

## 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:

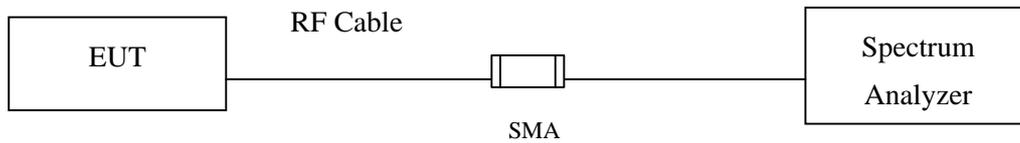
The following test equipments are used during the band edge tests:

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

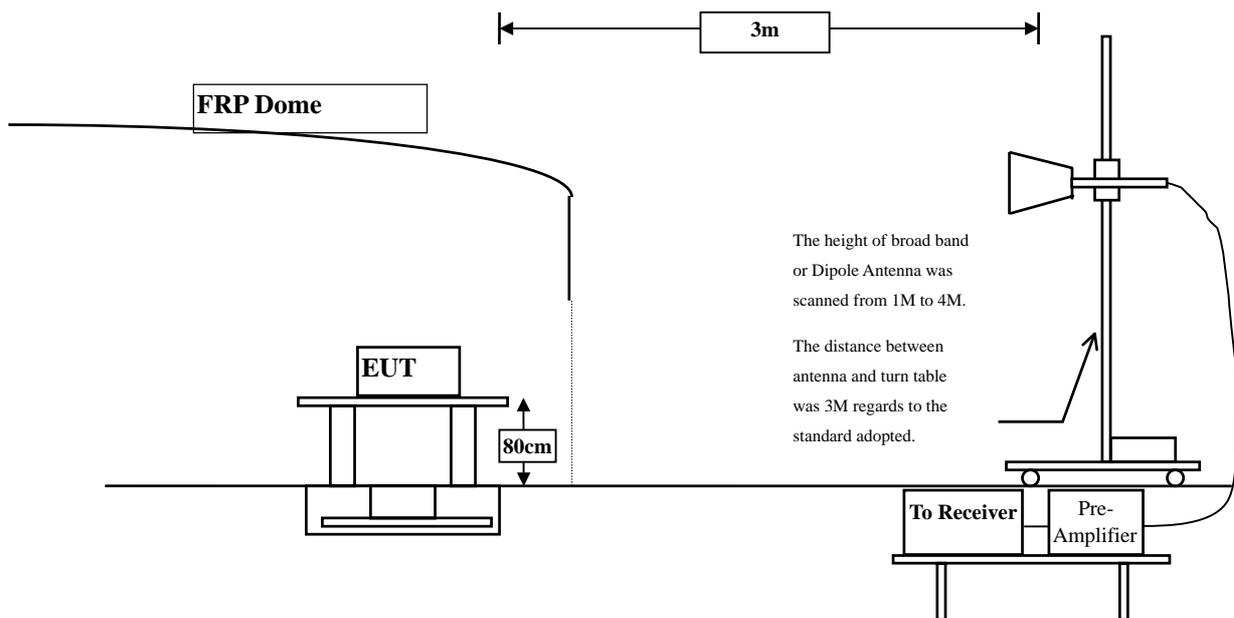
- Note:
1. All instruments are calibrated every one year.
  2. The test instruments marked by "X" are used to measure the final test results.

## 6.2. Test Setup

### RF Conducted Measurement



### RF Radiated Measurement:



## 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, 2009 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 C63.4:2009 on radiated measurement.

