6. Band Edge

6.1. Test Equipment

RF Conducted Measurement

The following test equipments are used during the band edge tests:

	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.
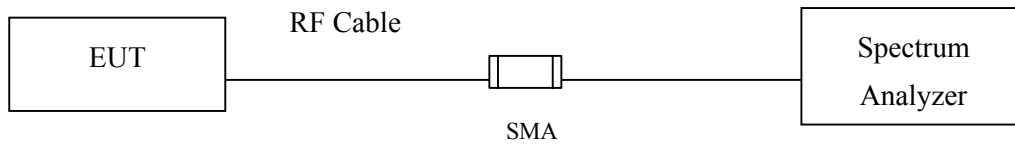
RF Radiated Measurement:

The following test equipments are used during the band edge tests:

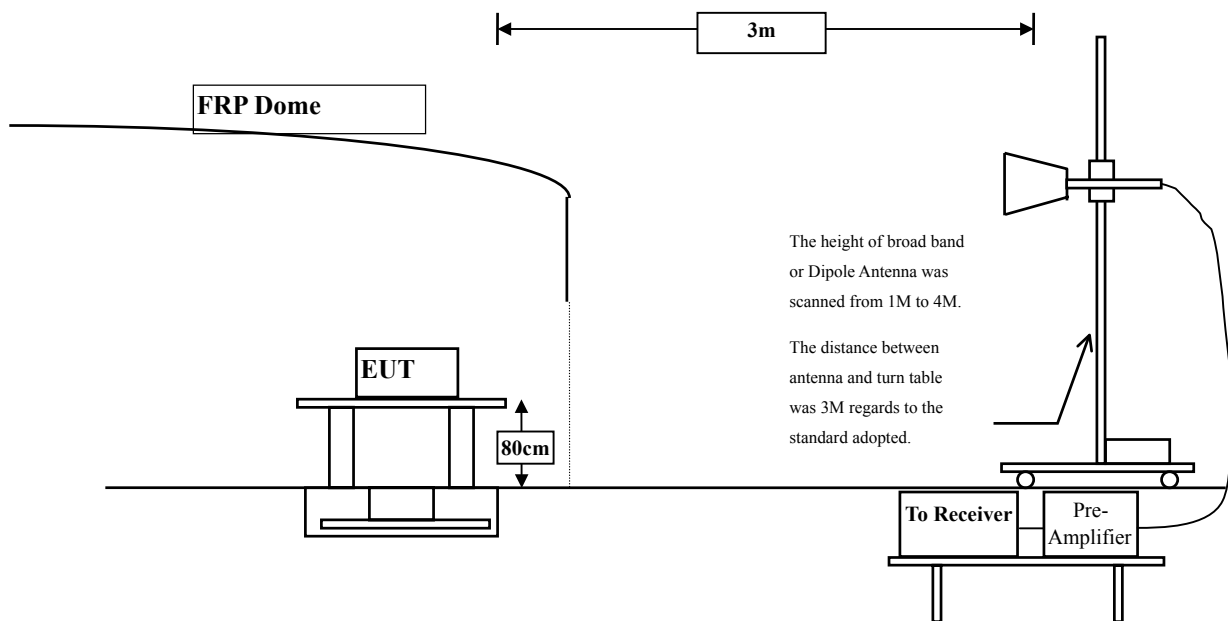| Test Site		Equipment	Manufacturer	Model No./Serial No.	Last Cal.
☒Site # 3		Bilog Antenna	Schaffner Chase	CBL6112B/2673	Sep., 2011
	X	Horn Antenna	Schwarzbeck	BBHA9120D/D305	Sep., 2011
		Horn Antenna	Schwarzbeck	BBHA9170/208	Jul., 2011
	X	Pre-Amplifier	Agilent	8447D/2944A09549	Sep., 2011
	X	Spectrum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

Note: 1. All instruments are calibrated every one year.

2. The test instruments marked by "X" are used to measure the final test results.

6.2. Test Setup

RF Conducted Measurement

RF Radiated Measurement:

The height of broad band or Dipole Antenna was scanned from 1M to 4M.

The distance between antenna and turn table was 3M regards to the standard adopted.

6.3. 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.

6.4. Test Procedure

The EUT was setup according to ANSI C63.4: 2003 and tested according to DTS test procedure of Mar. 2005 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 from 1 meter to 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.

6.5. Uncertainty

± 3.9 dB above 1GHz

± 3.8 dB below 1GHz

6.6. Test Result of Band Edge

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

Fundamental Filed Strength

Antenna Pole	Frequency [MHz]	Correction Factor [dB/m]	Reading Level [dBuV]	Emission Level [dBuV/m]	Detector
Horizontal	2412	31.639	72.06	103.698	Peak
Horizontal	2412	31.639	66.81	98.448	Average
Vertical	2412	30.95	69.18	100.129	Peak
Vertical	2412	30.95	64.03	94.979	Average

Note: 1:Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz

Average detector: RBW=1MHz, VBW=10Hz

Band Edge Test Data

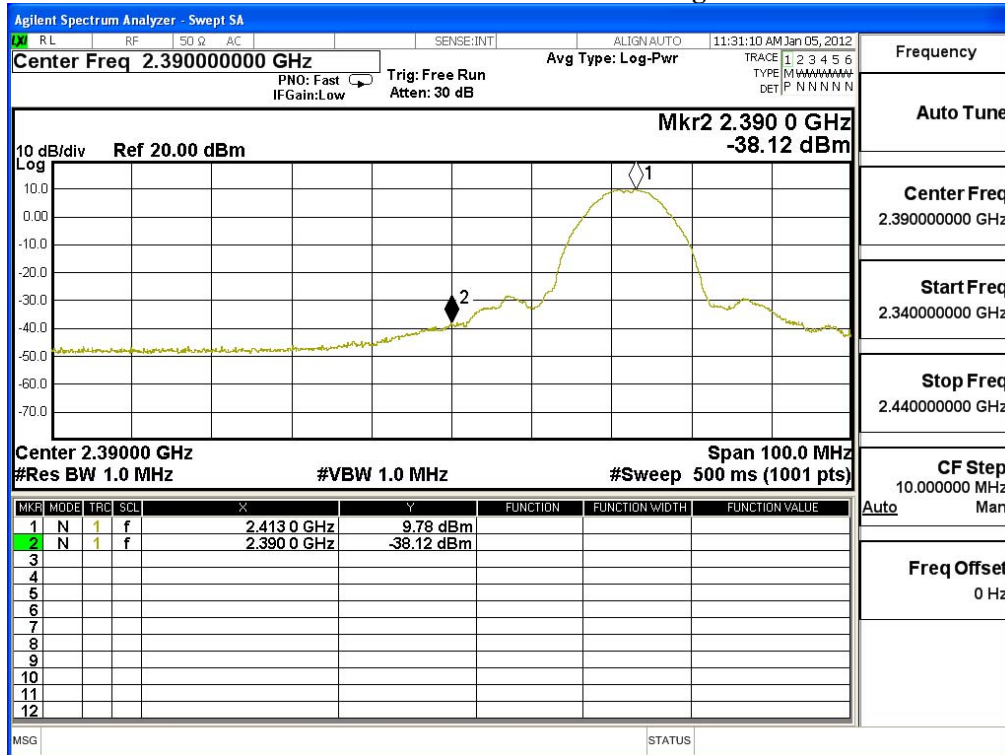| Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	Δ (dB)	Band Edge Field Strength (dBuV/m)	Limit (dBuV/m)	Detector
Horizontal	2390	103.698	47.9	55.798	74.000	Peak
Horizontal	2387.2	98.448	55.77	42.678	54.000	Average
Vertical	2390	100.129	47.9	52.229	74.000	Peak
Vertical	2387.2	94.979	55.77	39.209	54.000	Average

Note:

The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge

measurements per the Marker-Delta Method with the following formula:
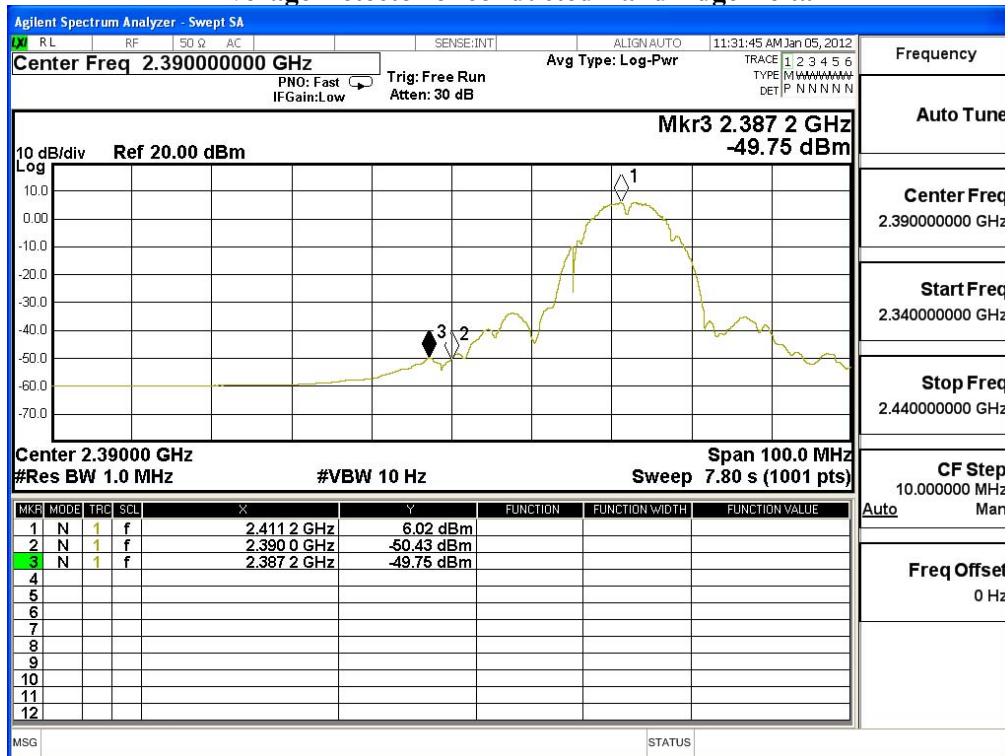
Band Edge field Strength = F - Δ

F = Fundamental field Strength (Peak or Average)

Δ = Conducted Band Edge Delta (Peak or Average)

Peak Detector of conducted Band Edge Delta

Average Detector of conducted Band Edge Delta

Product : ASUS Transformer Pad

Test Item : Band Edge Data

Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11b 1Mbps)

Fundamental Filed Strength

Antenna Pole	Frequency [MHz]	Correction Factor [dB/m]	Reading Level [dBuV]	Emission Level [dBuV/m]	Detector
Horizontal	2462	32.019	72.55	104.569	Peak
Horizontal	2462	32.019	67.6	99.619	Average
Vertical	2462	31.29	70.05	101.34	Peak
Vertical	2462	31.29	65.1	96.39	Average

Note: 1:Spectrum Analyzer setting:

