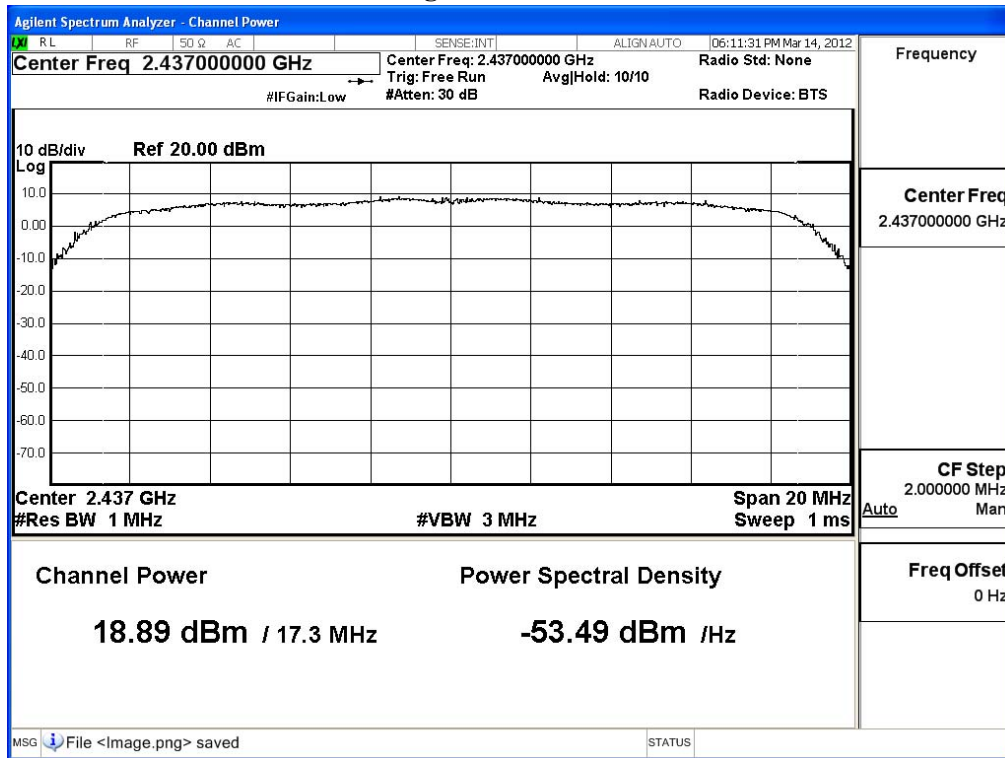
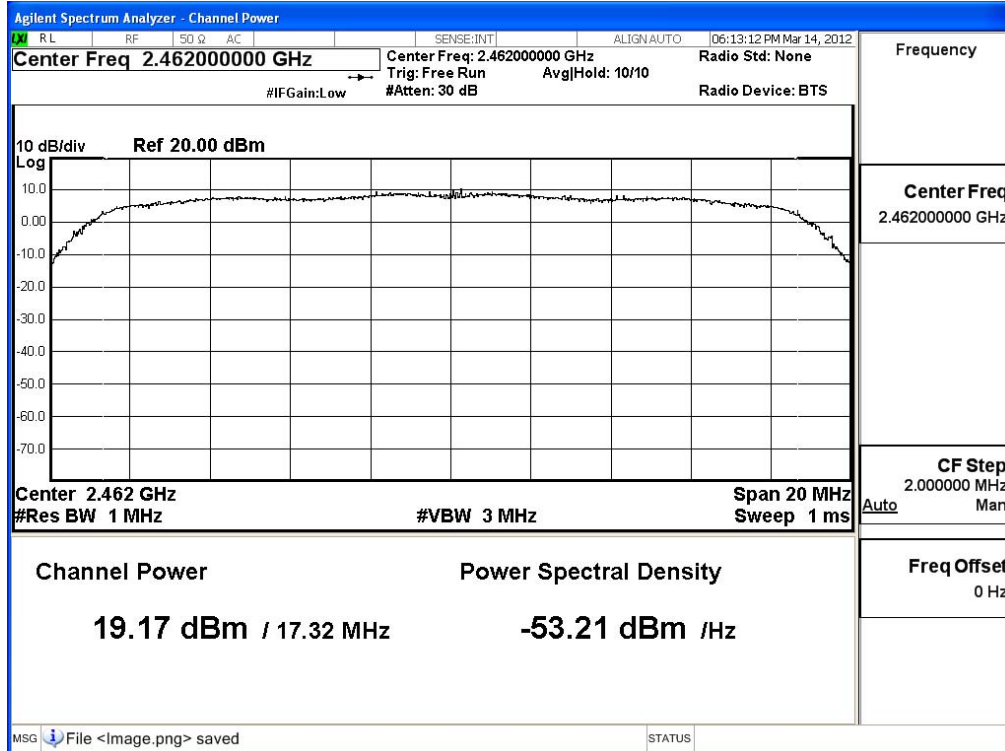


Figure Channel 11:



Product : ASUS Transformer Pad
 Test Item : Peak Power Output Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)

Channel No	Frequency (MHz)	Average Power For different Data Rate (Mbps)								Peak Power	Required Limit	Result
		7.2	14.4	21.7	28.9	43.3	57.8	65	72.2			
		Measurement Level (dBm)										
01	2412	10.66	--	--	--	--	--	--	--	17.39	<30dBm	Pass
06	2437	10.82	10.77	10.71	10.63	10.57	10.48	10.4	10.37	17.76	<30dBm	Pass
11	2462	10.81	--	--	--	--	--	--	--	18.09	<30dBm	Pass

Note:

1. Peak Power Output Value = Reading value on Spectrum Analyzer + cable loss
(Use the spectrum analyzer's integrated channel power measurement function)
2. Average Power for different data rate = Reading value on Power Meter + cable loss

Figure Channel 1:

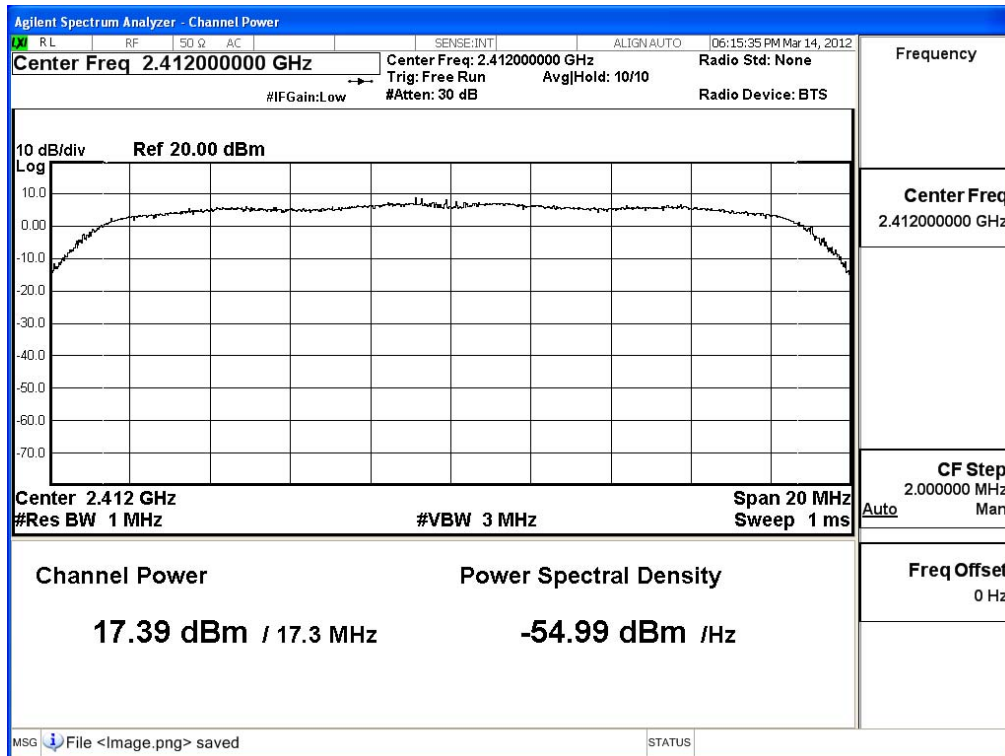


Figure Channel 6:

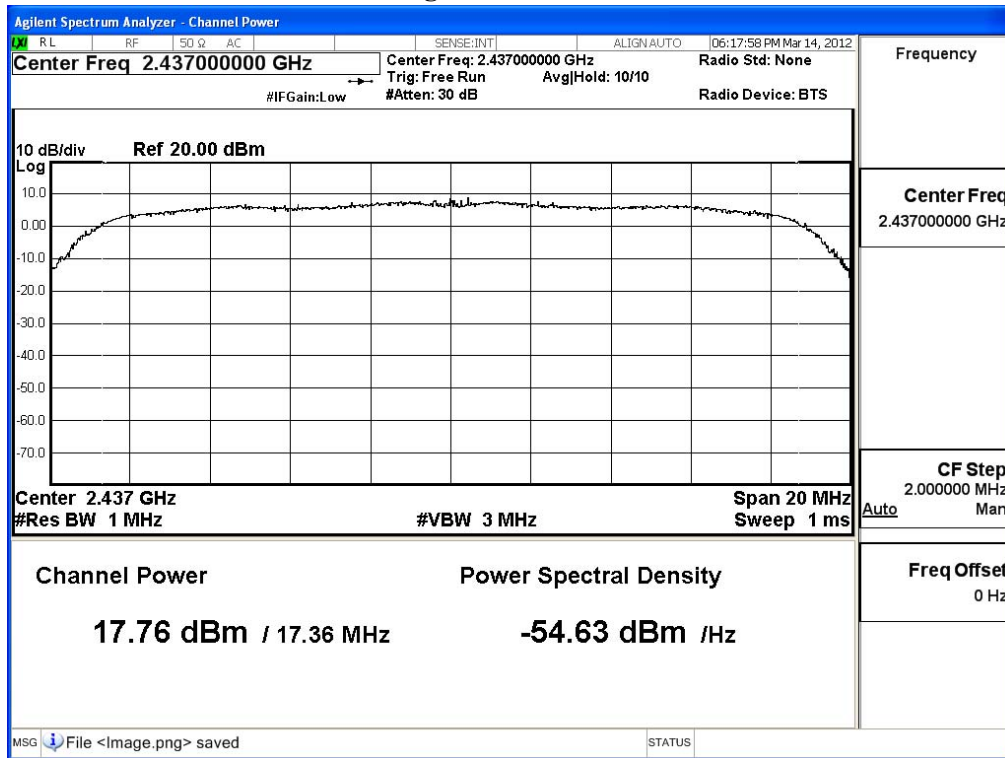
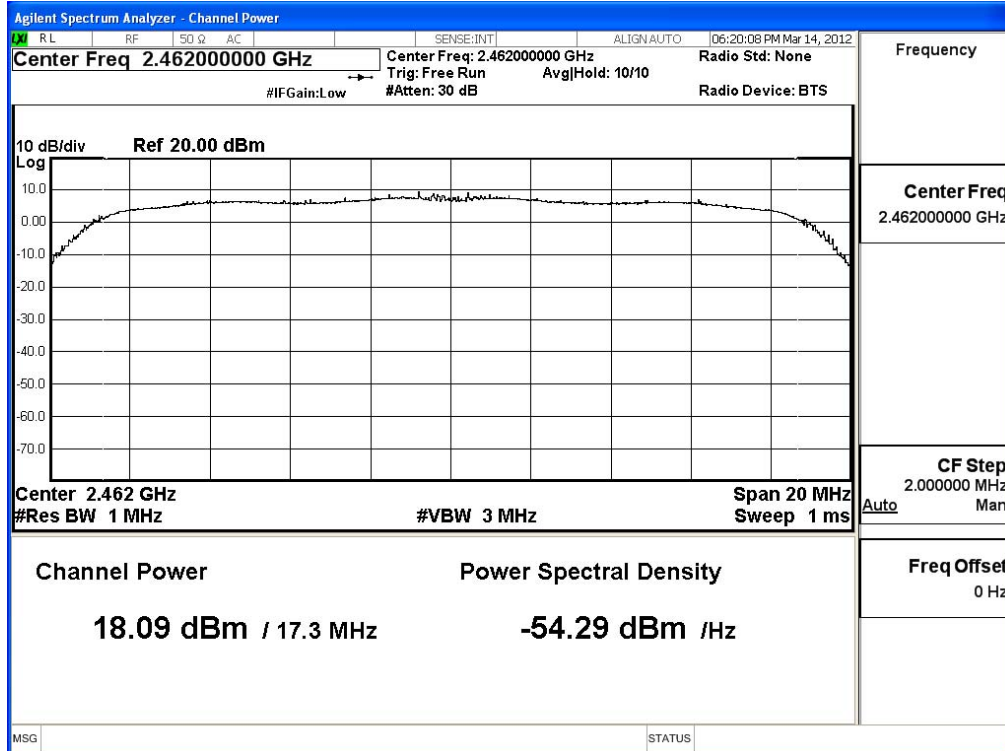