#### **6.5. Uncertainty**

± 3.9 dB above 1GHz

± 3.8 dB below 1GHz

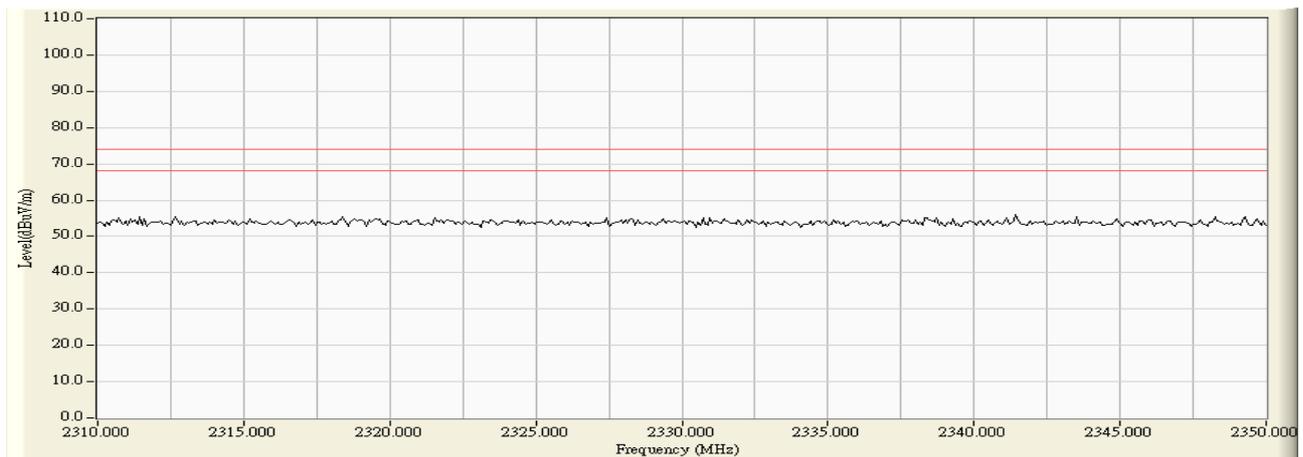
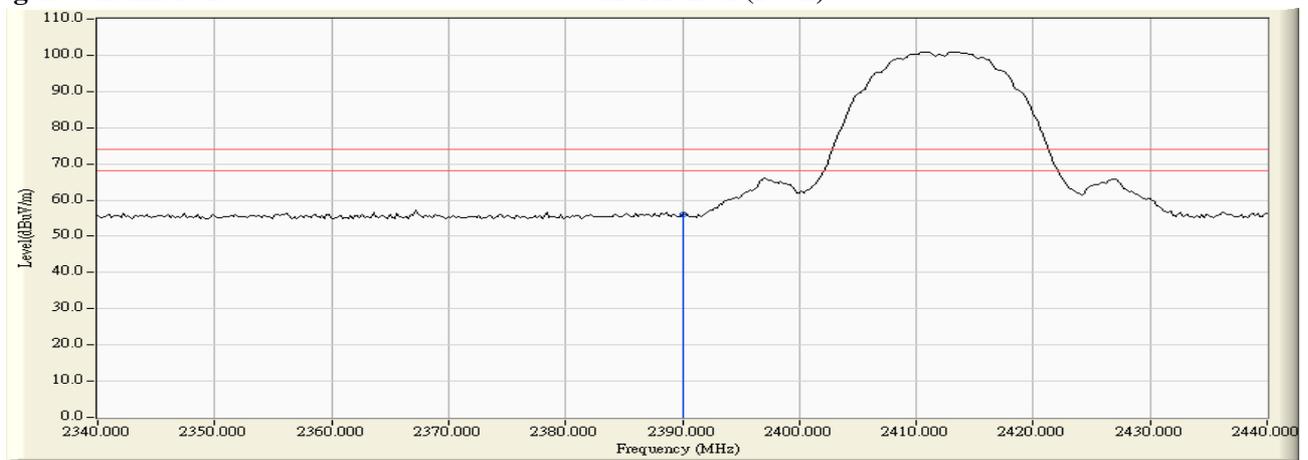
### 6.6. Test Result of Band Edge

Product : Mobile HD Snap Camera  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11b 1Mbps)

#### RF Radiated Measurement (Horizontal):

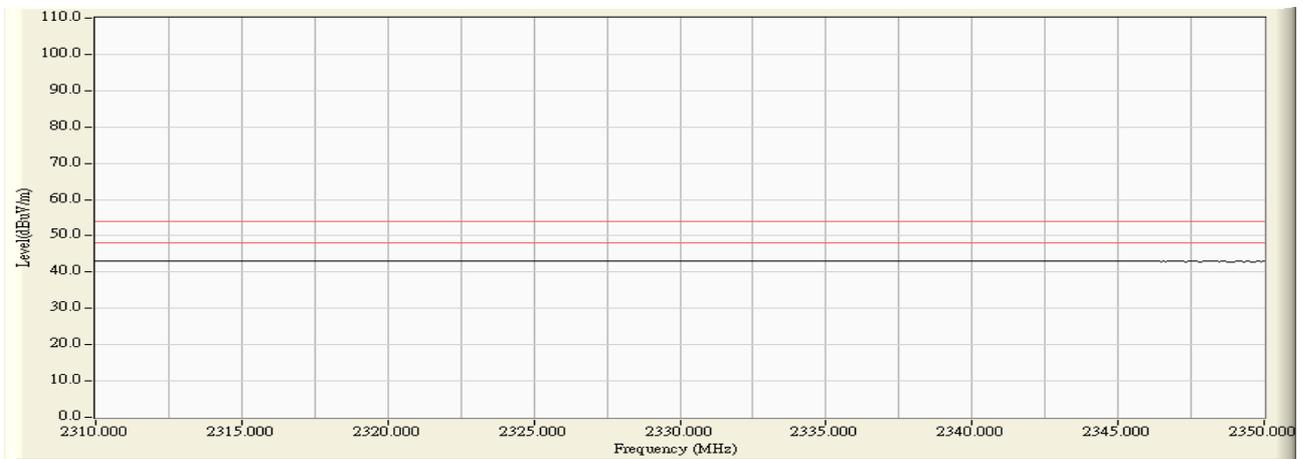
Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2390.000	31.739	24.199	55.938	74.00	54.00	Pass
01 (Average)	2390.000	31.739	11.918	43.657	74.00	54.00	Pass

**Figure Channel 01: Horizontal (Peak)**



Note: RBW=1MHz, VBW=1MHz, Sweep=500ms

Figure Channel 01: Horizontal (Average)