  Peak detector: RBW=1MHz, VBW=1MHz

  Average detector: RBW=1MHz, VBW=10Hz

Band Edge Test Data

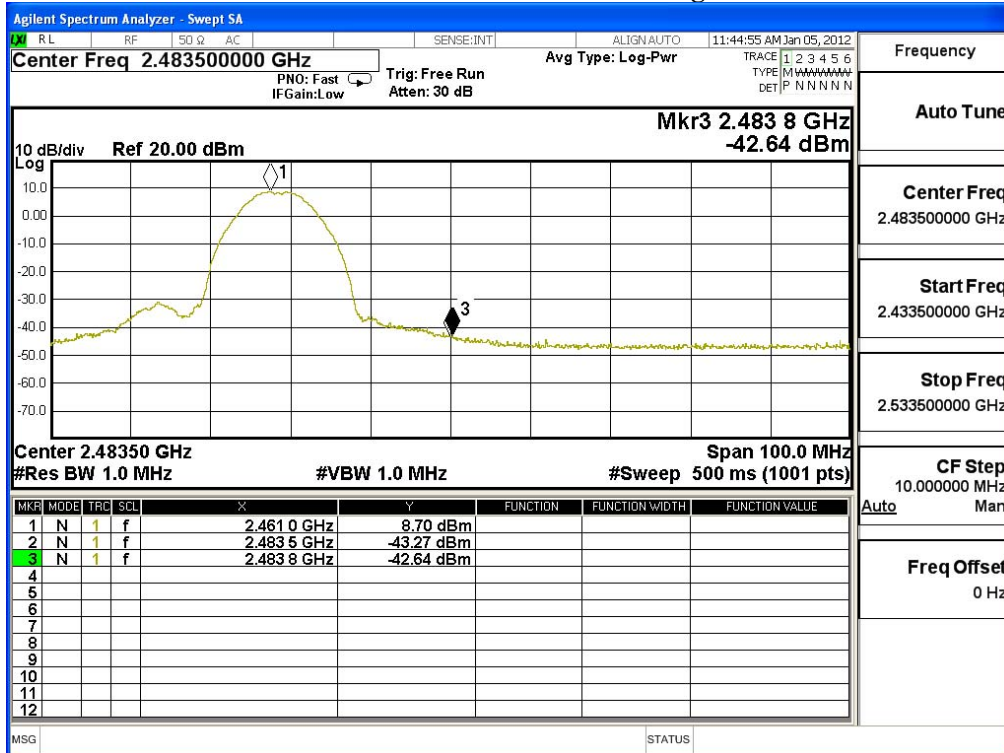| Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	Δ (dB)	Band Edge Field Strength (dBuV/m)	Limit (dBuV/m)	Detector
Horizontal	2483.8	104.569	51.34	53.229	74.000	Peak
Horizontal	2483.5	99.619	60.83	38.789	54.000	Average
Vertical	2483.8	101.34	51.34	50	74.000	Peak
Vertical	2483.5	96.39	60.83	35.56	54.000	Average

Note:

 The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge

 measurements per the Marker-Delta Method with the following formula:

 Band Edge field Strength = F - Δ
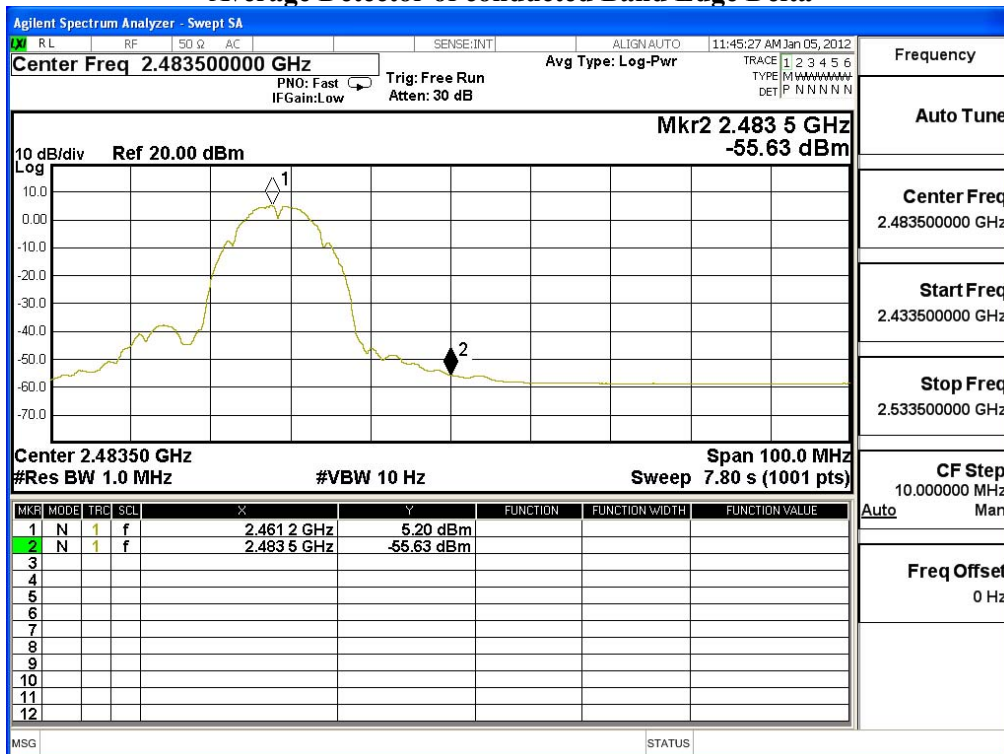
 F = Fundamental field Strength (Peak or Average)

 Δ = Conducted Band Edge Delta (Peak or Average)

Peak Detector of conducted Band Edge Delta

Average Detector of conducted Band Edge Delta

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

Fundamental Filed Strength

Antenna Pole	Frequency [MHz]	Correction Factor [dB/m]	Reading Level [dBuV]	Emission Level [dBuV/m]	Detector
Horizontal	2412	31.639	75.6	107.238	Peak
Horizontal	2412	31.639	57.63	89.268	Average
Vertical	2412	30.95	72.33	103.279	Peak
Vertical	2412	30.95	54.95	85.899	Average

Note: 1:Spectrum Analyzer setting:

      Peak detector: RBW=1MHz, VBW=1MHz

      Average detector: RBW=1MHz, VBW=10Hz

Band Edge Test Data

Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	Δ (dB)	Band Edge Field Strength (dBuV/m)	Limit (dBuV/m)	Detector
Horizontal	2390	107.238	36.13	71.108	74.000	Peak
Horizontal	2390	89.268	36.819	52.449	54.000	Average
Vertical	2390	103.279	36.13	67.149	74.000	Peak
Vertical	2390	85.899	36.819	49.08	54.000	Average

Note:

    The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge

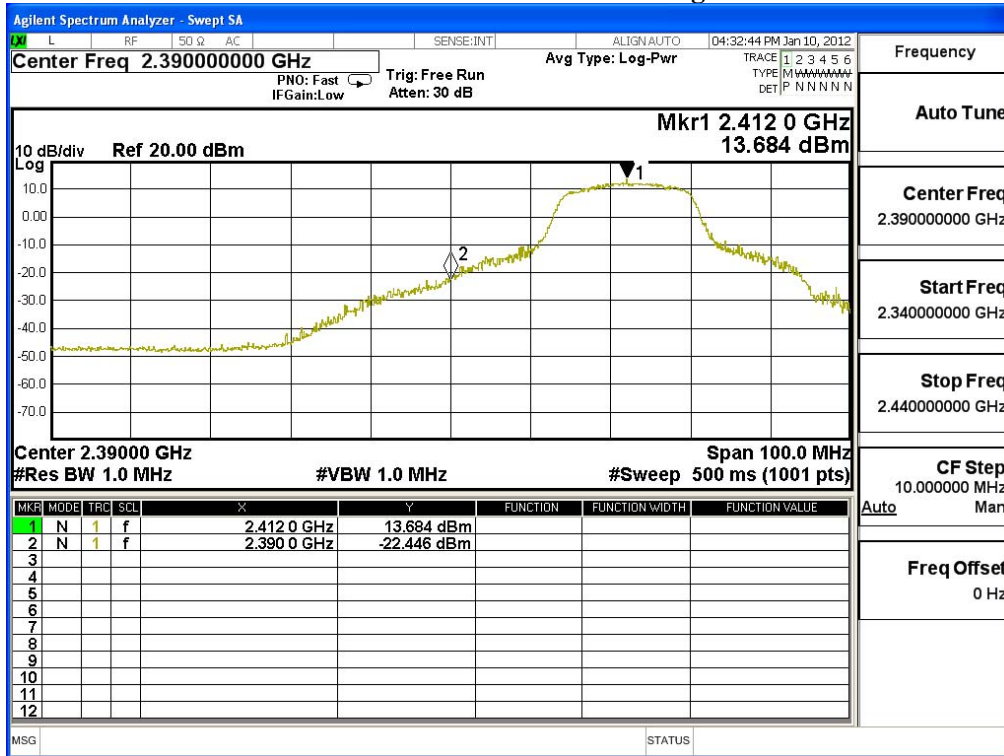   measurements per the Marker-Delta Method with the following formula:

    Band Edge field Strength = F - Δ
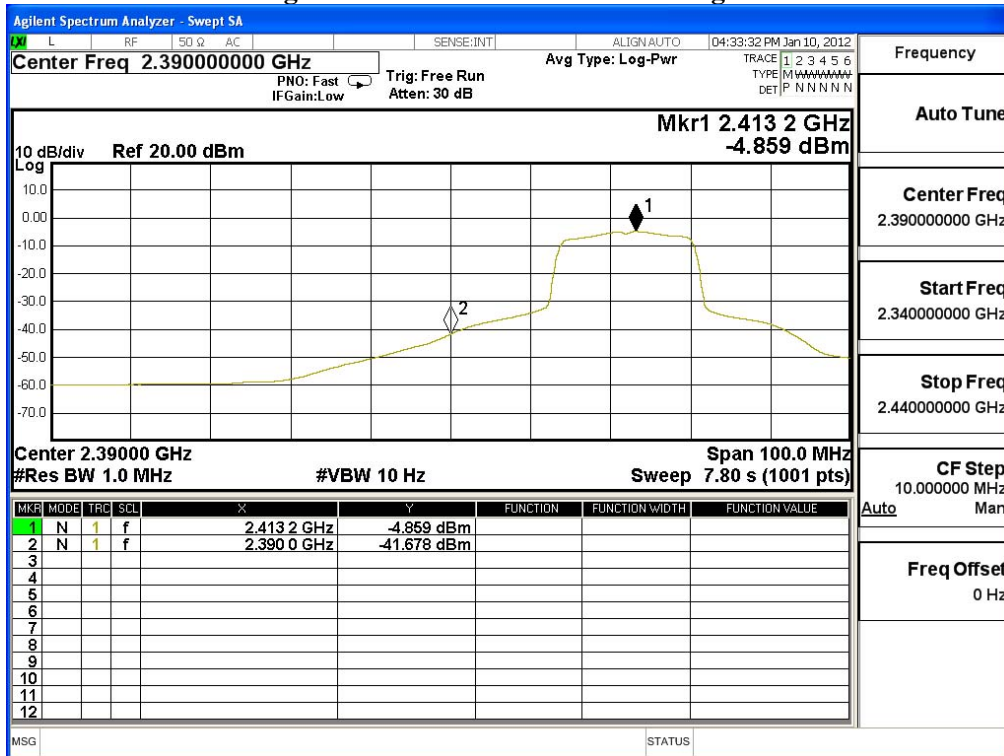
    F = Fundamental field Strength (Peak or Average)

    Δ = Conducted Band Edge Delta (Peak or Average)

Peak Detector of conducted Band Edge Delta

Average Detector of conducted Band Edge Delta

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

Fundamental Filed Strength

Antenna Pole	Frequency [MHz]	Correction Factor [dB/m]	Reading Level [dBuV]	Emission Level [dBuV/m]	Detector
Horizontal	2462	32.019	76.44	108.459	Peak
Horizontal	2462	32.019	58.48	90.499	Average
Vertical	2462	31.29	73.81	105.1	Peak
Vertical	2462	31.29	56.15	87.44	Average