Figure Channel 11:



4. Radiated Emission

4.1. Test Equipment

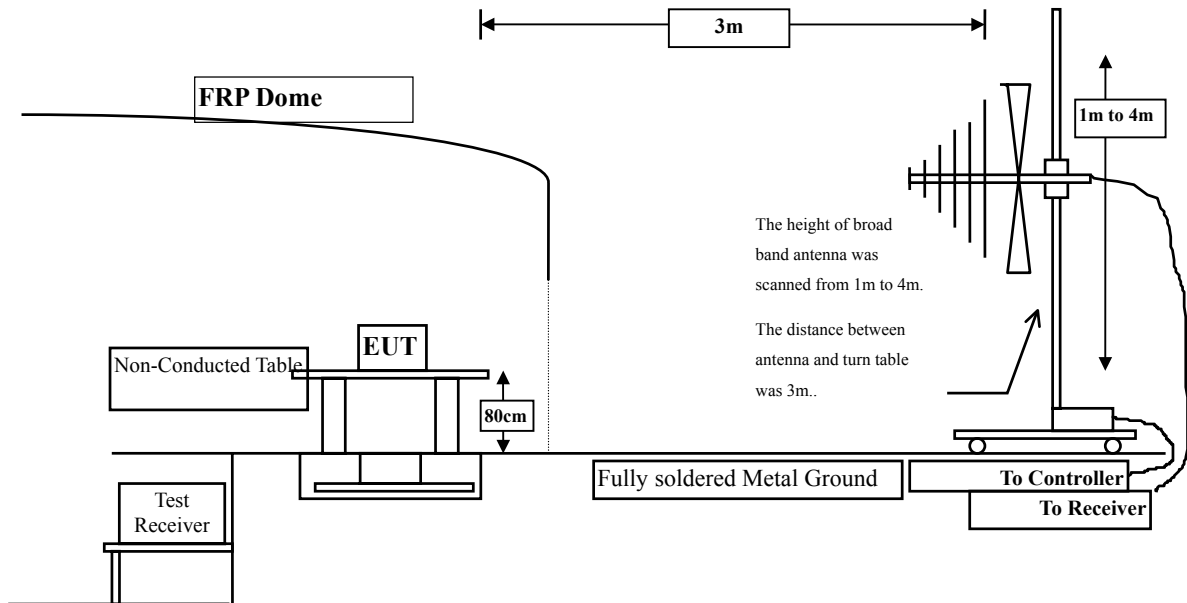
The following test equipment are used during the radiated emission test:

Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
☒ Site # 3	X	Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2011
	X	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2011
	X	Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2011
	X	Pre-Amplifier	Agilent	8447D/2944A09549	Sep., 2011
	X	Spectrum Analyzer	Agilent	E4407B / US39440758	May, 2011
	X	Test Receiver	R & S	ESCS 30/ 825442/018	Sep., 2011
	X	Coaxial Cable	Quietek	QTK-CABLE/ CAB5	Feb., 2012
	X	Controller	Quietek	QTK-CONTROLLER/ CTRL3	N/A
	X	Coaxial Switch	Anritsu	MP59B/6200265729	N/A

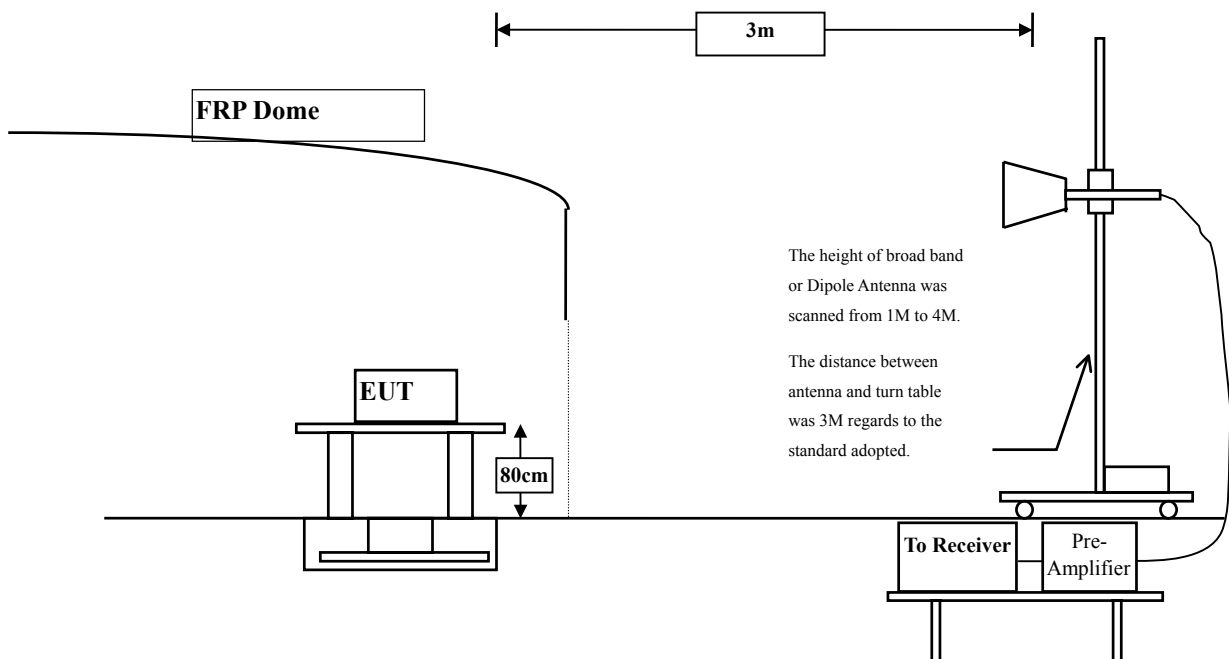
- Note:
1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
 2. The test instruments marked with “X” are used to measure the final test results.

4.2. Test Setup

Radiated Emission Below 1GHz



Radiated Emission Above 1GHz



4.3. Limits

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 20dB below the level of the fundamental or to the general radiated emission limits in paragraph 15.209, whichever is the lesser attenuation.

FCC Part 15 Subpart C Paragraph 15.209(a) Limits		
Frequency MHz	uV/m @3m	dBuV/m@3m
30-88	100	40
88-216	150	43.5
216-960	200	46
Above 960	500	54

Remarks: E field strength (dBuV/m) = 20 log E field strength (uV/m)

4.4. Test Procedure

The EUT was setup according to ANSI C63.4: 2003 and tested according to DTS test procedure of Jan. 2012 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

The EUT is placed on a turn table which is 0.8 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level. The EUT was positioned such that the distance from antenna to the EUT was 3 meters.

The antenna is scanned between 1 meter and 4 meters to find out the maximum emission level. This is repeated for both horizontal and vertical polarization of the antenna. In order to find the maximum emission, all of the interface cables were manipulated according to ANSI C63.4: 2003 on radiated measurement.

The resolution bandwidth below 1GHz setting on the field strength meter is 120 kHz and above 1GHz is 1MHz.

Radiated emission measurements below 1GHz are made using broadband Bilog antenna and above 1GHz are made using Horn Antennas.

The measurement is divided into the Preliminary Measurement and the Final Measurement.

The suspected frequencies are searched for in Preliminary Measurement with the measurement antenna kept pointed at the source of the emission both in azimuth and elevation, with the polarization of the antenna oriented for maximum response. The antenna is pointed at an angle towards the source of the emission, and the EUT is rotated in both height and polarization to maximize the measured emission. The emission is kept within the illumination area of the 3 dB bandwidth of the antenna.

The worst radiated emission is measured in the Open Area Test Site on the Final Measurement.

The frequency range from 30MHz to 10th harmonics is checked.

4.5. Uncertainty

± 3.9 dB above 1GHz

± 3.8 dB below 1GHz

4.6. Test Result of Radiated Emission

Product : ASUS Transformer Pad
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2412MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
4824.000	3.261	46.850	50.111	-23.889	74.000
7236.000	10.650	41.650	52.300	-21.700	74.000
9648.000	13.337	36.410	49.746	-24.254	74.000
Average Detector:					
4824.000	3.261	43.000	46.261	-7.739	54.000
7236.000	10.650	33.250	43.900	-10.100	54.000
Vertical					
Peak Detector:					
4824.000	6.421	45.340	51.761	-22.239	74.000
7236.000	11.495	41.025	52.520	-21.480	74.000
9648.000	13.807	35.700	49.506	-24.494	74.000
Average Detector:					
4824.000	6.421	40.180	46.601	-7.399	54.000
7236.000	11.495	35.050	46.545	-7.455	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : ASUS Transformer Pad
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2437 MHz)