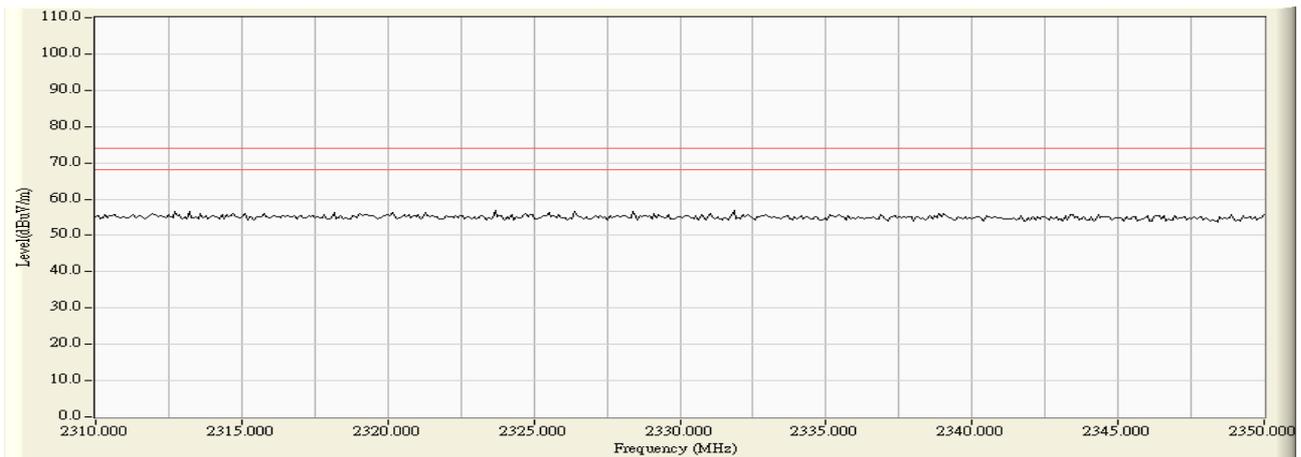
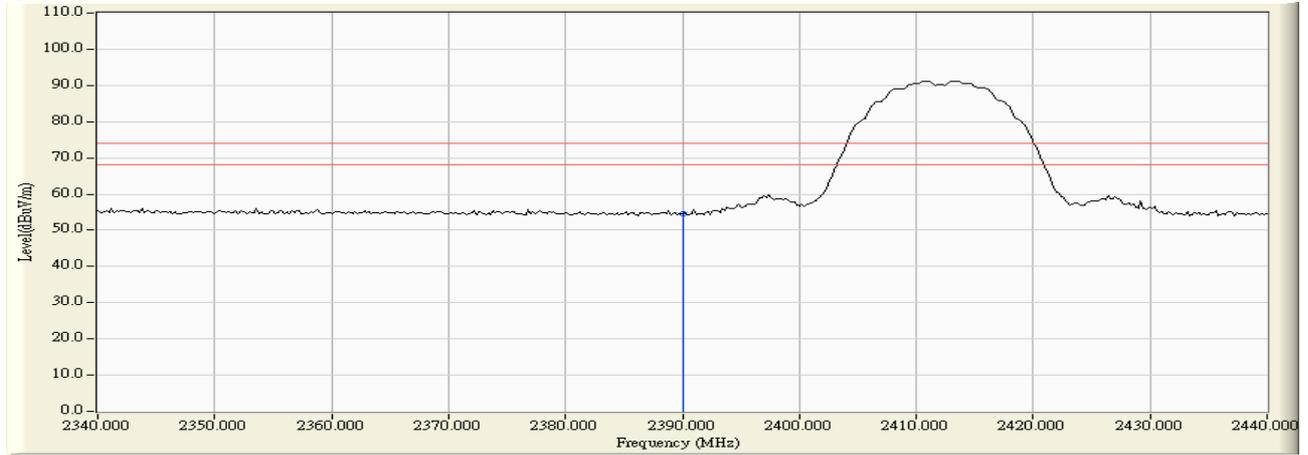


Note: RBW=1MHz, VBW=10Hz, Sweep=500ms

**RF Radiated Measurement (Vertical):**

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2390.000	30.267	24.269	54.536	74.00	54.00	Pass
01 (Average)	2390.000	30.267	11.551	41.818	74.00	54.00	Pass