Note: 1:Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz

Average detector: RBW=1MHz, VBW=10Hz

Band Edge Test Data

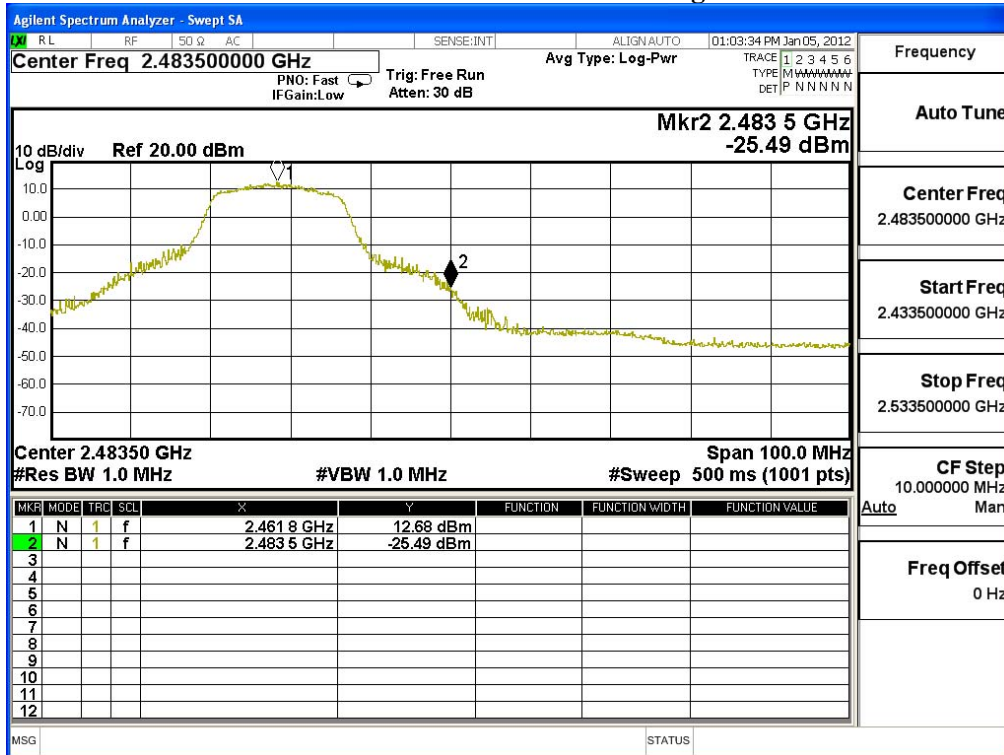| Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	Δ (dB)	Band Edge Field Strength (dBuV/m)	Limit (dBuV/m)	Detector
Horizontal	2483.5	108.459	38.17	70.289	74.000	Peak
Horizontal	2483.5	90.499	41.72	48.779	54.000	Average
Vertical	2483.5	105.1	38.17	66.93	74.000	Peak
Vertical	2483.5	87.44	41.72	45.72	54.000	Average

Note:

The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge

measurements per the Marker-Delta Method with the following formula:
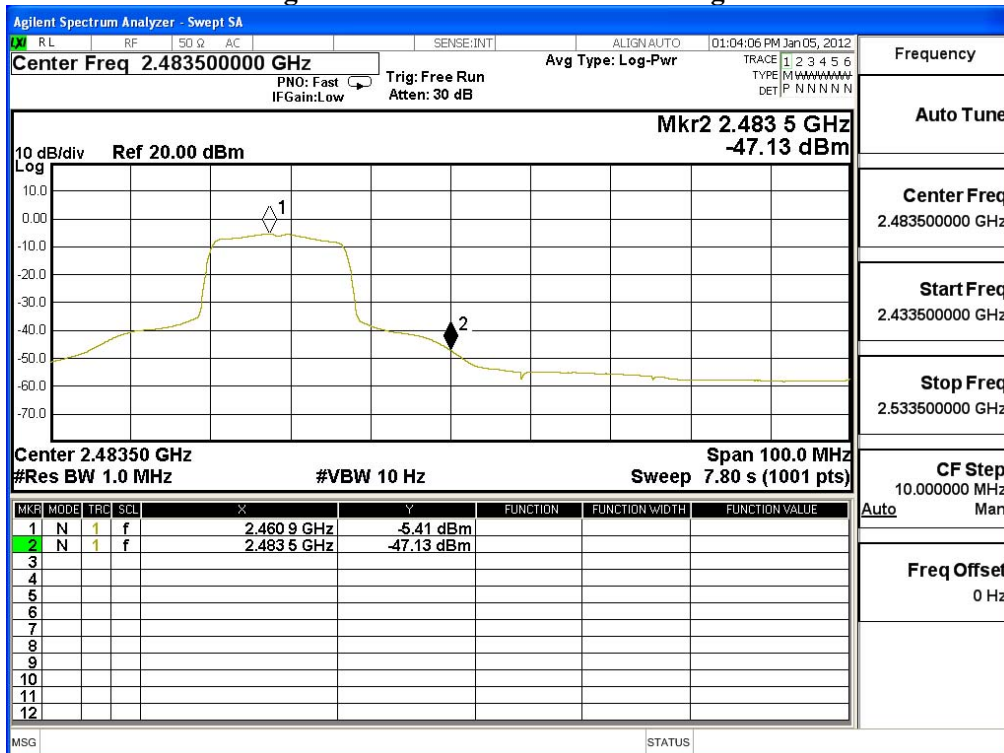
Band Edge field Strength = F - Δ

F = Fundamental field Strength (Peak or Average)

Δ = Conducted Band Edge Delta (Peak or Average)

Peak Detector of conducted Band Edge Delta

Average Detector of conducted Band Edge Delta

Product   :   ASUS Transformer Pad

Test Item   :   Band Edge Data

Test Site   :   No.3 OATS

Test Mode   :   Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)

Fundamental Filed Strength

Antenna Pole	Frequency [MHz]	Correction Factor [dB/m]	Reading Level [dBuV]	Emission Level [dBuV/m]	Detector
Horizontal	2412	31.639	72.32	103.958	Peak
Horizontal	2412	31.639	55.17	86.808	Average
Vertical	2412	31.639	69.4	101.038	Peak
Vertical	2412	31.639	52.57	84.208	Average

Note: 1:Spectrum Analyzer setting:

Peak detector: RBW=1MHz, VBW=1MHz

Average detector: RBW=1MHz, VBW=10Hz

Band Edge Test Data

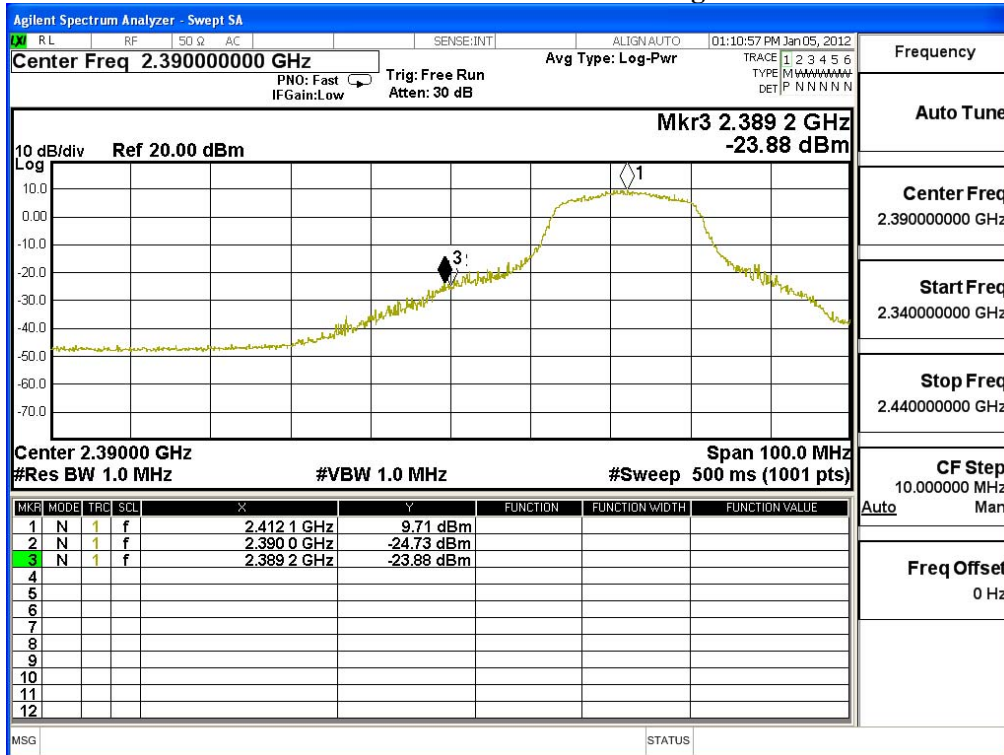| Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	Δ (dB)	Band Edge Field Strength (dBuV/m)	Limit (dBuV/m)	Detector
Horizontal	2389.2	103.958	33.59	70.368	74.000	Peak
Horizontal	2390	86.808	36.45	50.358	54.000	Average
Vertical	2389.2	101.038	33.59	67.448	74.000	Peak
Vertical	2390	84.208	36.45	47.758	54.000	Average

Note:

The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge measurements per the Marker-Delta Method with the following formula:

Band Edge field Strength = F - Δ

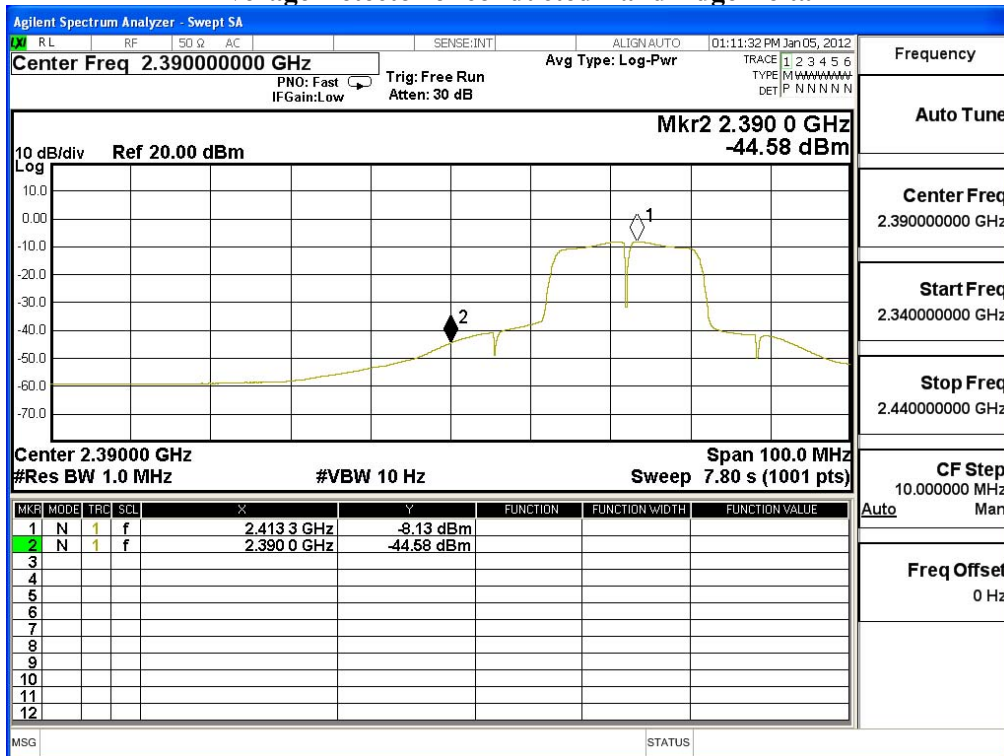F = Fundamental field Strength (Peak or Average)

Δ = Conducted Band Edge Delta (Peak or Average)