Frequency MHz	Correct Factor dB	Reading Level dBUV	Measurement Level dBUV/m	Margin dB	Limit dBUV/m
Horizontal					
Peak Detector:					
4874.000	3.038	45.540	48.577	-25.423	74.000
7311.000	11.795	39.270	51.064	-22.936	74.000
9648.000	13.337	36.310	49.646	-24.354	74.000
Average Detector:					
7311.000	11.795	29.620	41.414	-12.586	54.000
Vertical					
Peak Detector:					
4874.000	5.812	44.180	49.991	-24.009	74.000
7311.000	12.630	41.300	53.930	-20.070	74.000
9748.000	13.126	36.810	49.936	-24.064	74.000
Average Detector:					
7311.000	12.630	33.870	46.499	-7.501	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : ASUS Transformer Pad
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2462 MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
4924.000	2.858	44.870	47.727	-26.273	74.000
7386.000	12.127	37.100	49.228	-24.772	74.000
9848.000	12.852	36.910	49.763	-24.237	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4924.000	5.521	43.840	49.360	-24.640	74.000
7386.000	13.254	37.720	50.974	-23.026	74.000
9848.000	13.367	36.710	50.077	-23.923	74.000
Average Detector:					
7386.000	13.254	26.840	40.094	-13.906	54.000
9848.000	13.367	22.240	35.607	-18.393	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : ASUS Transformer Pad
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2412MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
4824.000	3.261	43.490	46.751	-27.249	74.000
7236.000	10.650	39.400	50.050	-23.950	74.000
9648.000	13.337	35.510	48.846	-25.154	74.000
Average Detector:					
7236.000	10.650	30.340	40.990	-13.010	54.000
Vertical					
Peak Detector:					
4824.000	6.421	43.110	49.531	-24.469	74.000
7236.000	11.495	41.390	52.885	-21.115	74.000
9648.000	13.807	35.820	49.626	-24.374	74.000
Average Detector:					
7236.000	11.495	33.870	45.365	-8.635	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : ASUS Transformer Pad
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2437 MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
4874.000	3.038	43.200	46.237	-27.763	74.000
7311.000	11.795	37.490	49.284	-24.716	74.000
9748.000	12.635	36.450	49.085	-24.915	74.000
Average Detector:					
--					
Peak Detector:					
4874.000	5.812	42.610	48.421	-25.579	74.000
7311.000	12.630	39.300	51.929	-22.071	74.000
9748.000	13.126	36.610	49.736	-24.264	74.000
Average Detector:					
7311.000	12.630	29.710	42.339	-11.661	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : ASUS Transformer Pad
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11g 6Mbps) (2462 MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
4924.000	2.858	43.020	45.877	-28.123	74.000
7386.000	12.127	36.150	48.278	-25.722	74.000
9848.000	12.852	36.980	49.833	-24.167	74.000
Average Detector:					
--					
Vertical					
Peak Detector:					
4924.000	5.521	42.600	48.120	-25.880	74.000
7386.000	13.254	38.520	51.774	-22.226	74.000
9648.000	13.807	36.610	50.416	-23.584	74.000
Average Detector:					
7386.000	13.254	27.940	41.194	-12.806	54.000
9848.000	13.367	22.230	35.597	-18.403	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : ASUS Transformer Pad
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)(2412MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
4824.000	3.261	43.850	47.111	-26.889	74.000
7236.000	10.650	42.320	52.970	-21.030	74.000
9648.000	13.337	35.890	49.226	-24.774	74.000
Average Detector:					
7236.000	10.650	25.970	36.620	-17.380	54.000
Vertical					
Peak Detector:					
4824.000	6.421	43.310	49.731	-24.269	74.000
7236.000	11.495	43.540	55.035	-18.965	74.000
9648.000	13.807	35.770	49.576	-24.424	74.000
Average Detector:					
7236.000	11.495	27.160	38.655	-15.345	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : ASUS Transformer Pad
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2437 MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
4874.000	3.038	41.970	45.007	-28.993	74.000
7311.000	11.795	38.230	50.024	-23.976	74.000
9748.000	12.635	36.210	48.845	-25.155	74.000
Average Detector:					
7311.000	11.795	23.080	34.874	-19.126	54.000
Vertical					
Peak Detector:					
4874.000	5.812	40.960	46.771	-27.229	74.000
7311.000	12.630	42.360	54.989	-19.011	74.000
9748.000	13.126	36.750	49.876	-24.124	74.000
Average Detector:					
7311.000	12.630	25.720	38.349	-15.651	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : ASUS Transformer Pad
 Test Item : Harmonic Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2462 MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
Peak Detector:					
4924.000	2.858	40.800	43.657	-30.343	74.000
7386.000	13.254	37.970	51.224	-22.776	74.000
9848.000	12.852	36.540	49.393	-24.607	74.000
Average Detector:					
7386.000	13.254	22.040	35.294	-18.706	54.000
Vertical					
Peak Detector:					
4924.000	5.521	42.280	47.800	-26.200	74.000
7386.000	13.254	38.040	51.294	-22.706	74.000
9848.000	13.367	36.840	50.207	-23.793	74.000
Average Detector:					
7386.000	13.254	23.580	36.834	-17.166	54.000
9848.000	13.367	22.500	35.867	-18.133	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : ASUS Transformer Pad
 Test Item : General Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11b 1Mbps)(2437 MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
113.420	-8.339	33.454	25.115	-18.385	43.500
202.660	-10.889	37.964	27.075	-16.425	43.500
303.540	-3.074	32.189	29.115	-16.885	46.000
379.200	-1.005	35.583	34.577	-11.423	46.000
544.100	3.512	23.835	27.347	-18.653	46.000
615.880	3.215	25.751	28.966	-17.034	46.000
Vertical					
109.540	-0.418	35.851	35.433	-8.067	43.500
206.540	-7.705	31.591	23.886	-19.614	43.500
303.540	-6.794	34.379	27.585	-18.415	46.000
355.920	-3.488	34.795	31.307	-14.693	46.000
608.120	-1.576	25.700	24.124	-21.876	46.000
961.200	7.260	26.674	33.934	-20.066	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : ASUS Transformer Pad
 Test Item : General Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11g 6Mbps)(2437 MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
109.540	-7.488	32.299	24.811	-18.689	43.500
202.660	-10.889	35.142	24.253	-19.247	43.500
303.540	-3.074	32.176	29.102	-16.898	46.000
379.200	-1.005	31.198	30.192	-15.808	46.000
515.000	1.610	25.527	27.137	-18.863	46.000
608.120	4.384	25.526	29.910	-16.090	46.000
Vertical					
206.540	-7.705	31.290	23.585	-19.915	43.500
303.540	-6.794	33.649	26.855	-19.145	46.000
359.800	-3.810	33.545	29.735	-16.265	46.000
538.280	0.020	25.512	25.532	-20.468	46.000
608.120	-1.576	26.694	25.118	-20.882	46.000
961.200	7.260	27.022	34.282	-19.718	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

Product : ASUS Transformer Pad
 Test Item : General Radiated Emission Data
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)(2437 MHz)

Frequency MHz	Correct Factor dB	Reading Level dBuV	Measurement Level dBuV/m	Margin dB	Limit dBuV/m
Horizontal					
202.660	-10.889	35.355	24.466	-19.034	43.500
303.540	-3.074	31.243	28.169	-17.831	46.000
379.200	-1.005	31.133	30.127	-15.873	46.000
515.000	1.610	24.899	26.509	-19.491	46.000
608.120	4.384	26.199	30.583	-15.417	46.000
745.860	3.308	24.551	27.859	-18.141	46.000
Vertical					
202.660	-7.739	31.822	24.083	-19.417	43.500
303.540	-6.794	33.375	26.581	-19.419	46.000
458.740	-3.887	25.113	21.226	-24.774	46.000
608.120	-1.576	27.554	25.978	-20.022	46.000
757.500	2.921	24.080	27.001	-18.999	46.000
961.200	7.260	26.847	34.107	-19.893	54.000

Note:

1. All Readings below 1GHz are Quasi-Peak, above 1GHz are performed with peak and/or average measurements as necessary.
2. Peak measurements: RBW = 1MHz, VBW = 3 MHz, Sweep: Auto.
3. Average measurements: RBW = 1MHz, VBW = 10 Hz, Sweep: Auto.
4. Measurement Level = Reading Level + Correct Factor.
5. Correct Factor = Antenna factor + Cable loss – Amplifier gain.
6. The average measurement was not performed when the peak measured data under the limit of average detection.
7. The emission levels of other frequencies are very lower than the limit and not show in test report.

5. RF antenna conducted test

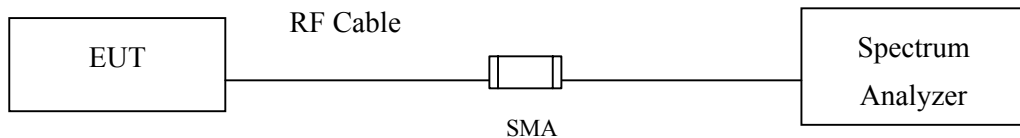
5.1. Test Equipment

	Equipment	Manufacturer	Model No./Serial No.	Last Cal.
	Spectrum Analyzer	R&S	FSP40 / 100170	Jun, 2011
	Spectrum Analyzer	Agilent	E4407B / US39440758	Jun, 2011
X	Spectrum Analyzer	Agilent	N9010A / MY48030495	Apr., 2011

- Note:
1. All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.
 2. The test instruments marked with “X” are used to measure the final test results.

5.2. Test Setup

RF antenna Conducted Measurement:



5.3. Limits

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

5.4. Test Procedure

The EUT was tested according to DTS test procedure of Jan. 2012 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

Set RBW = 100 kHz, Set VBW > RBW, scan up through 10th harmonic.