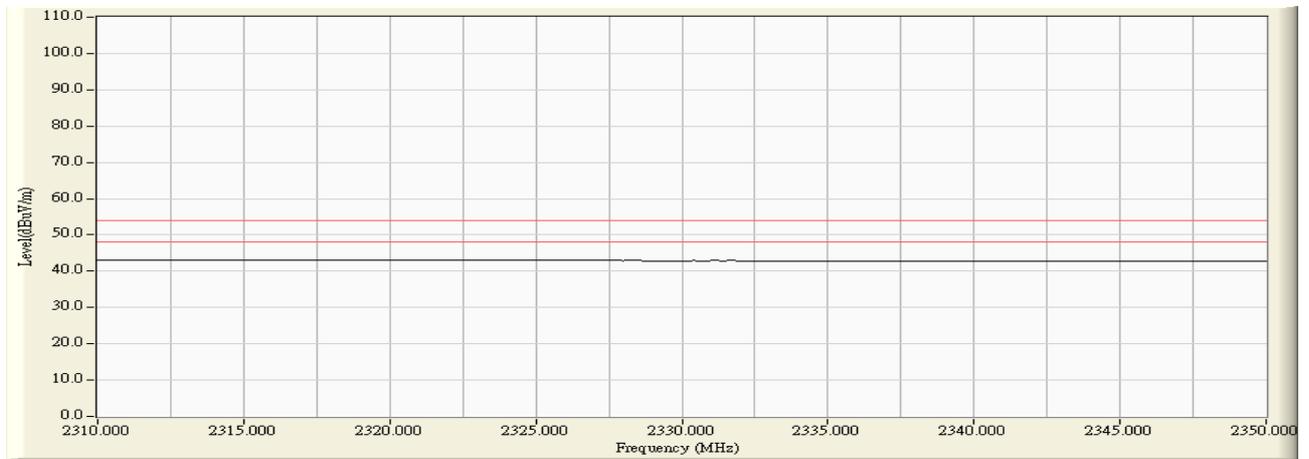
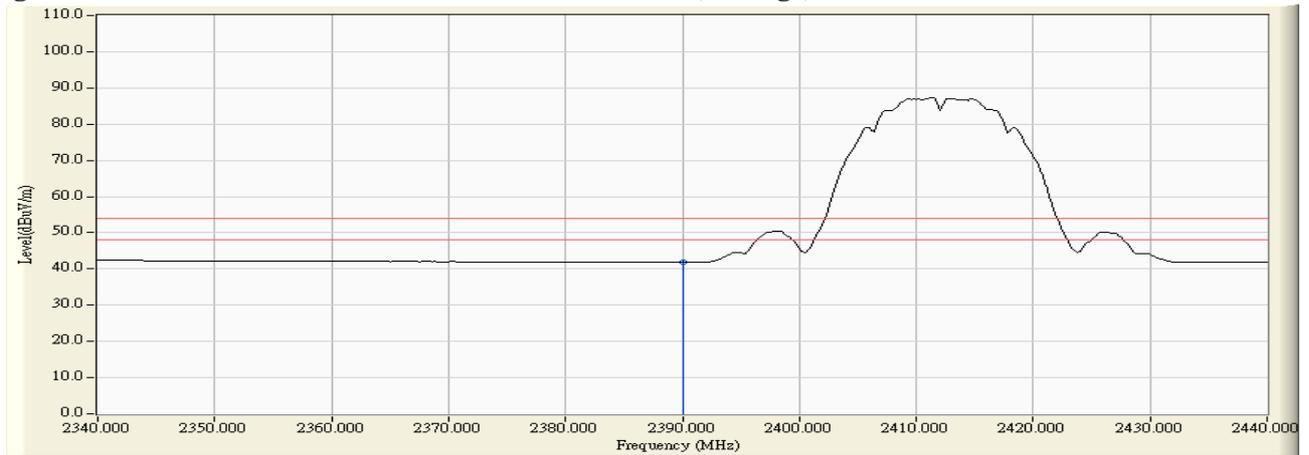
**Figure Channel 01: Vertical (Peak)**



Note: RBW=1MHz, VBW=1MHz, Sweep=500ms

Figure Channel 01:

Vertical (Average)



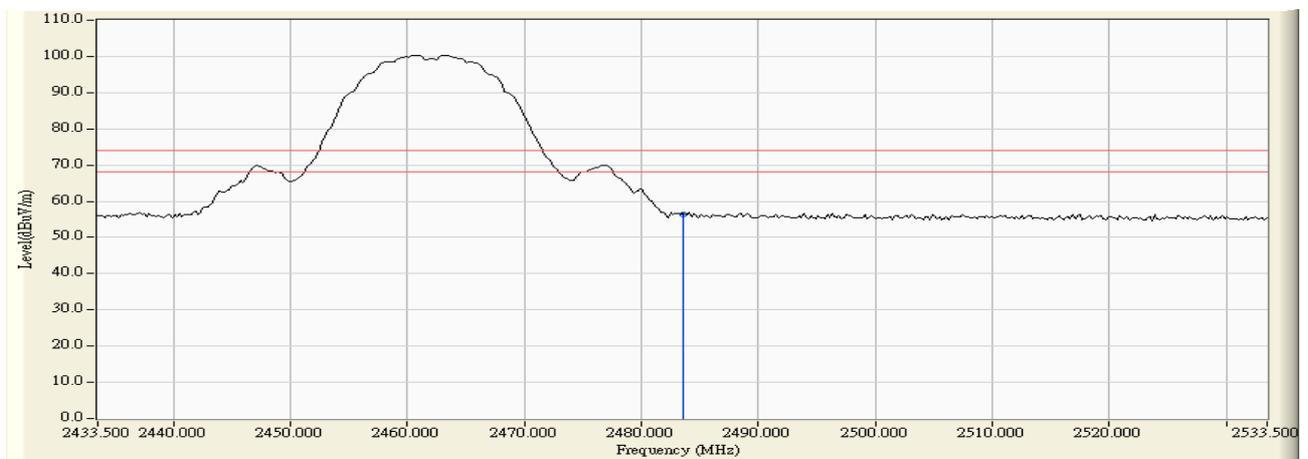
Note: RBW=1MHz, VBW=10Hz, Sweep=500ms

Product : Mobile HD Snap Camera  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 1: Transmit (802.11b 1Mbps)

**RF Radiated Measurement (Horizontal):**

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11 (Peak)	2483.500	31.951	24.506	56.456	74.00	54.00	Pass
11 (Average)	2483.500	31.951	13.024	44.974	74.00	54.00	Pass