Peak Detector of conducted Band Edge Delta

Average Detector of conducted Band Edge Delta

Product   :   ASUS Transformer Pad

Test Item   :   Band Edge Data

Test Site   :   No.3 OATS

Test Mode   :   Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)

Fundamental Filed Strength

Antenna Pole	Frequency [MHz]	Correction Factor [dB/m]	Reading Level [dBuV]	Emission Level [dBuV/m]	Detector
Horizontal	2462	32.019	73.23	105.249	Peak
Horizontal	2462	32.019	55.9	87.919	Average
Vertical	2462	31.29	70.46	101.75	Peak
Vertical	2462	31.29	53.57	84.86	Average

Note: 1:Spectrum Analyzer setting:

      Peak detector: RBW=1MHz, VBW=1MHz

      Average detector: RBW=1MHz, VBW=10Hz

Band Edge Test Data

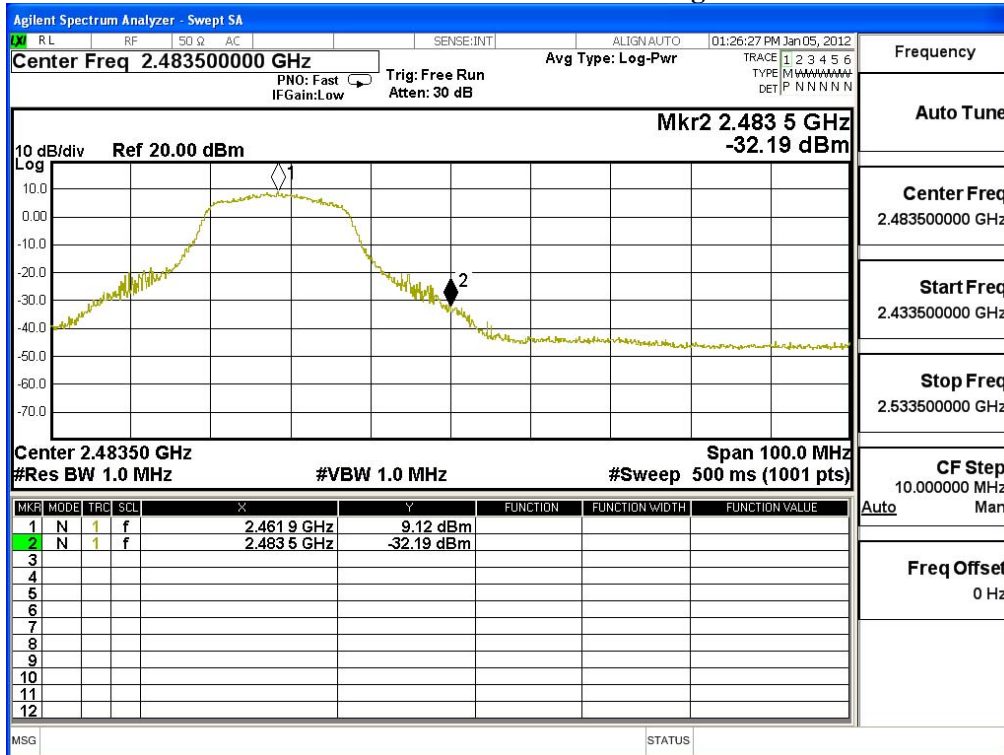| Antenna Pole	Test Frequency (MHz)	Fundamental (dBuV/m)	Δ (dB)	Band Edge Field Strength (dBuV/m)	Limit (dBuV/m)	Detector
Horizontal	2483.5	105.249	41.31	63.939	74.000	Peak
Horizontal	2483.5	87.919	41.72	46.199	54.000	Average
Vertical	2483.5	101.75	41.31	60.44	74.000	Peak
Vertical	2483.5	84.86	41.72	43.14	54.000	Average

Note:

    The Band Edge Field Strength was calculated using the Fundamental and Conducted Band Edge

    measurements per the Marker-Delta Method with the following formula:
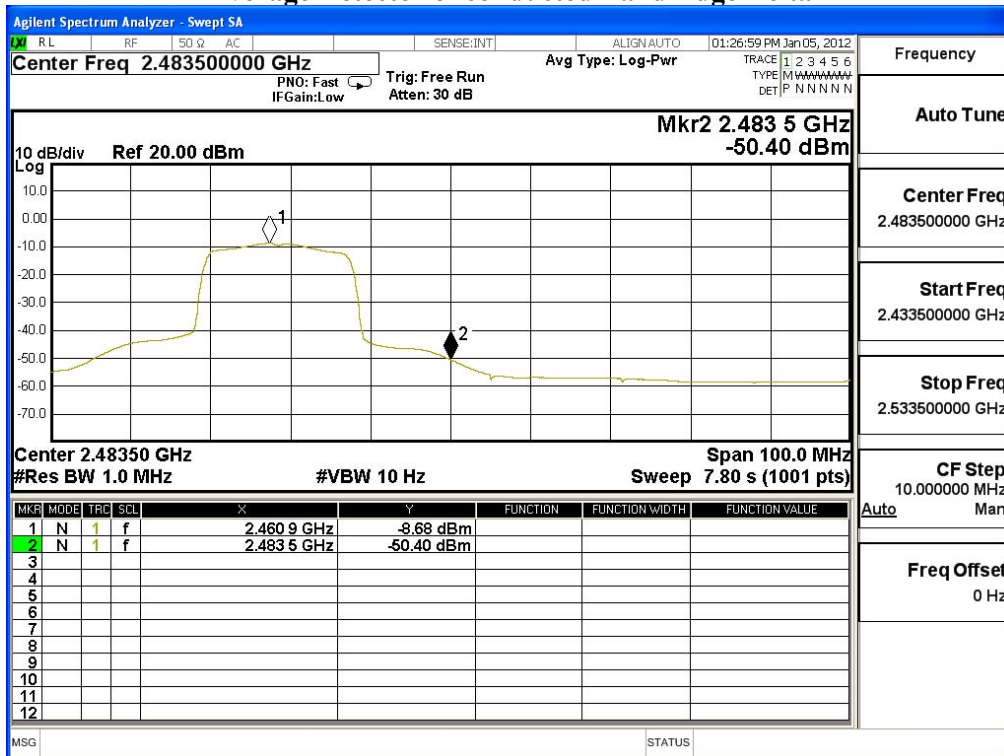
    Band Edge field Strength = F - Δ

    F = Fundamental field Strength (Peak or Average)

    Δ = Conducted Band Edge Delta (Peak or Average)

Peak Detector of conducted Band Edge Delta

Agilent Spectrum Analyzer - Swept SA

R L	RF	50 Ω	AC		SENSE:INT	ALIGN AUTO	01:26:27 PM Jan 05, 2012

Center Freq 2.483500000 GHz
PNO: Fast   Trig: Free Run
IFGain:Low   Atten: 30 dB

Avg Type: Log-Pwr   TRACE 1 2 3 4 5 6
TYPE M W W W W W
DET P N N N N N

Frequency

Mkr2 2.483 5 GHz
-32.19 dBm

Auto Tune

10 dB/div   Ref 20.00 dBm
Log

10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0

Center Freq
2.483500000 GHz

Start Freq
2.433500000 GHz

Stop Freq
2.533500000 GHz

Center 2.48350 GHz   Span 100.0 MHz
#Res BW 1.0 MHz   #VBW 1.0 MHz   #Sweep 500 ms (1001 pts)

CF Step
10.000000 MHz
Auto   Man

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.461 9 GHz	9.12 dBm			
2	N	1	f	2.483 5 GHz	-32.19 dBm			
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								

MSG   STATUS

Freq Offset
0 Hz

Average Detector of conducted Band Edge Delta

Agilent Spectrum Analyzer - Swept SA

R L	RF	50 Ω	AC		SENSE:INT	ALIGN AUTO	01:26:59 PM Jan 05, 2012

Center Freq 2.483500000 GHz
PNO: Fast   Trig: Free Run
IFGain:Low   Atten: 30 dB

Avg Type: Log-Pwr   TRACE 1 2 3 4 5 6
TYPE M W W W W W
DET P N N N N N

Frequency

Mkr2 2.483 5 GHz
-50.40 dBm

Auto Tune

10 dB/div   Ref 20.00 dBm
Log

10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0

Center Freq
2.483500000 GHz

Start Freq
2.433500000 GHz

Stop Freq
2.533500000 GHz

Center 2.48350 GHz   Span 100.0 MHz
#Res BW 1.0 MHz   #VBW 10 Hz   Sweep 7.80 s (1001 pts)

CF Step
10.000000 MHz
Auto   Man

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.460 9 GHz	-8.68 dBm			
2	N	1	f	2.483 5 GHz	-50.40 dBm			
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								

MSG   STATUS

Freq Offset
0 Hz

7. Occupied Bandwidth

7.1. 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.

7.2. Test Setup
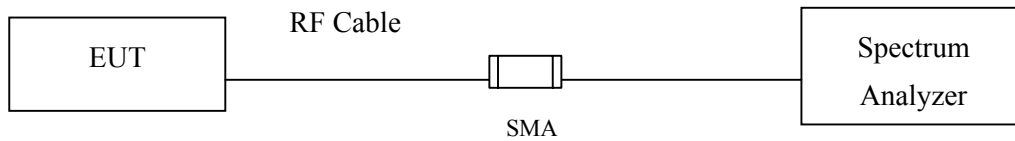
7.3. Limits

The minimum bandwidth shall be at least 500 kHz.

7.4. Test Procedure

The EUT was setup according to ANSI C63.4: 2003; tested according to DTS test procedure of Mar. 2005 KDB558074 for compliance to FCC 47CFR 15.247 requirements.

Set RBW = 100 kHz, Span greater than RBW.