5.5. Uncertainty

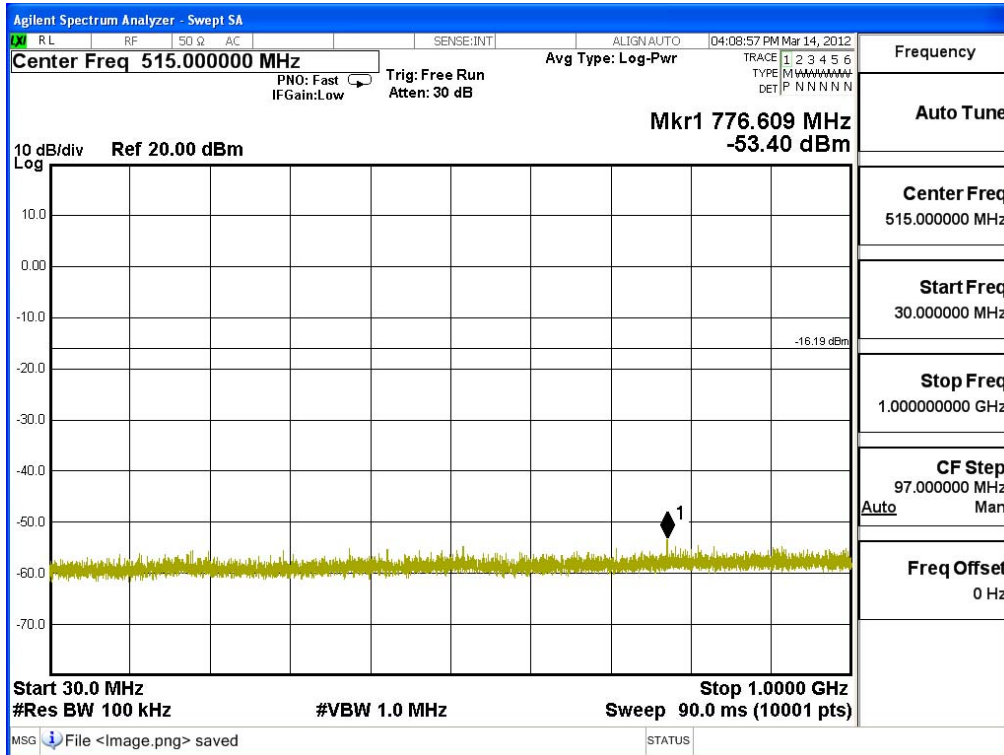
The measurement uncertainty

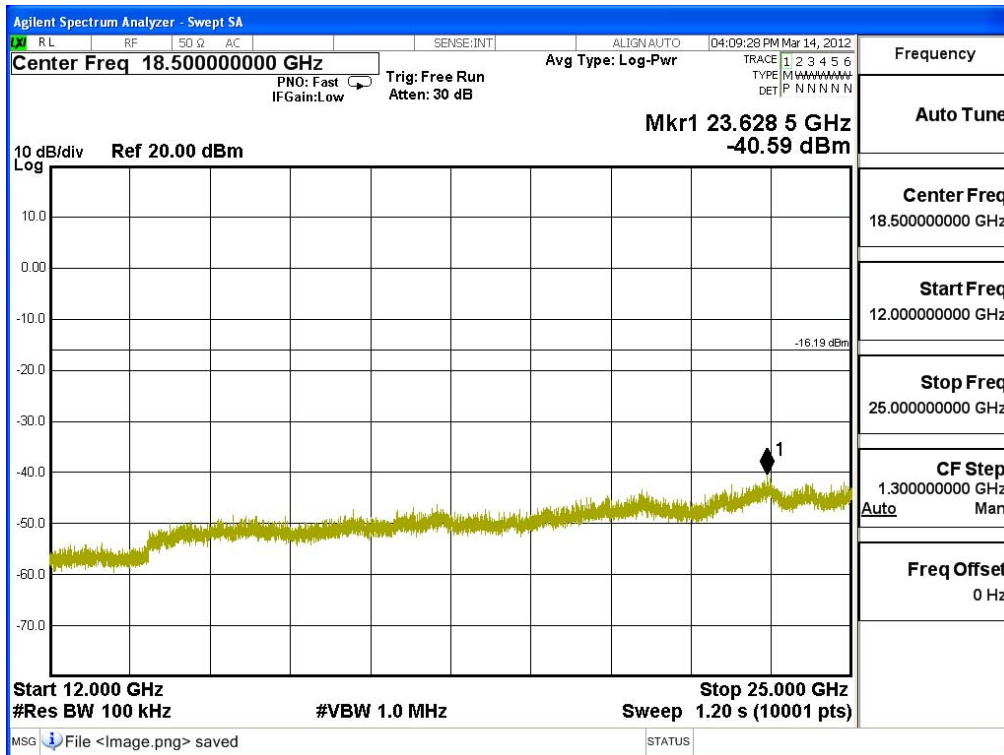
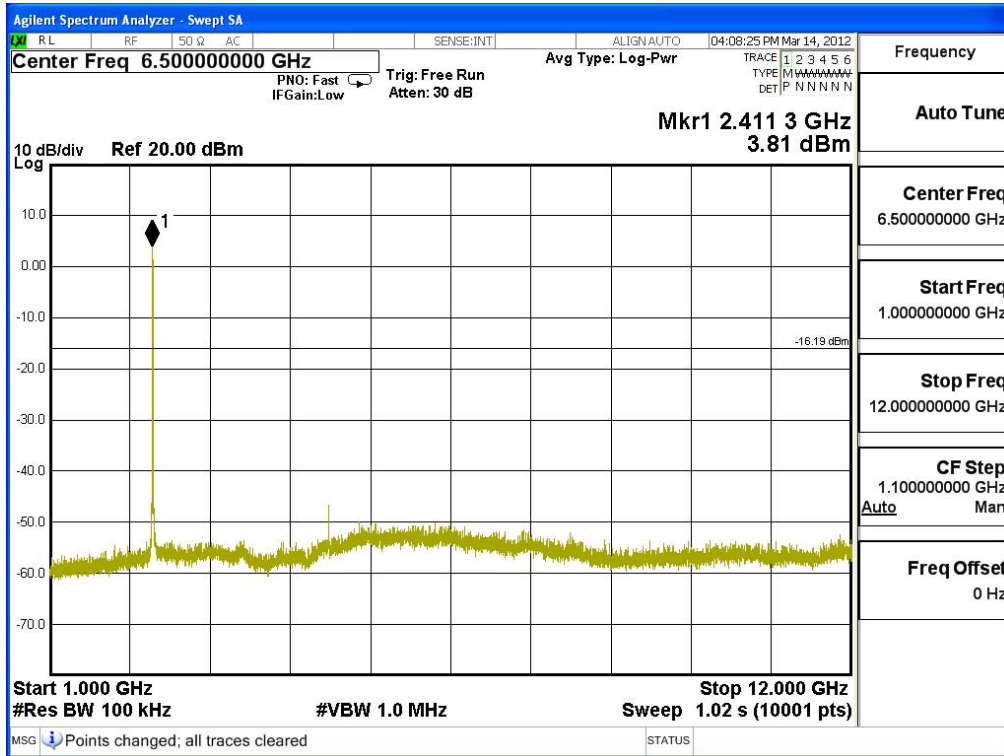
Conducted is defined as $\pm 1.27\text{dB}$

5.6. Test Result of RF antenna conducted test

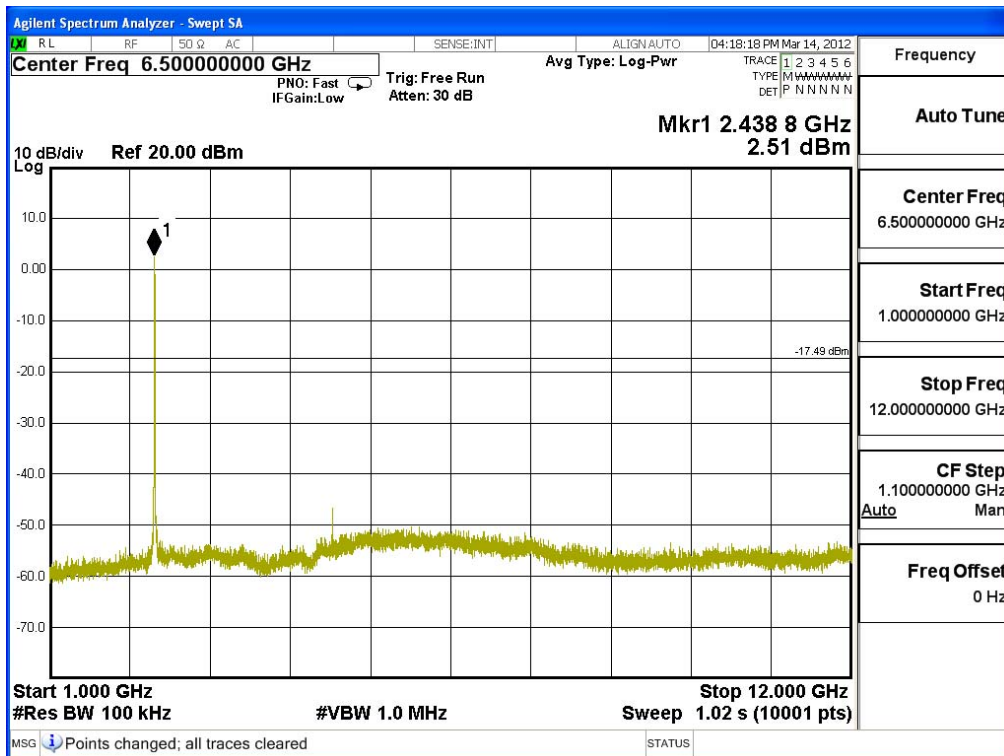
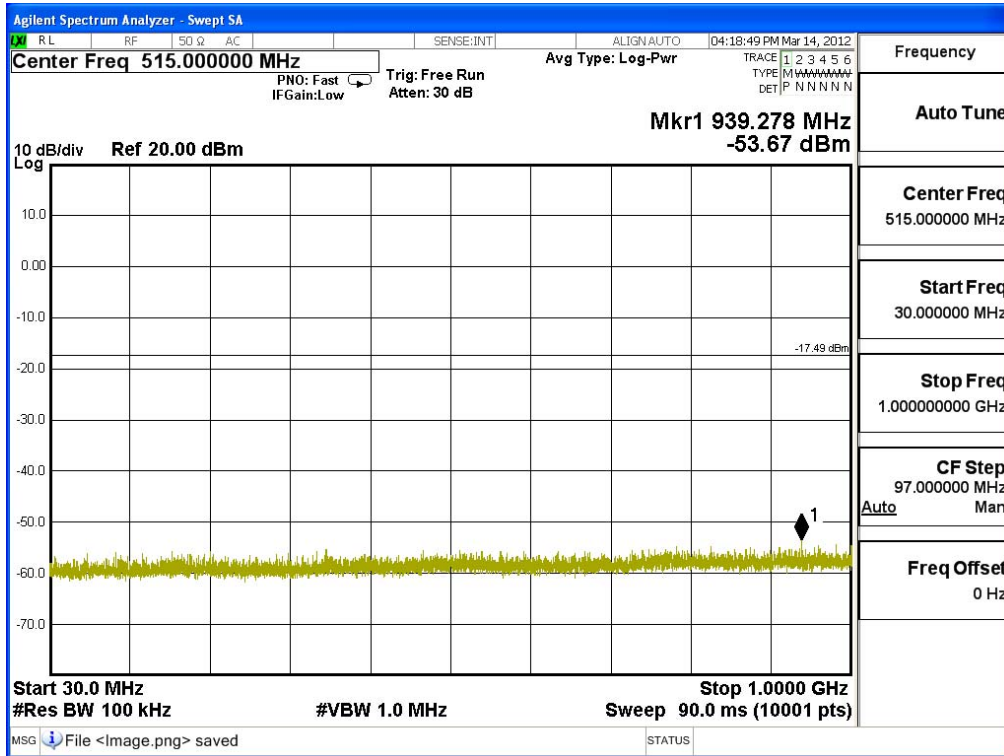
Product : ASUS Transformer Pad
 Test Item : RF antenna conducted test
 Test Site : No.3 OATS
 Test Mode : Mode 1: Transmit (802.11b 1Mbps)

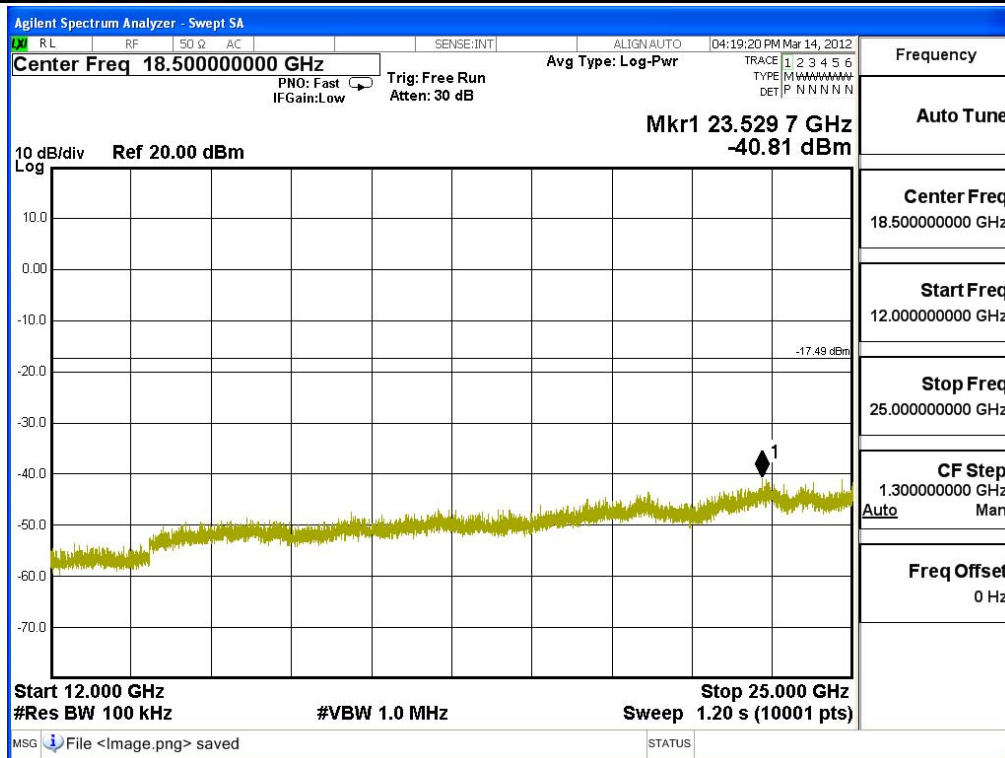
Channel 01 (2412MHz)