**Figure Channel 11: Horizontal (Peak)**



Note: RBW=1MHz, VBW=1MHz, Sweep=500ms

**Figure Channel 11: Horizontal (Average)**

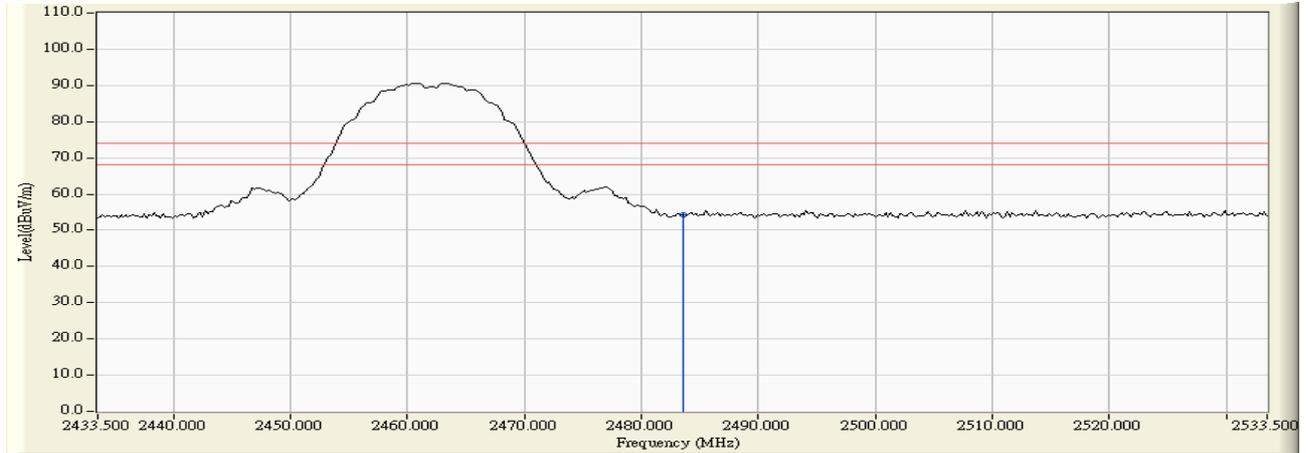


Note: RBW=1MHz, VBW=10Hz, Sweep=500ms

**RF Radiated Measurement (Vertical):**

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11 (Peak)	2483.500	30.586	23.633	54.218	74.00	54.00	Pass
11 (Average)	2483.500	30.586	11.705	42.290	74.00	54.00	Pass

**Figure Channel 11: Vertical (Peak)**



Note: RBW=1MHz, VBW=1MHz, Sweep=500ms

**Figure Channel 11: Vertical (Average)**



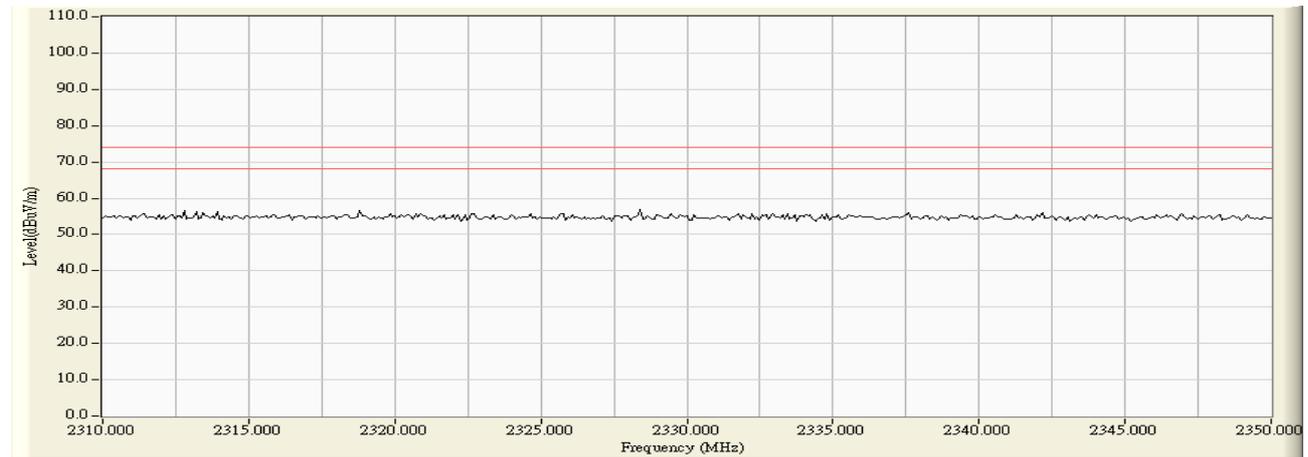
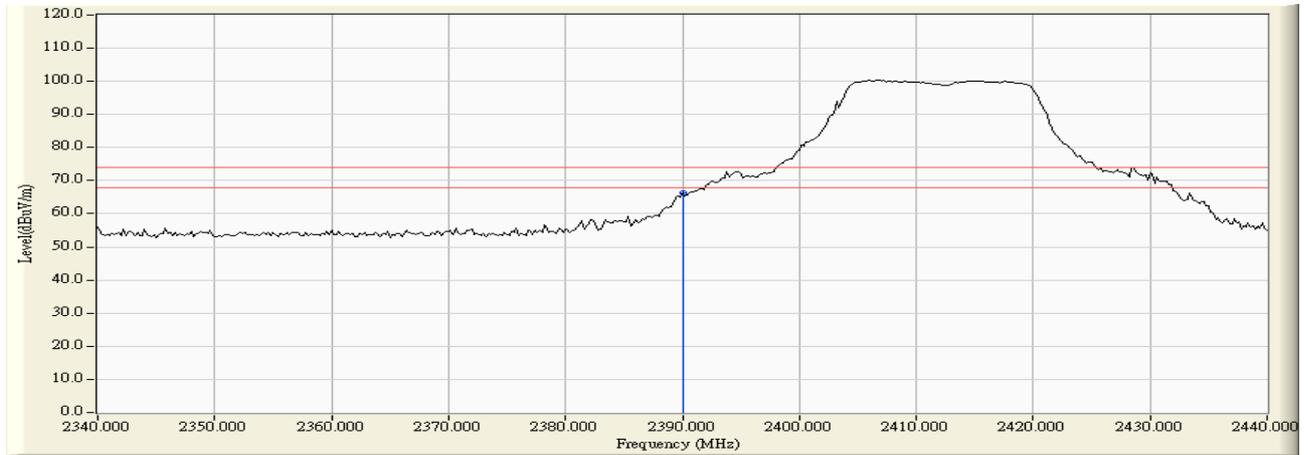
Note: RBW=1MHz, VBW=10Hz, Sweep=500ms