7.5. Uncertainty

± 150Hz

7.6. Test Result of Occupied Bandwidth
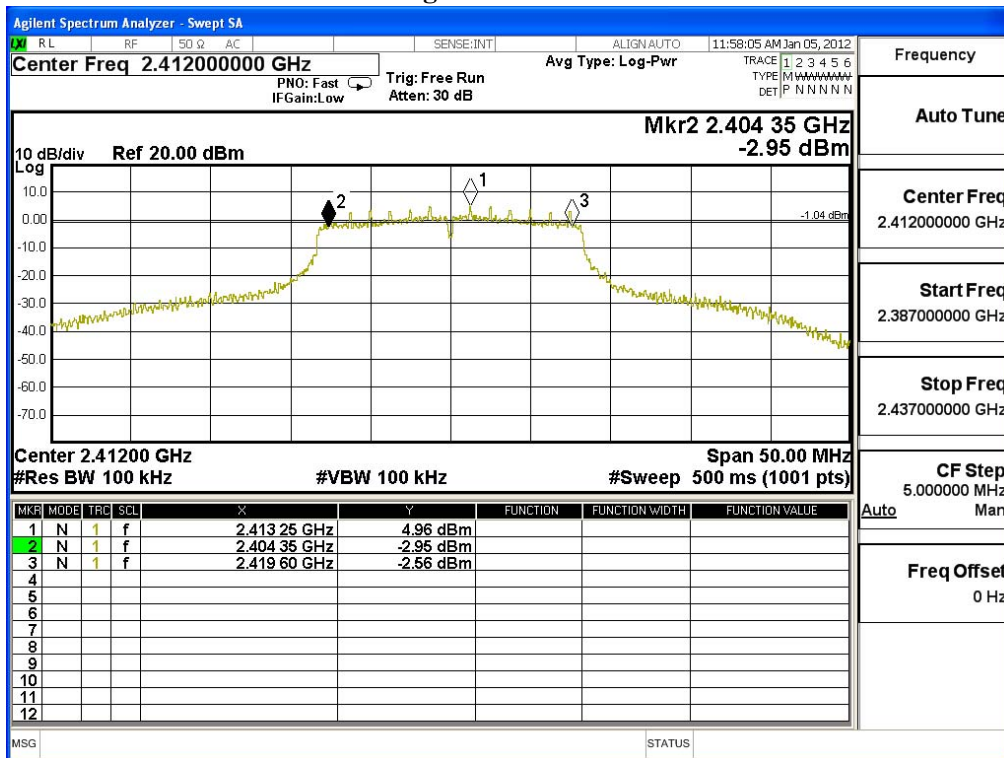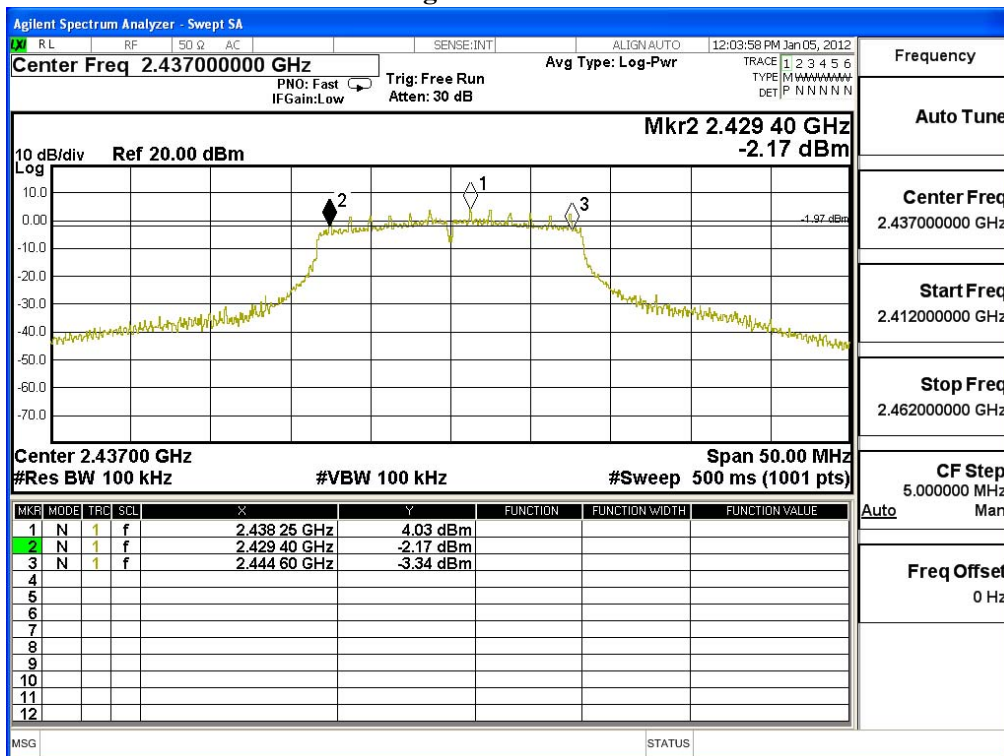
Product   :   ASUS Transformer Pad
Test Item   :   Occupied Bandwidth Data
Test Site   :   No.3 OATS
Test Mode   :   Mode 1: Transmit (802.11b 1Mbps) (2412MHz)

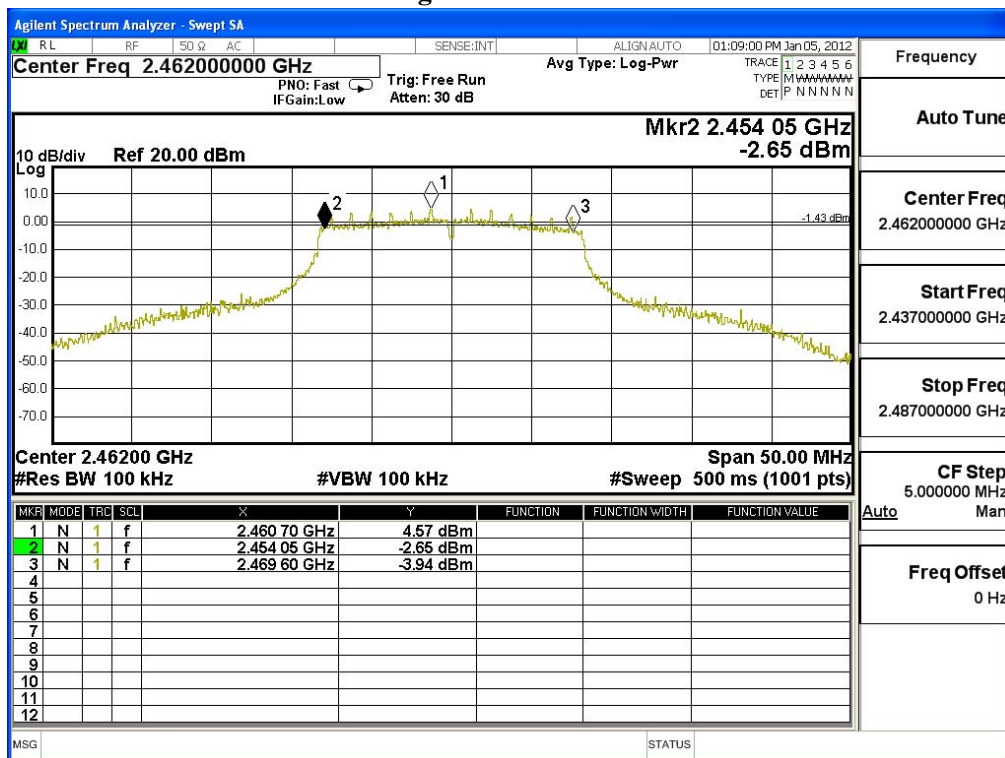| Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
1	2412	8650	>500	Pass

Figure Channel 1:
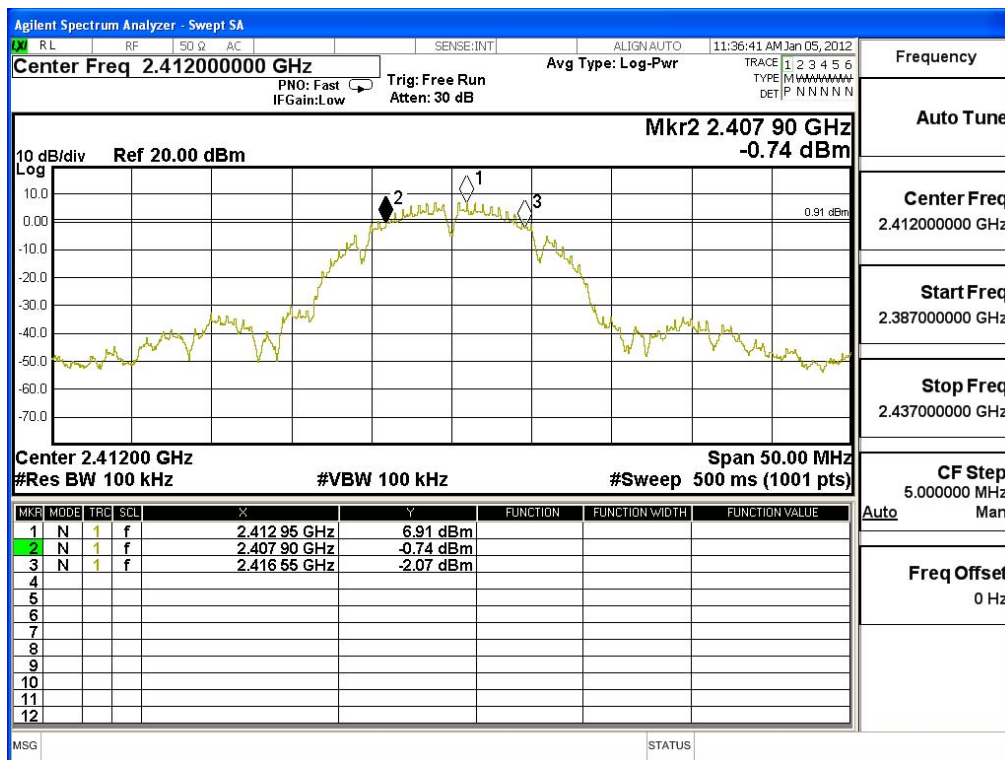
Product : ASUS Transformer Pad
Test Item : Occupied Bandwidth Data
Test Site : No.3 OATS
Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2437MHz)

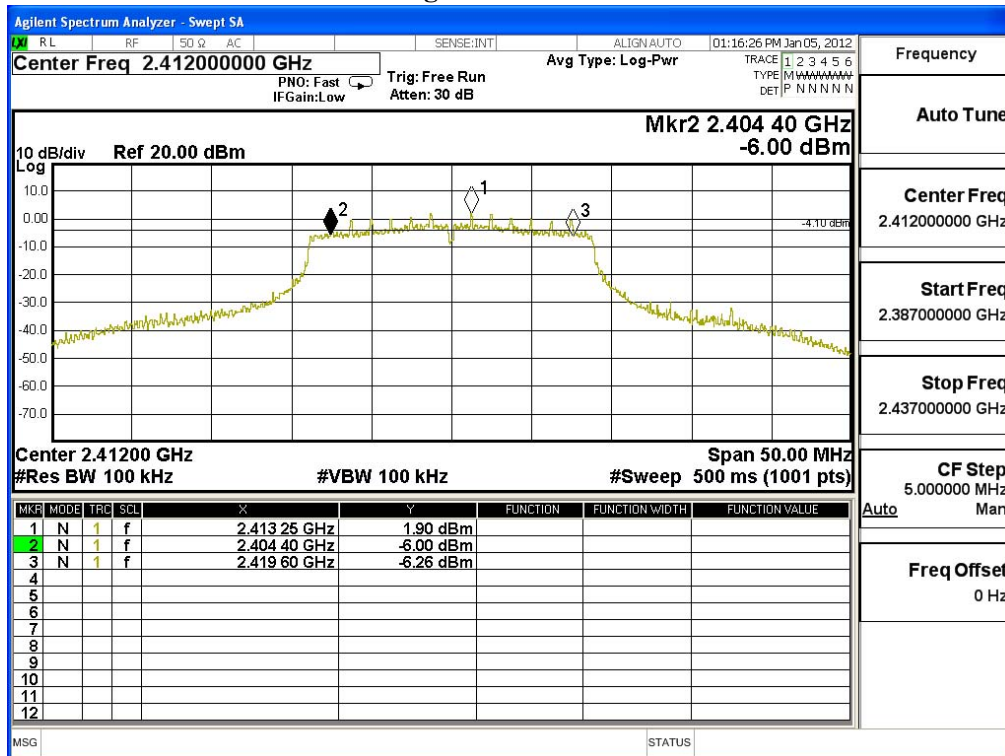| Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
6	2437	8600	>500	Pass