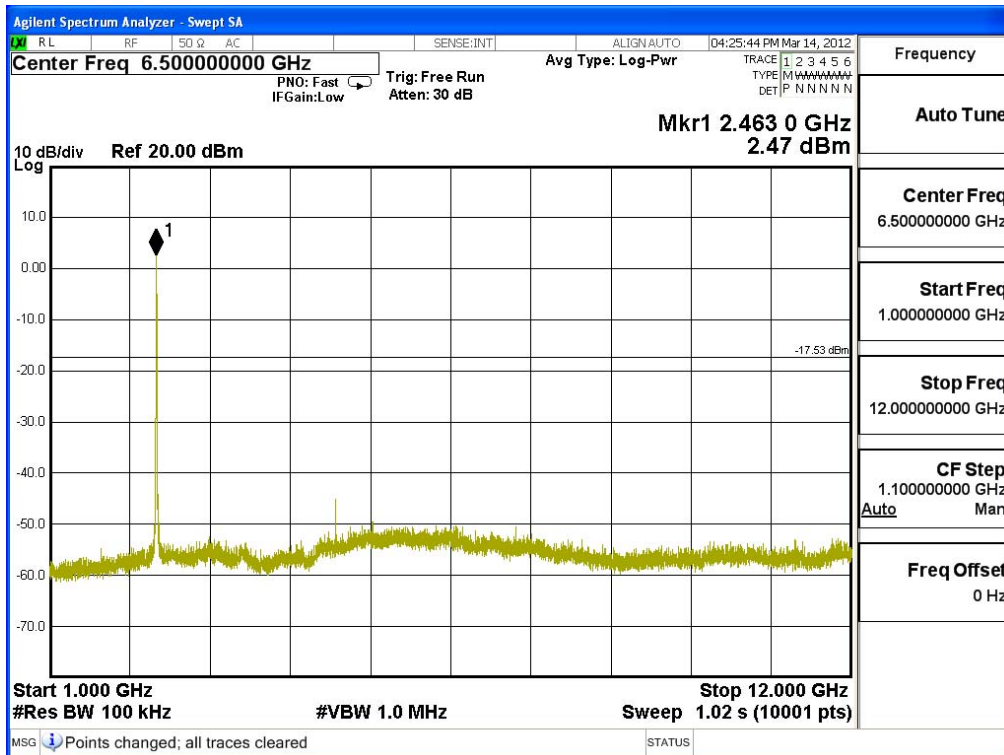
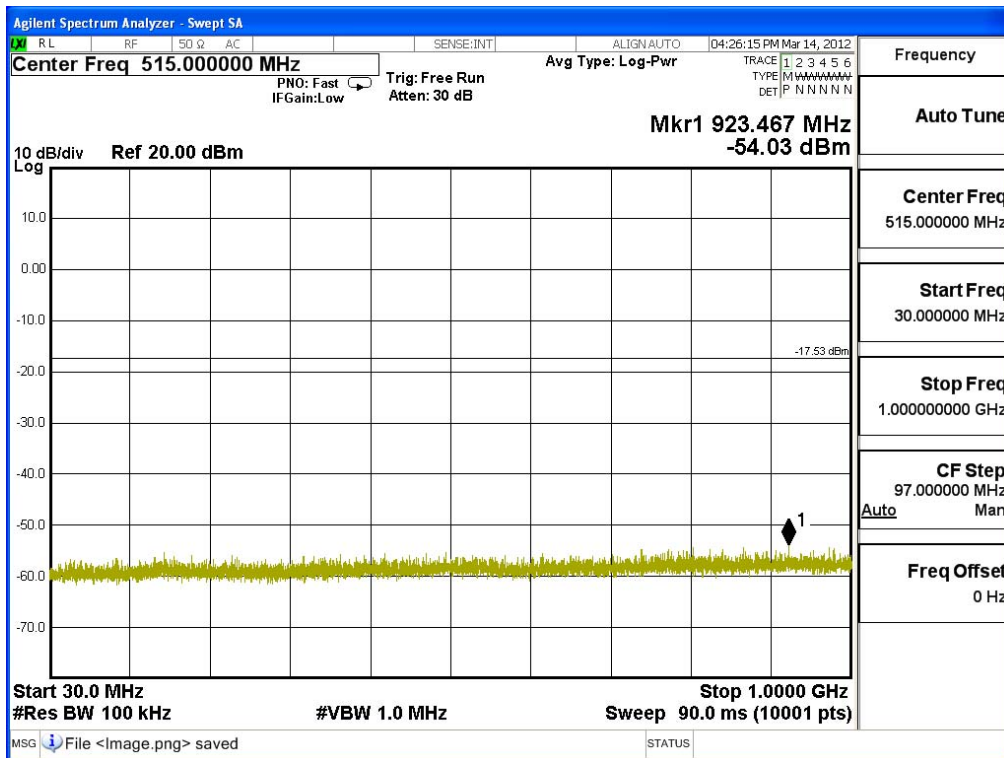


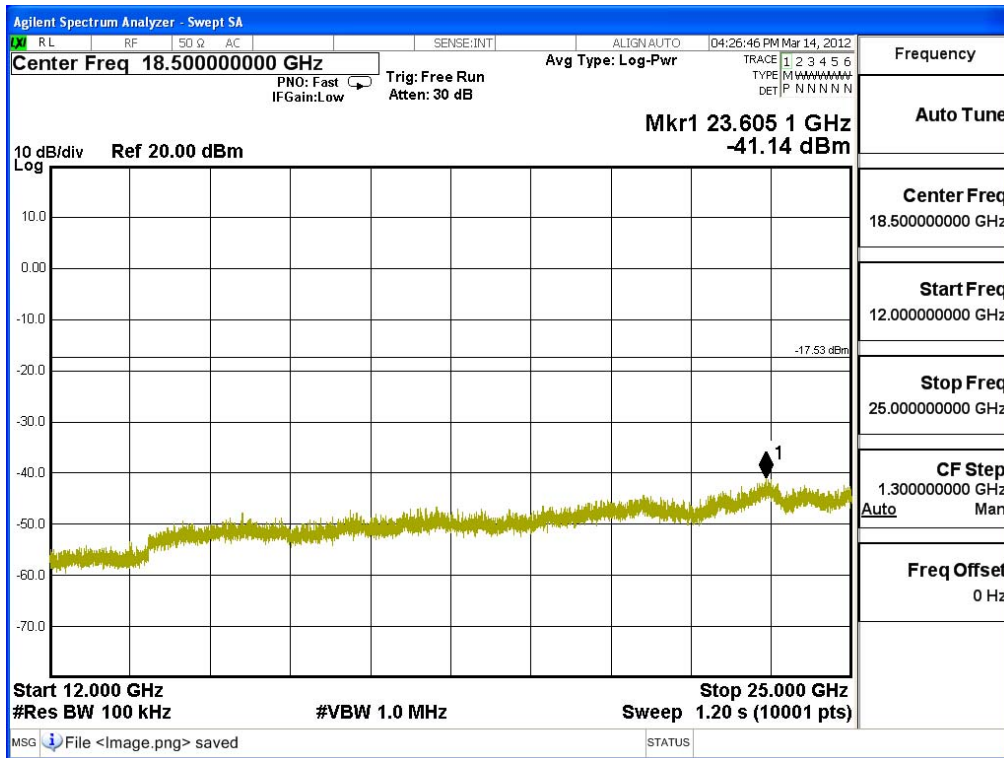
Channel 06 (2437MHz)





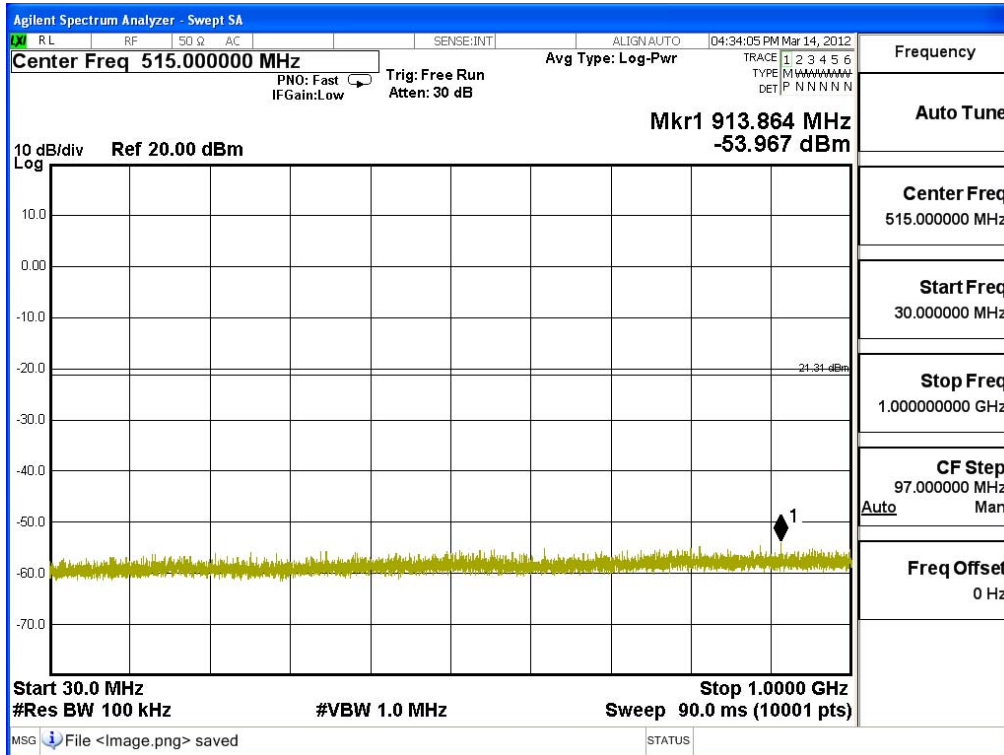
Channel 11 (2462MHz)