Product : Mobile HD Snap Camera  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11g 6Mbps)

**RF Radiated Measurement (Horizontal):**

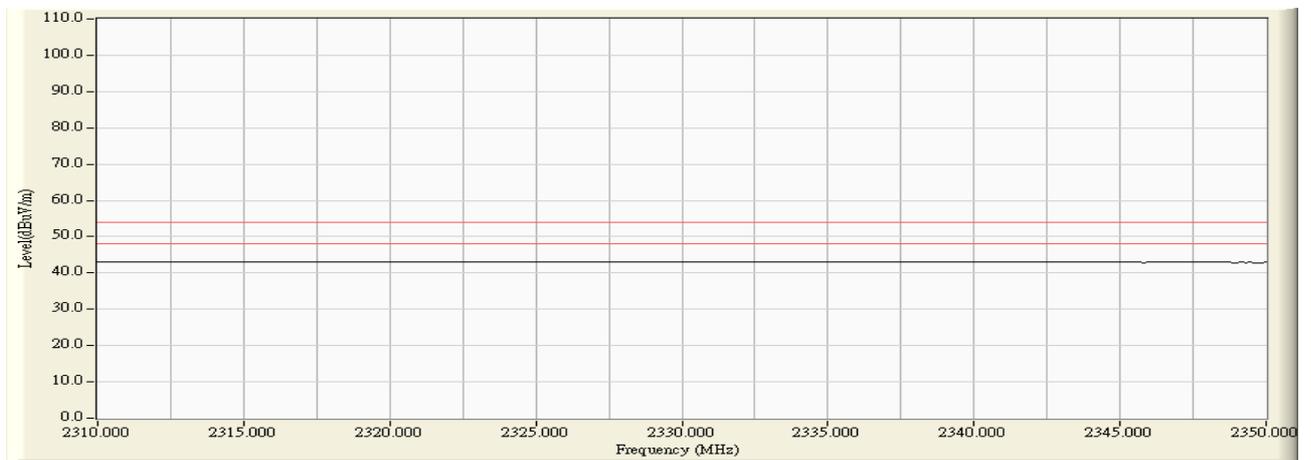
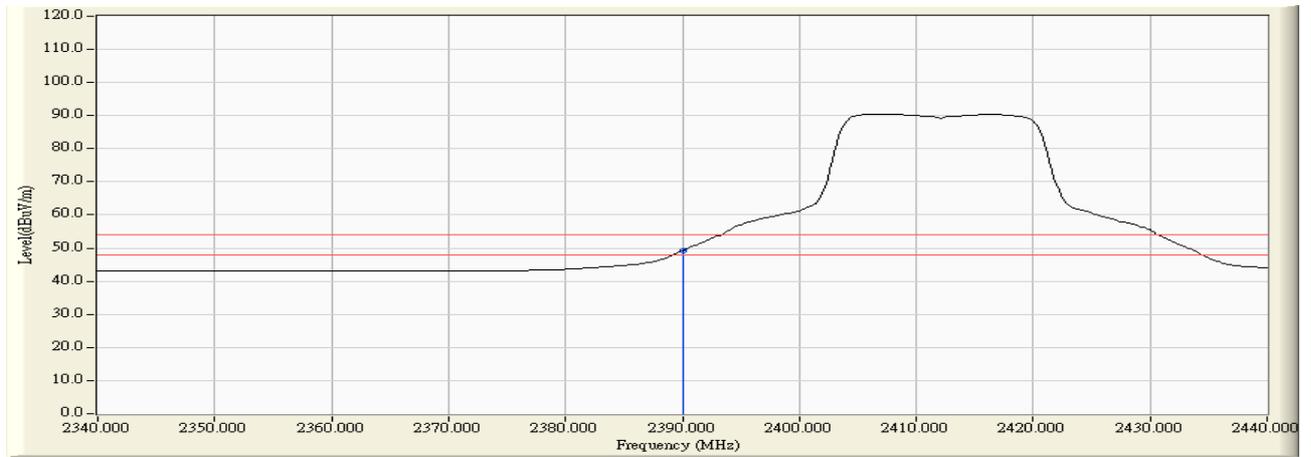
Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2390.000	31.509	34.694	66.203	74.00	54.00	Pass
01 (Average)	2390.000	31.509	17.678	49.187	74.00	54.00	Pass

**Figure Channel 01: Horizontal (Peak)**



Note: RBW=1MHz, VBW=1MHz, Sweep=500ms

Figure Channel 01: Horizontal (Average)