Figure Channel 6:
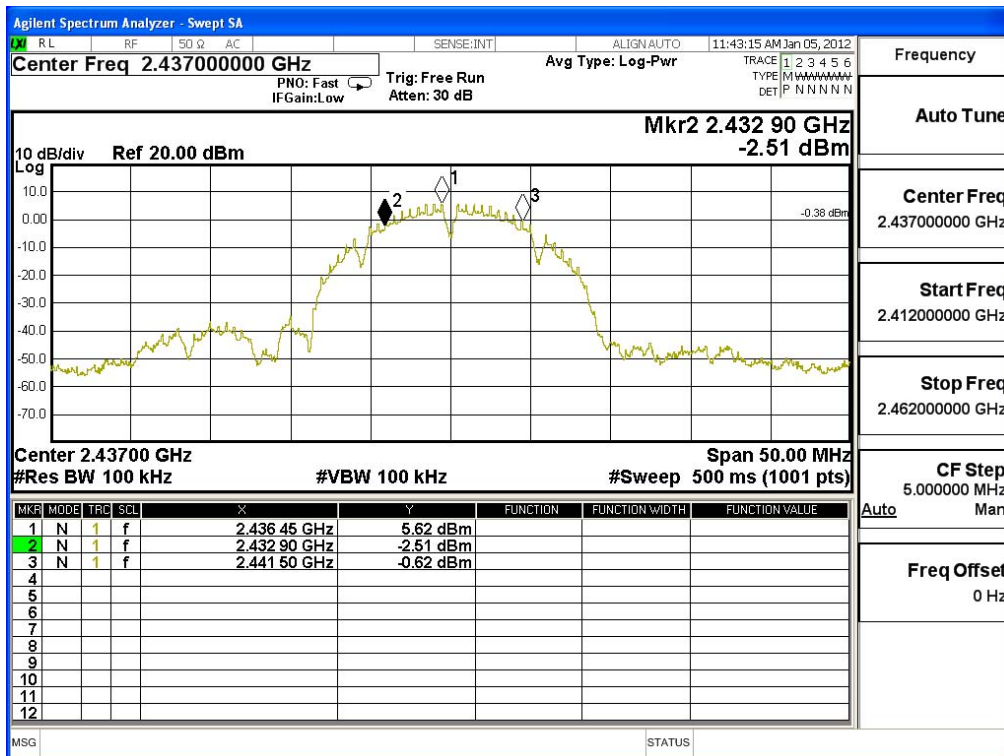
Product : ASUS Transformer Pad

Test Item : Occupied Bandwidth Data

Test Site : No.3 OATS

Test Mode : Mode 1: Transmit (802.11b 1Mbps) (2462MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
11	2462	8150	>500	Pass

Figure Channel 11:
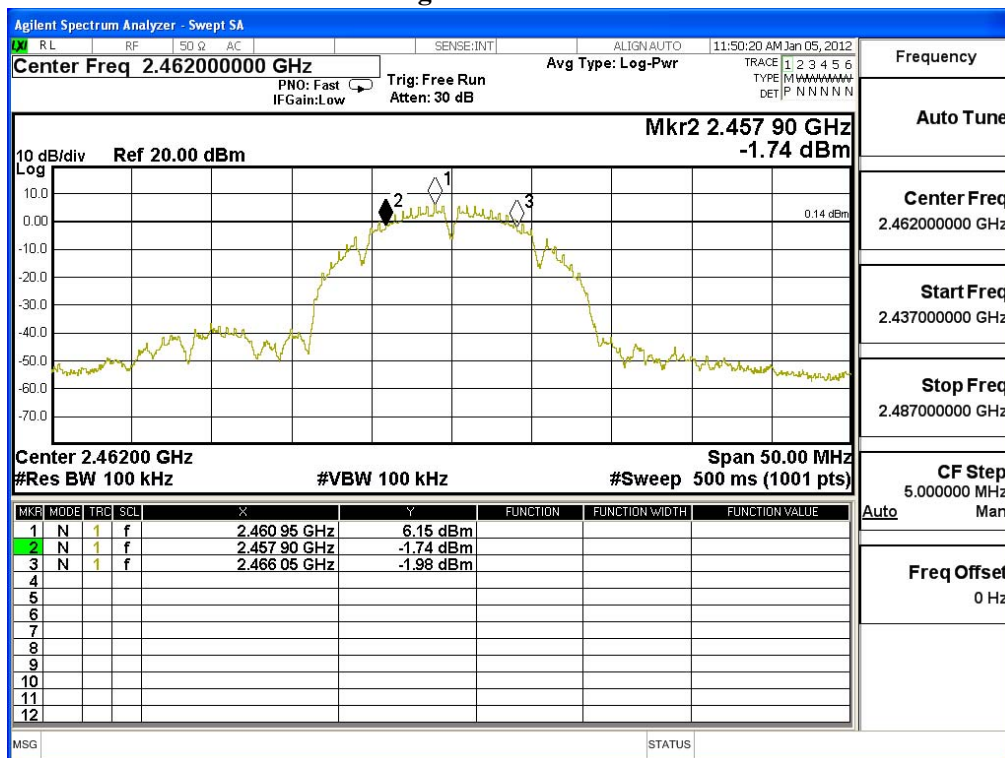
Product   :   ASUS Transformer Pad
Test Item   :   Occupied Bandwidth Data
Test Site   :   No.3 OATS
Test Mode   :   Mode 2: Transmit (802.11g 6Mbps) (2412MHz)

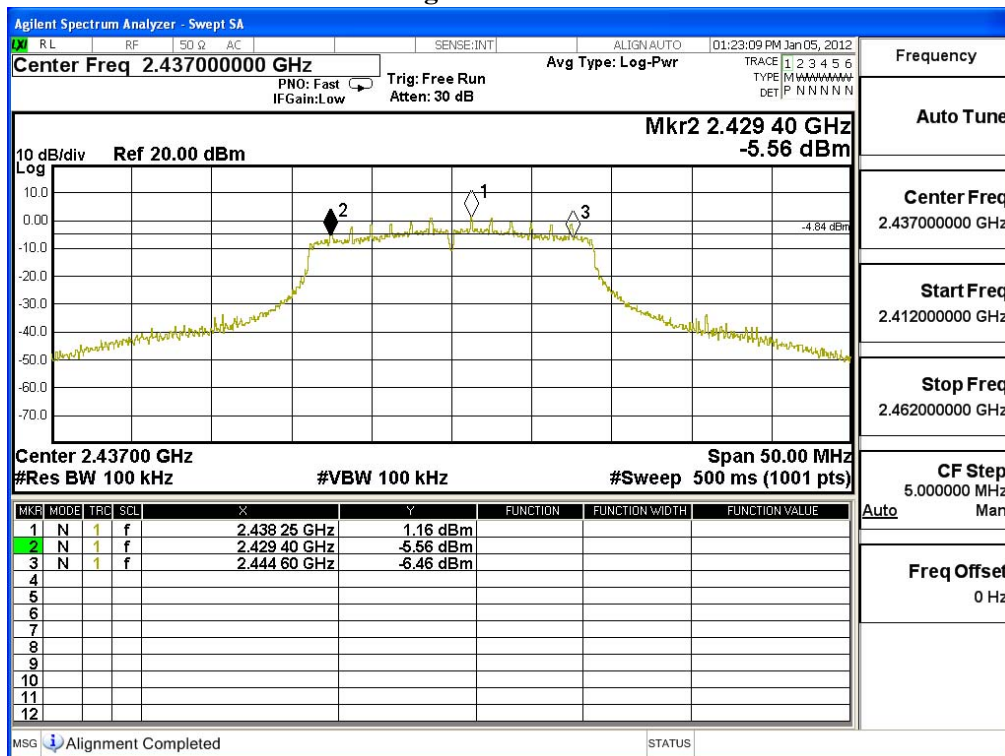| Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
1	2412	15250	>500	Pass

Figure Channel 1:

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

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
6	2437	15200	>500	Pass

Figure Channel 6:

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

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
11	2462	15550	>500	Pass

Figure Channel 11:

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

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
1	2412	15200	>500	Pass

Figure Channel 1:

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

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
6	2437	15200	>500	Pass

Figure Channel 6:

Product   :   ASUS Transformer Pad

Test Item   :   Occupied Bandwidth Data

Test Site   :   No.3 OATS

Test Mode   :   Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2462MHz)

Channel No.	Frequency (MHz)	Measurement Level (kHz)	Required Limit (kHz)	Result
11	2462	15250	>500	Pass

Figure Channel 11:
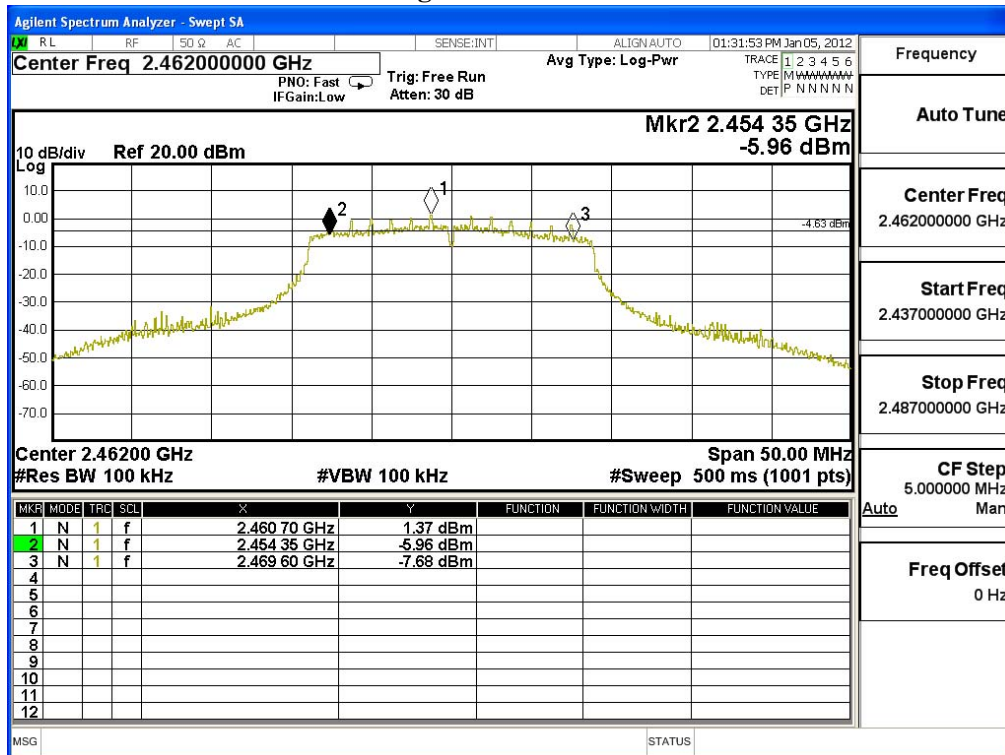
8. Power Density

8.1. 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.

8.2. Test Setup
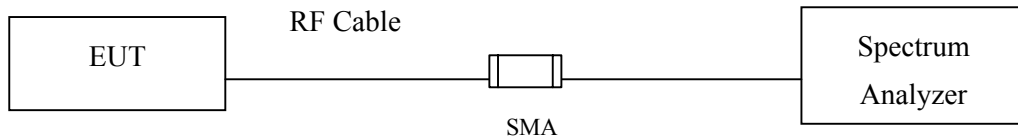
8.3. Limits

The transmitted power density averaged over any 1 second interval shall not be greater +8dBm in any 3kHz bandwidth.