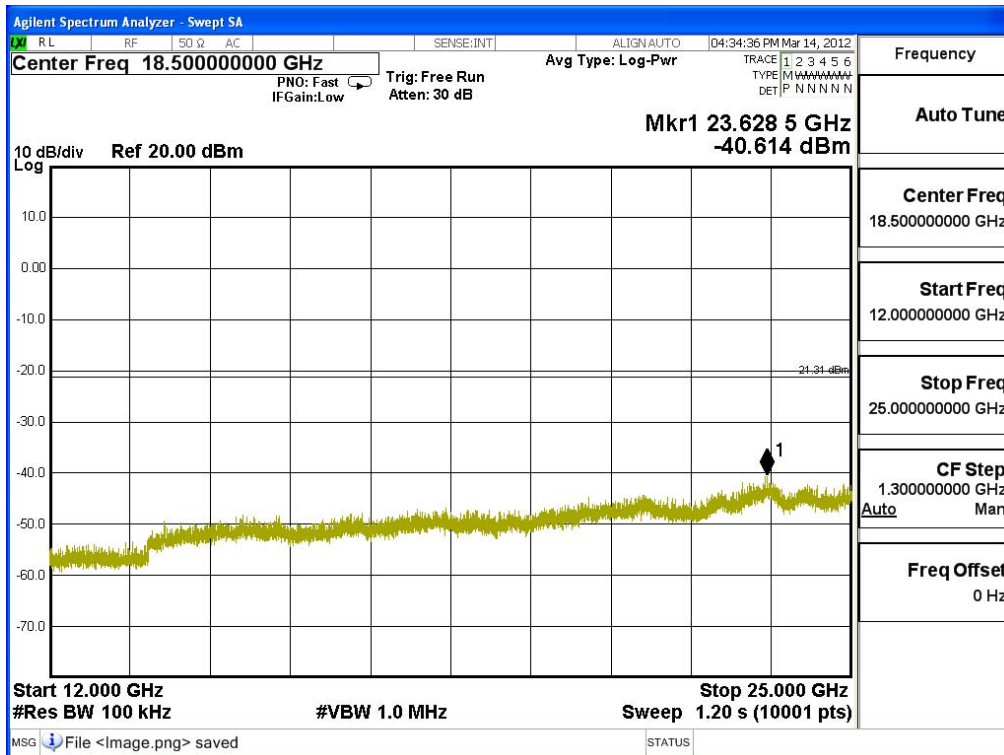
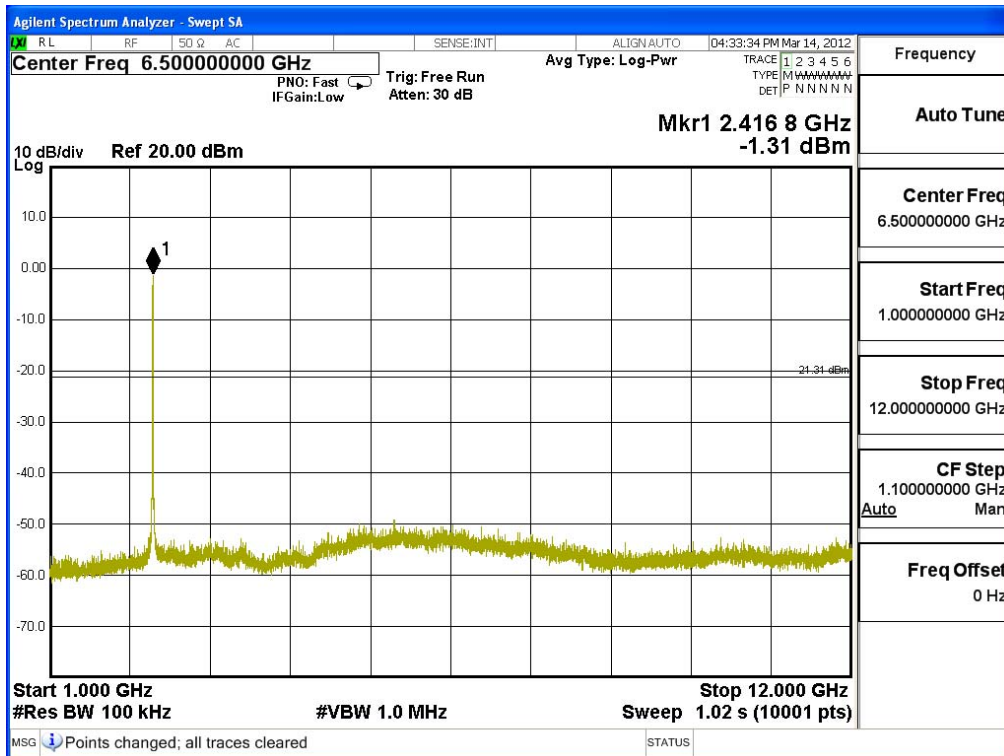




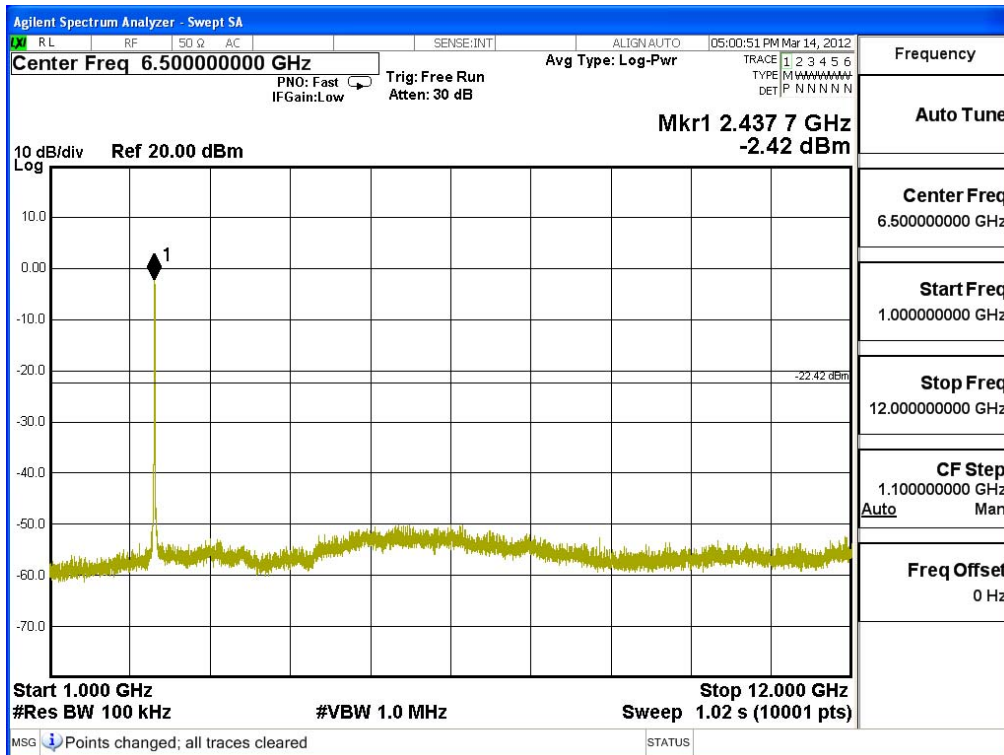
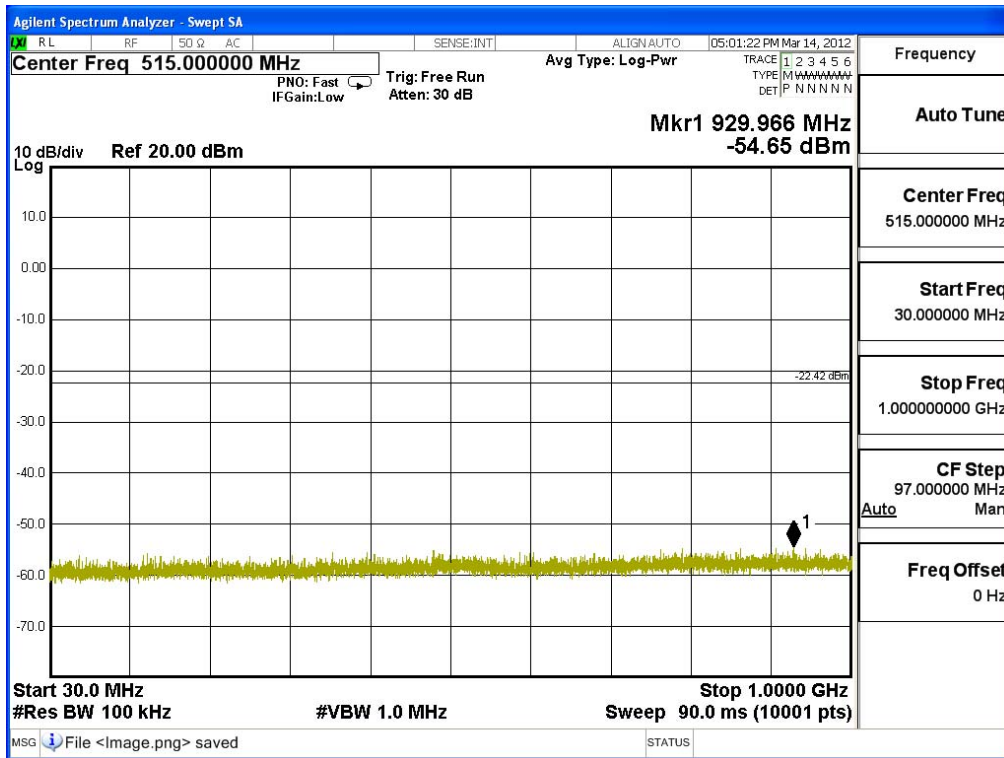
Product : ASUS Transformer Pad
 Test Item : RF Antenna Conducted Spurious
 Test Site : No.3 OATS
 Test Mode : Mode 2: Transmit (802.11g 6Mbps)

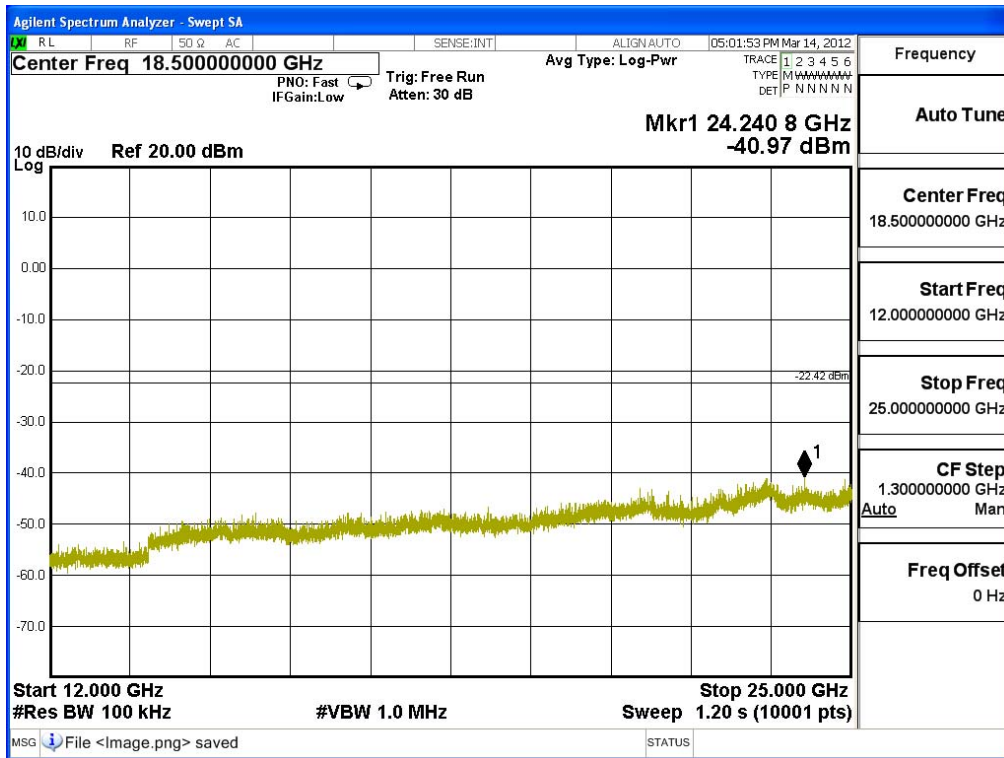
Channel 01 (2412MHz)