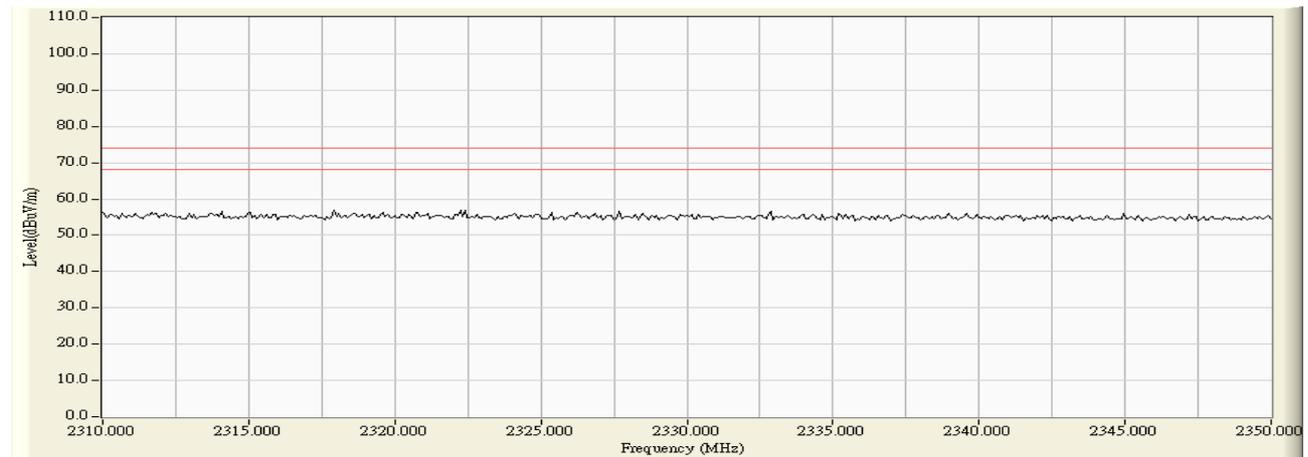
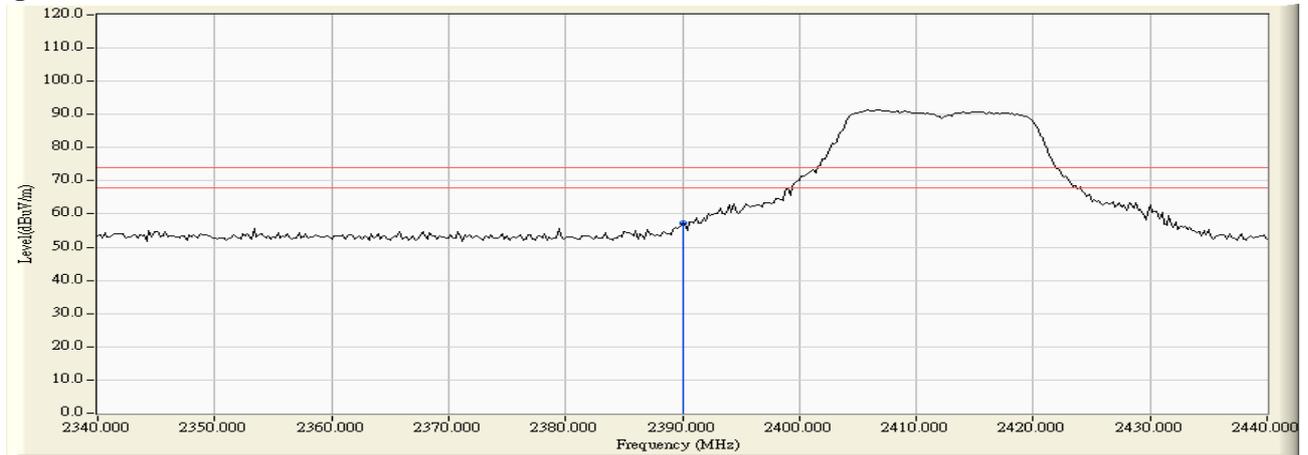