8.4. Test Procedure

The EUT was setup according to ANSI C63.4: 2003; tested according to DTS test procedure of Mar. 2005 KDB558074 for compliance to FCC 47CFR 15.247 requirements.
Set RBW= 3 kHz, VBW=10KHz, Sweep time=(SPAN/3KHz), detector=Peak detector

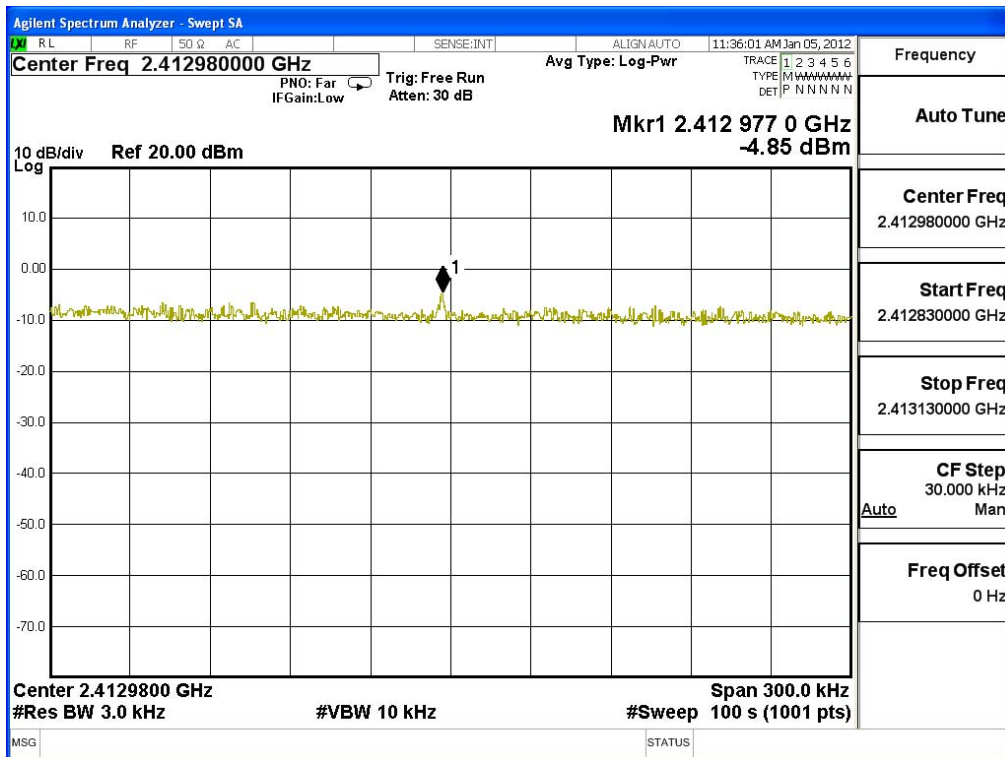## 8.5. Uncertainty

± 1.27 dB

8.6. Test Result of Power Density
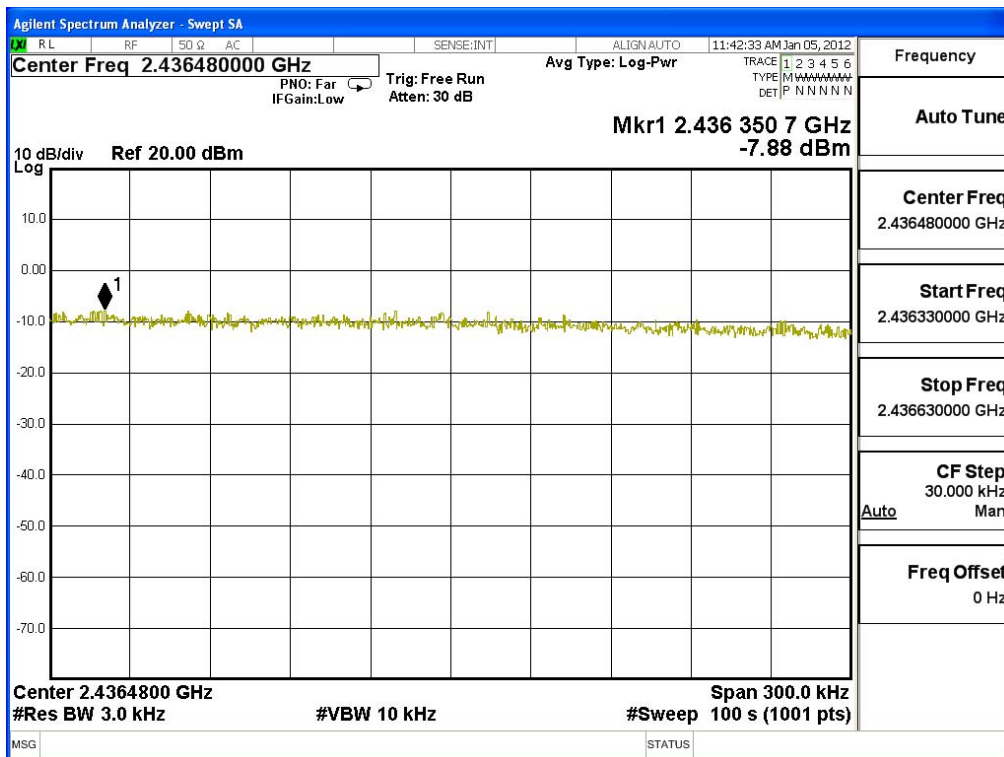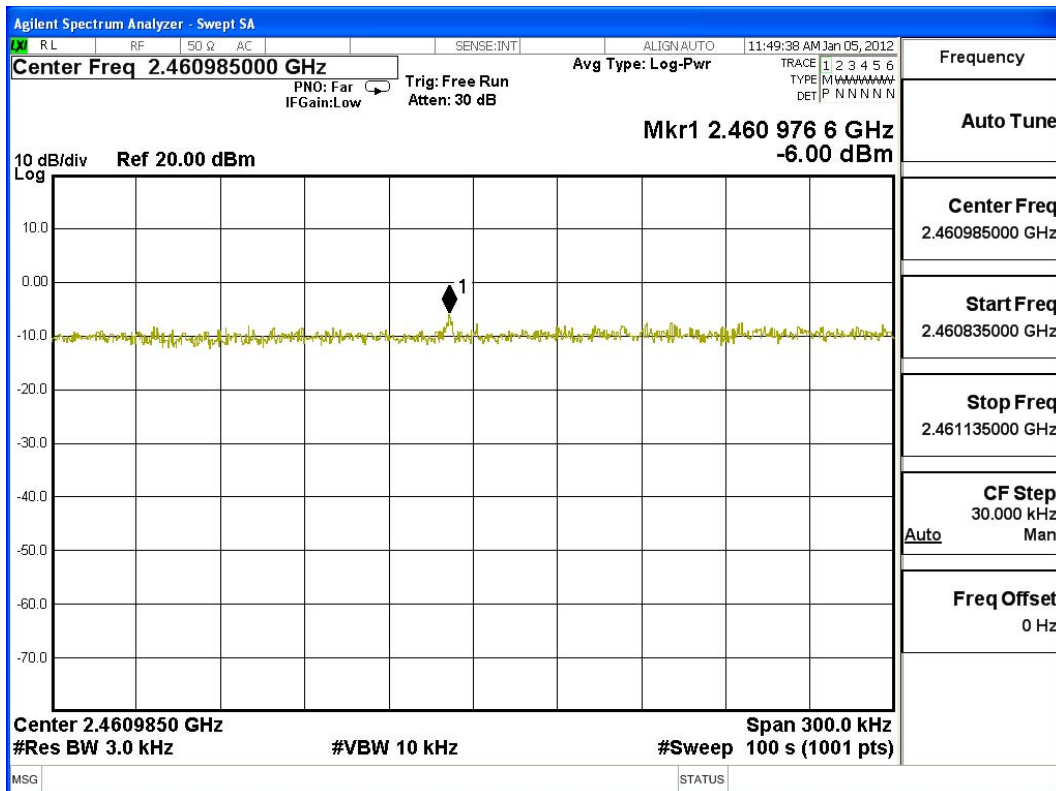
Product   :   ASUS Transformer Pad
Test Item   :   Power Density Data
Test Site   :   No.3 OATS
Test Mode   :   Mode 1: Transmit (802.11b 1Mbps) (2412MHz)

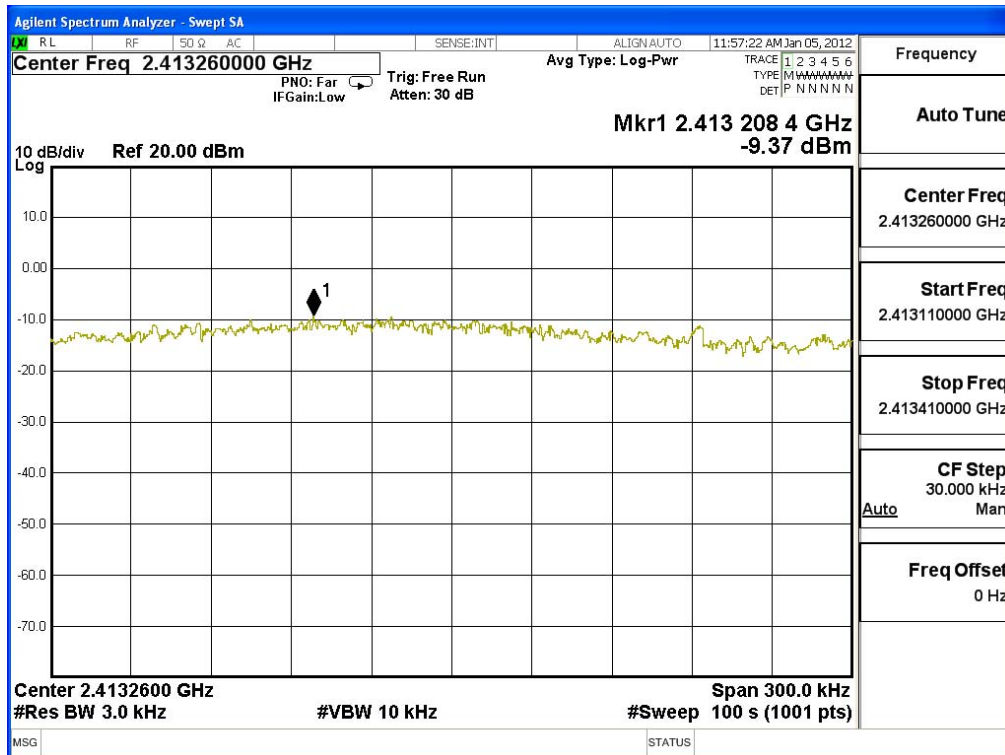| Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	-4.85	< 8dBm	Pass

Figure Channel 1:

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

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
6	2437	-7.88	< 8dBm	Pass

Figure Channel 6:

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

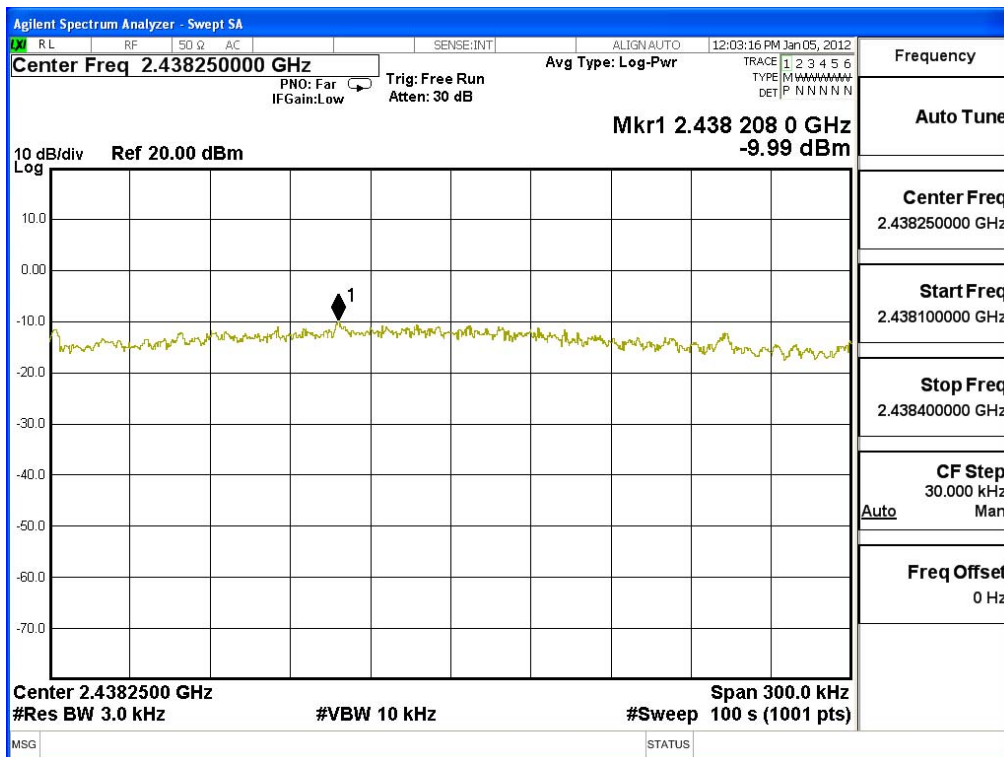| Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
11	2462	-6.00	< 8dBm	Pass