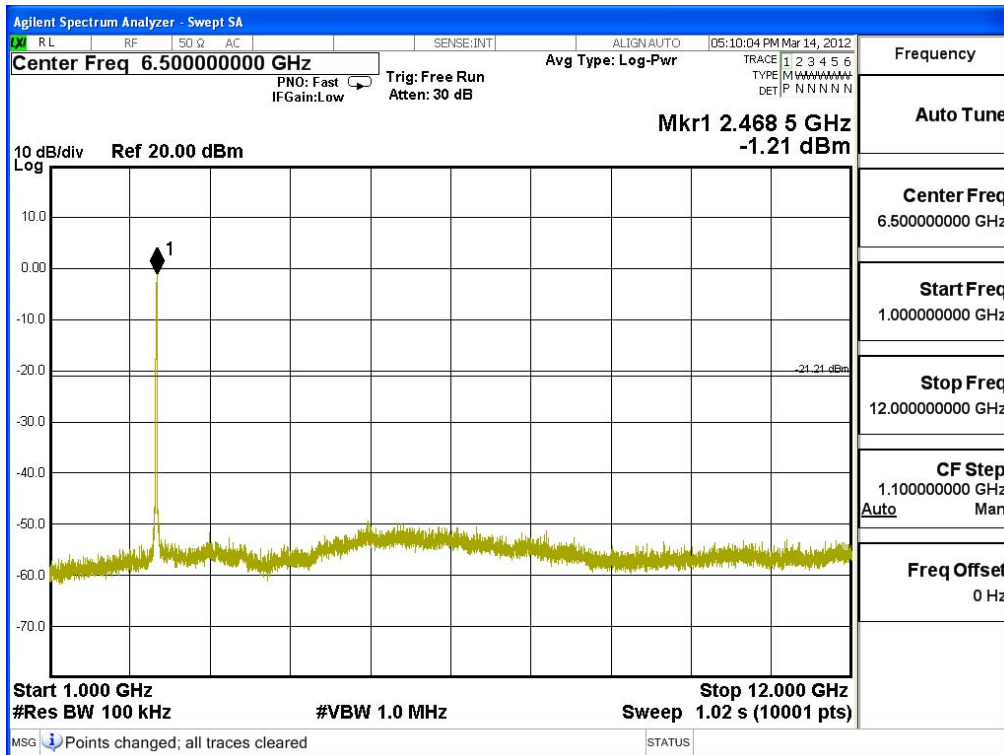
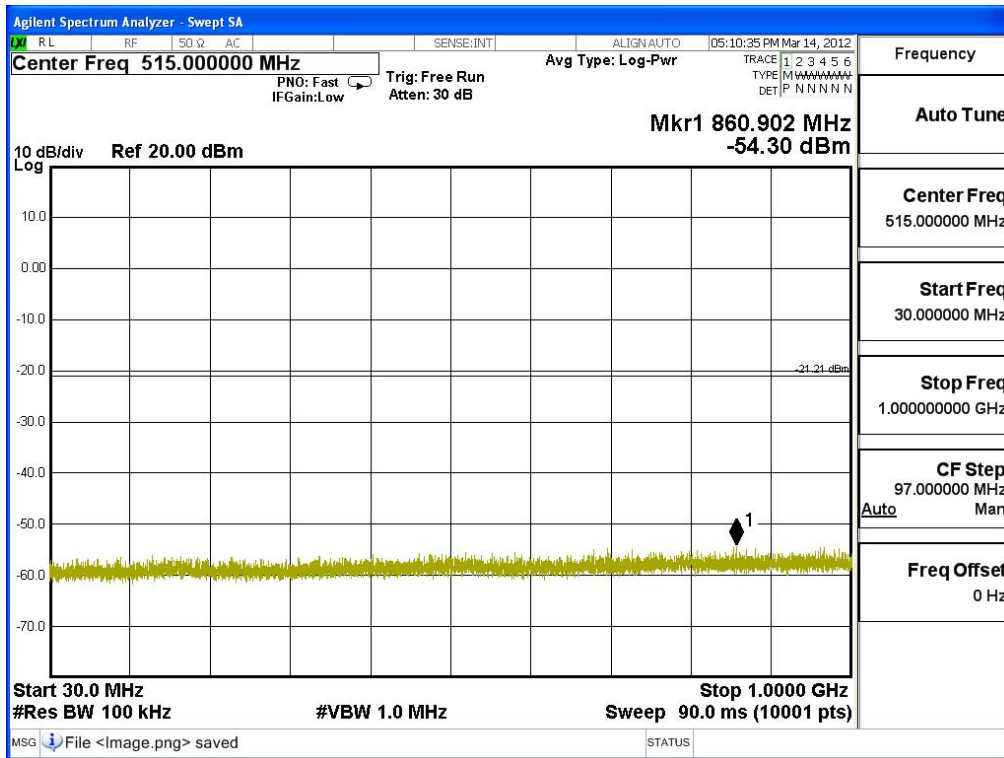


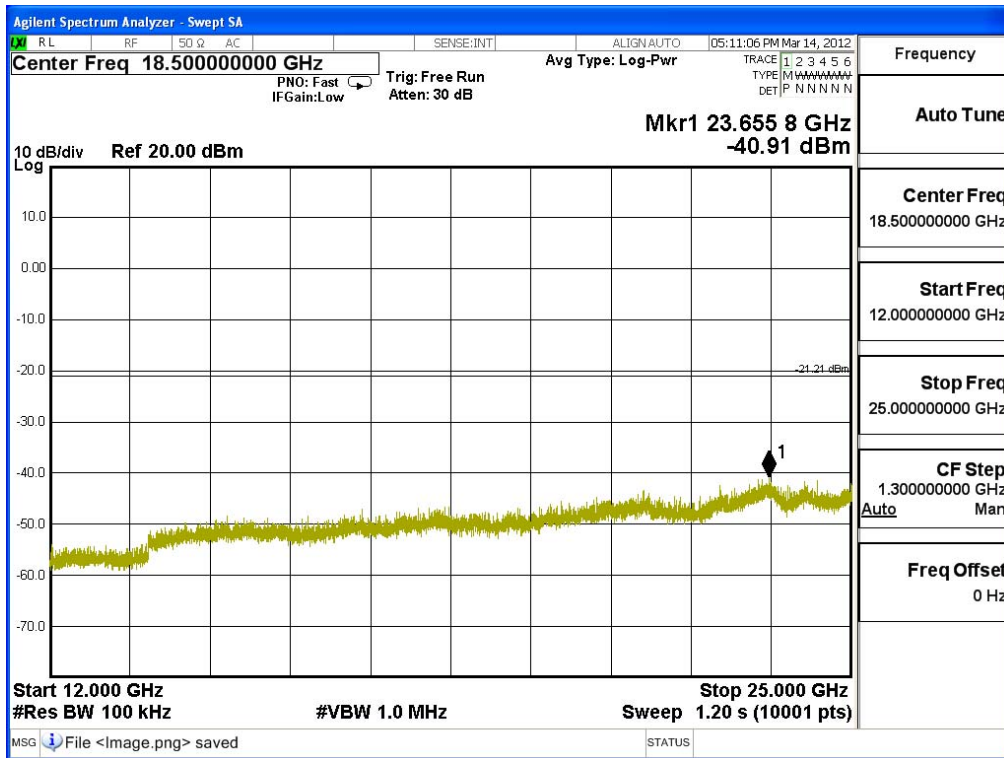
Channel 06 (2437MHz)





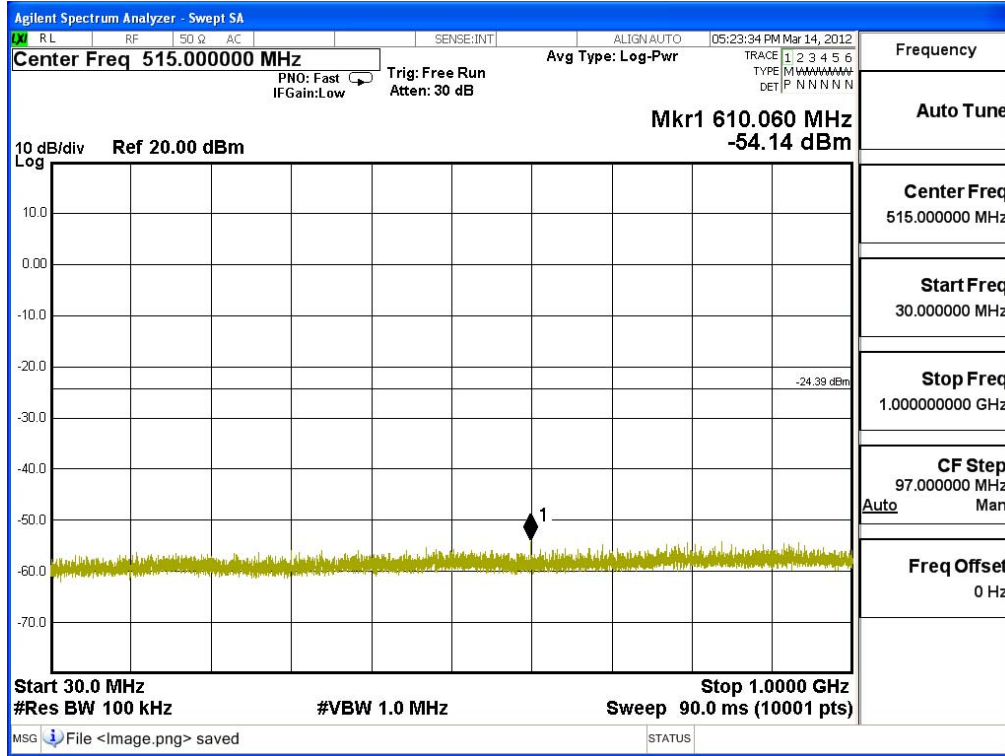
Channel 11 (2462MHz)