Figure Channel 11:

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

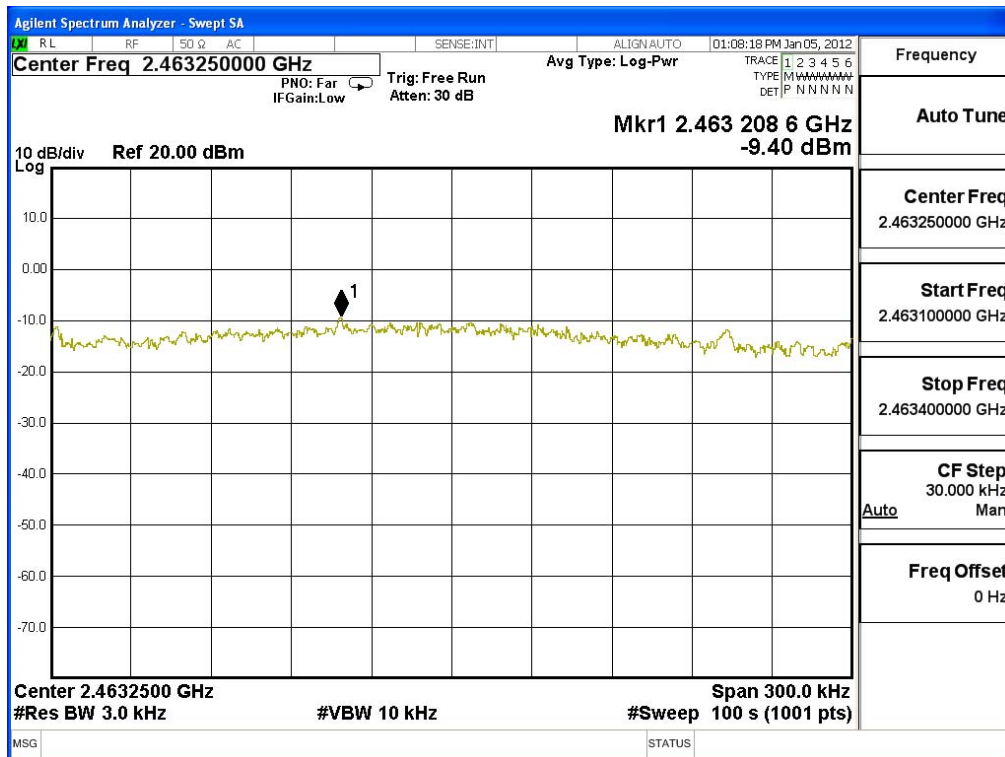| Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	-9.37	< 8dBm	Pass

Figure Channel 1:

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

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
6	2437	-9.99	< 8dBm	Pass

Figure Channel 6:

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

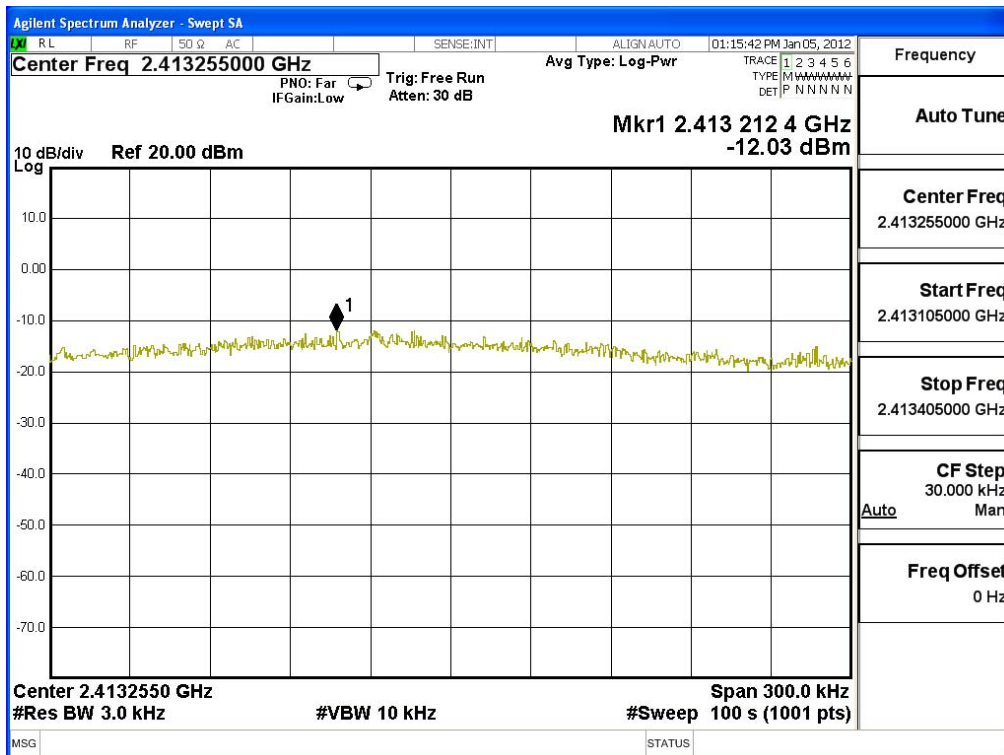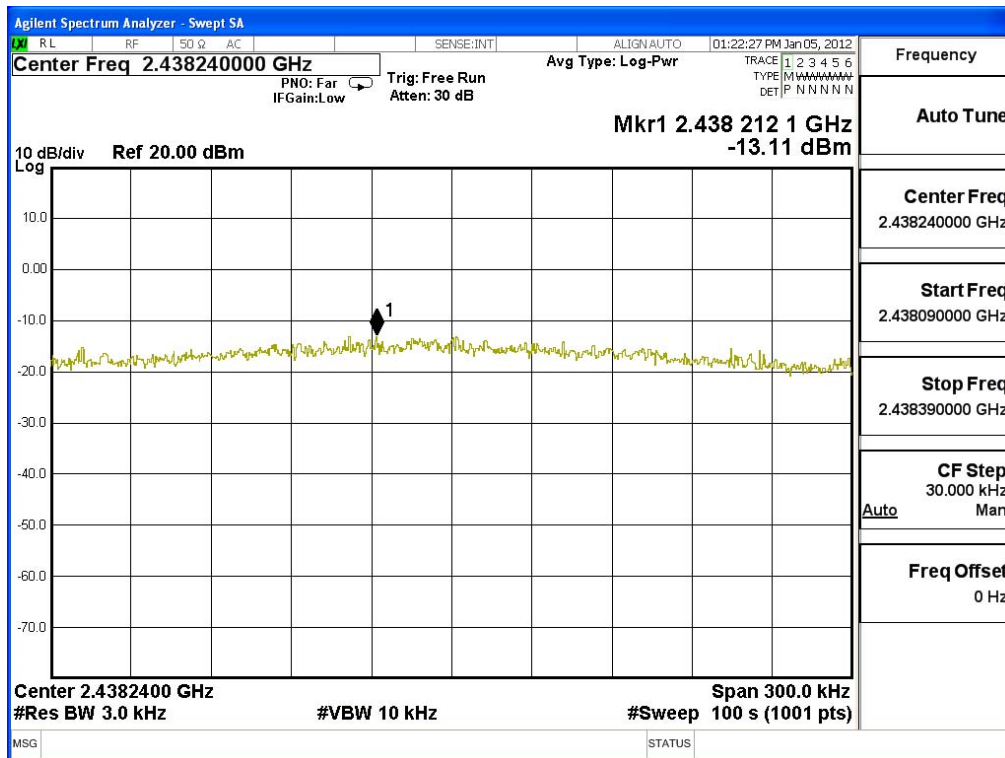| Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
11	2462	-9.40	< 8dBm	Pass

Figure Channel 11:

Product : ASUS Transformer Pad

Test Item : Power Density Data

Test Site : No.3 OATS

Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW) (2412MHz)

Channel No.	Frequency (MHz)	Measure Level (dBm)	Limit (dBm)	Result
1	2412	-12.03	< 8dBm	Pass

Figure Channel 1:

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

| Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
6	2437	-13.11	< 8dBm	Pass

Figure Channel 6:

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

Channel No.	Frequency (MHz)	Measurement Level (dBm)	Required Limit (dBm)	Result
11	2462	-12.77	< 8dBm	Pass

Figure Channel 11:
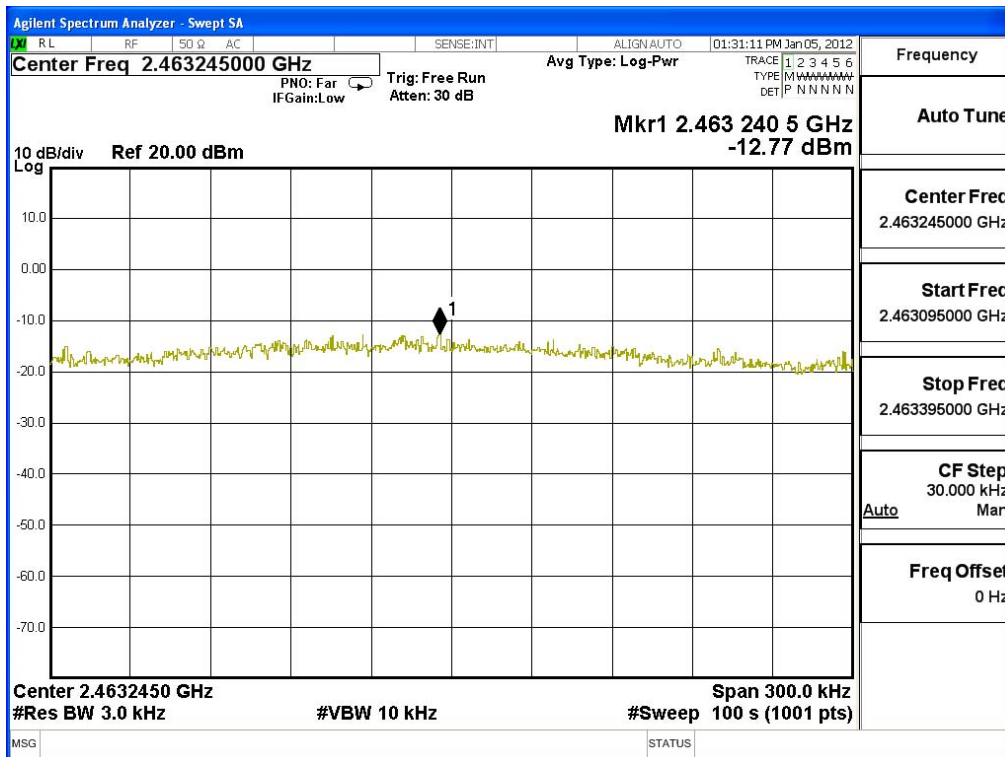
## 9.	EMI Reduction Method During Compliance Testing

No modification was made during testing.

Attachment 1: EUT Test Photographs

Attachment 2: EUT Detailed Photographs