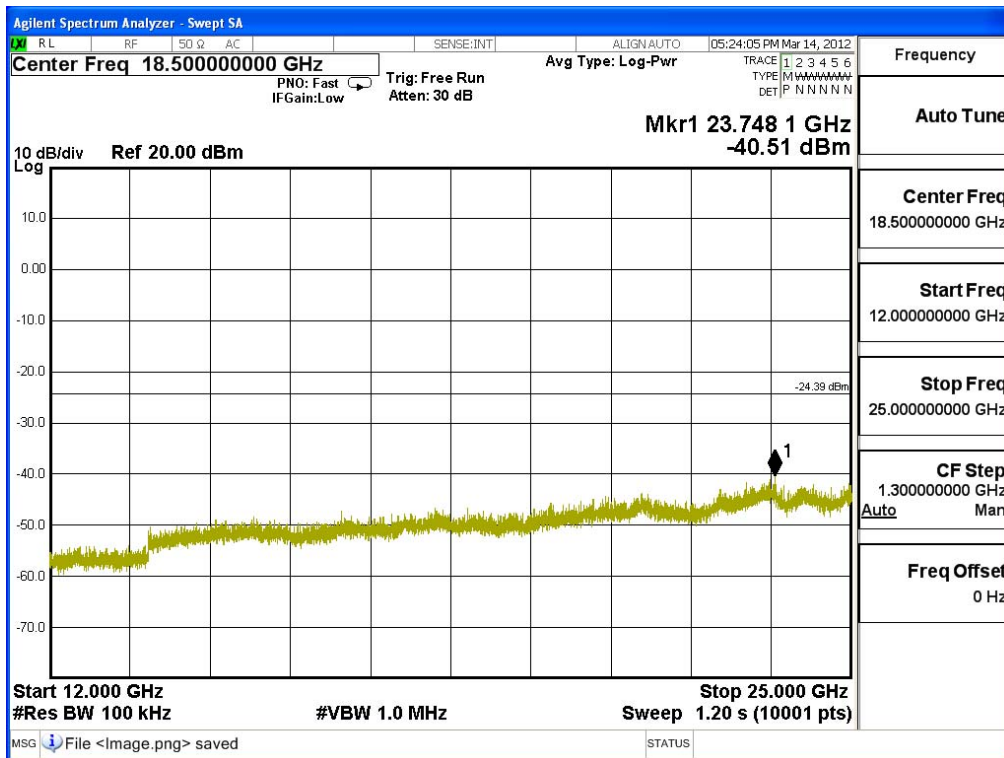
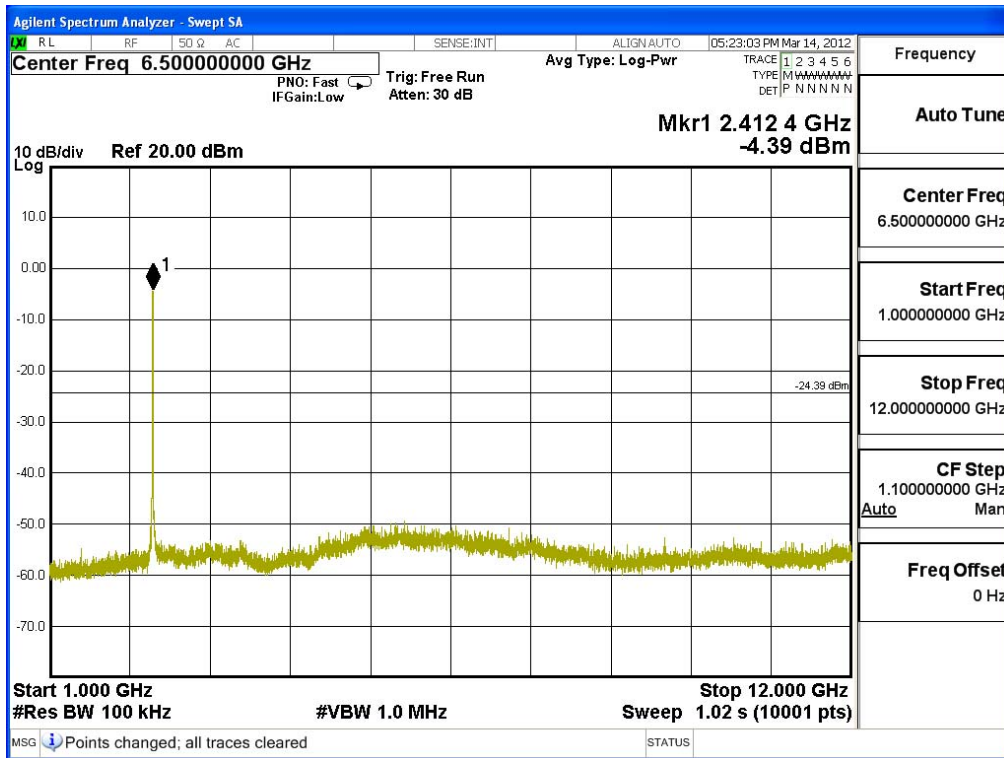




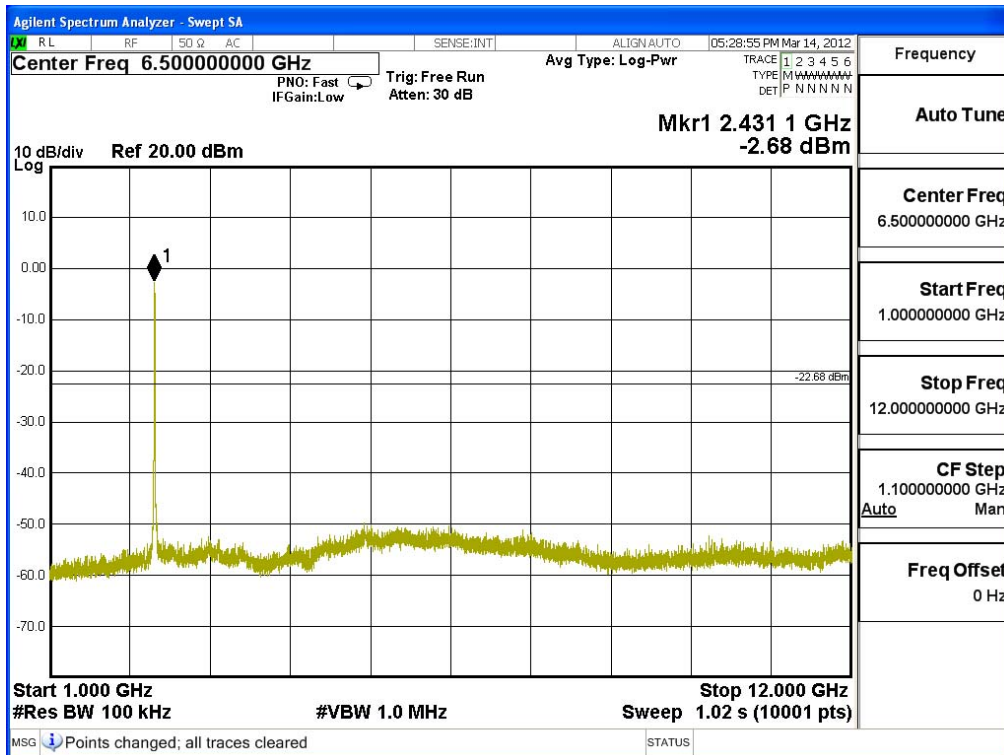
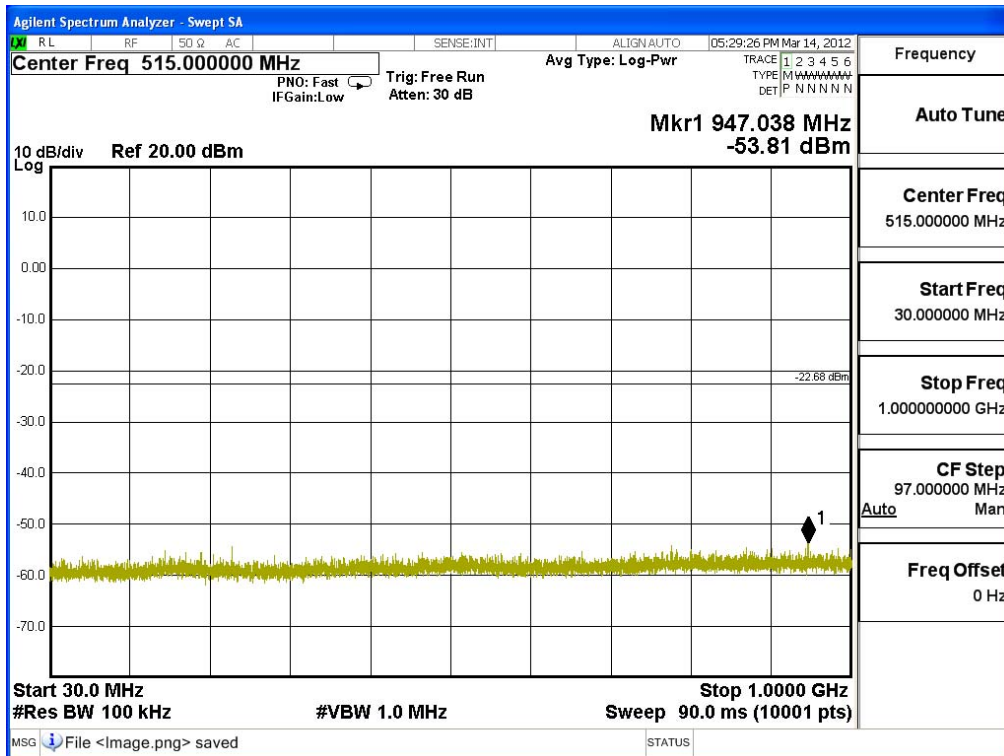
Product : ASUS Transformer Pad
 Test Item : RF Antenna Conducted Spurious
 Test Site : No.3 OATS
 Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)

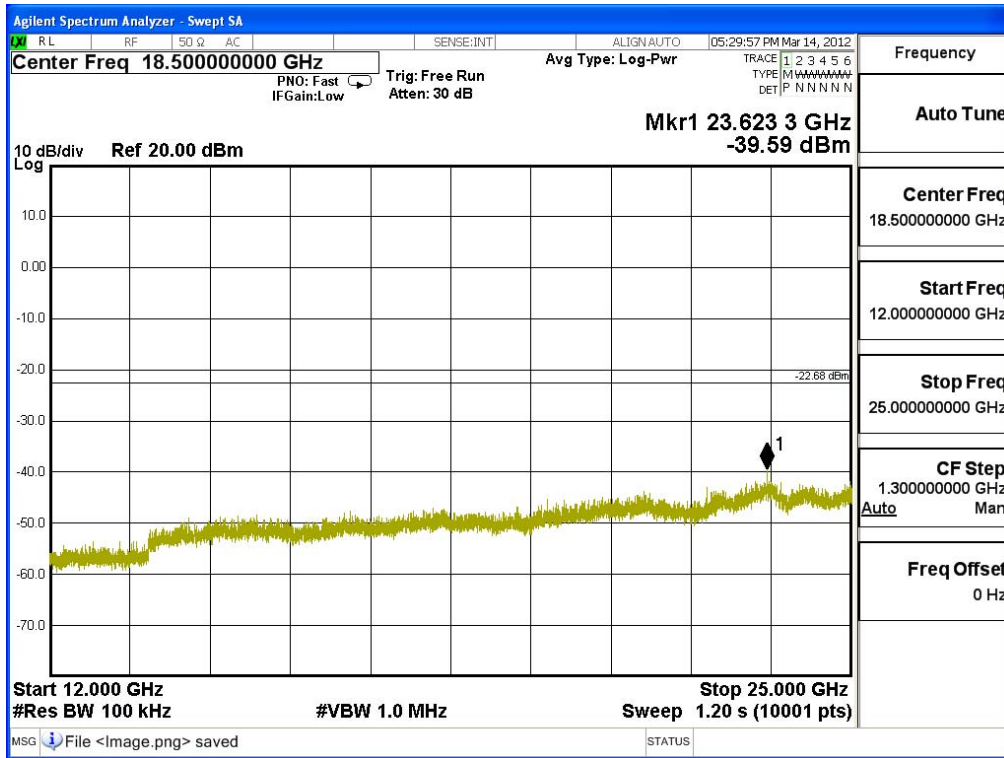
Channel 01 (2412MHz)





Channel 06 (2437MHz)





Channel 11 (2462MHz)