Note: RBW=1MHz, VBW=10Hz, Sweep=500ms

**RF Radiated Measurement (Vertical):**

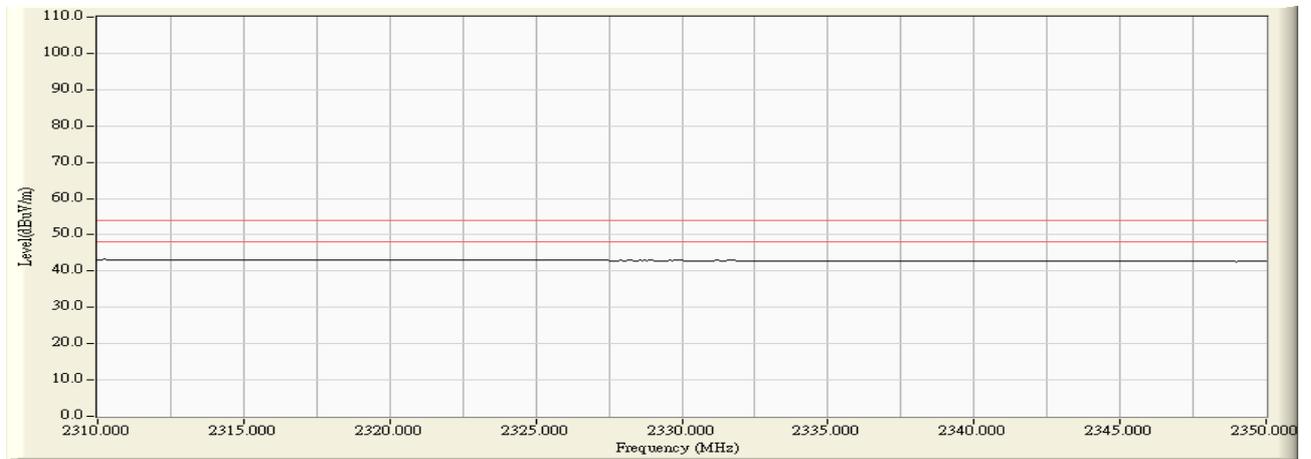
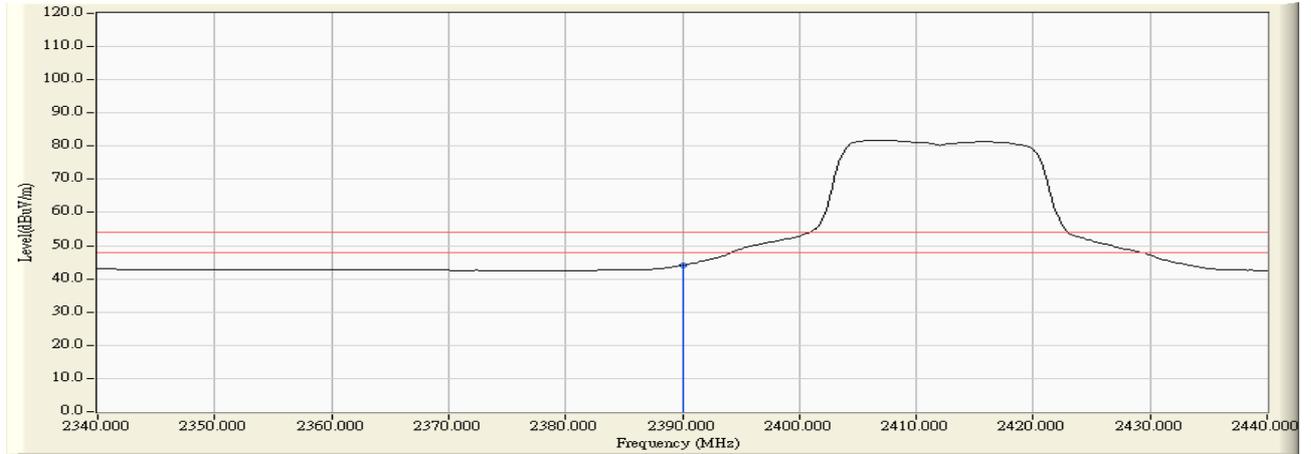
Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2390.000	30.915	26.238	57.153	74.00	54.00	Pass
01 (Average)	2390.000	30.915	13.149	44.064	74.00	54.00	Pass

**Figure Channel 01: Vertical (Peak)**



Note: RBW=1MHz, VBW=1MHz, Sweep=500ms

Figure Channel 01: Vertical (Average)



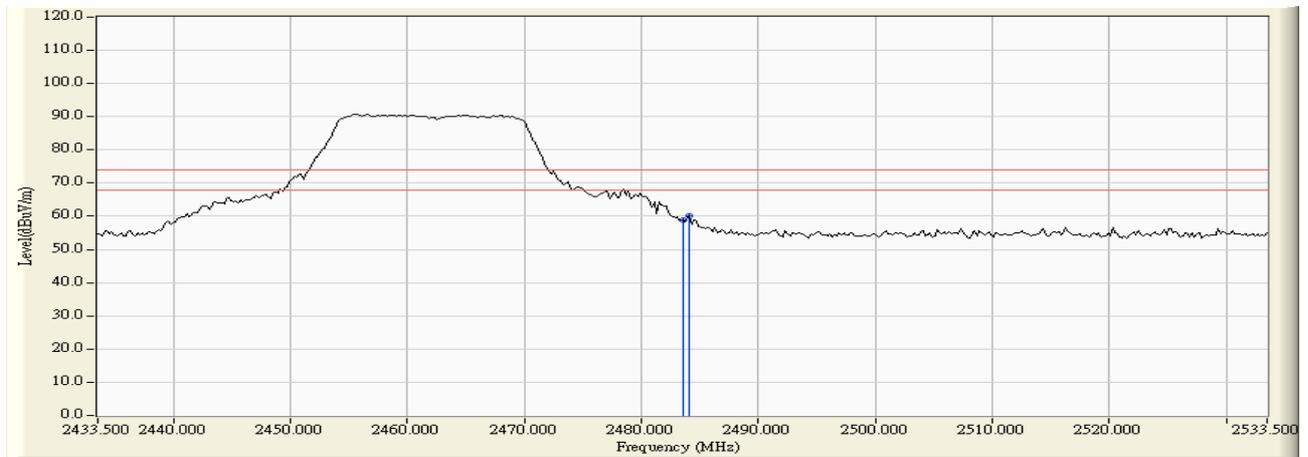
Note: RBW=1MHz, VBW=10Hz, Sweep=500ms

Product : Mobile HD Snap Camera  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 2: Transmit (802.11g 6Mbps)

**RF Radiated Measurement (Horizontal):**

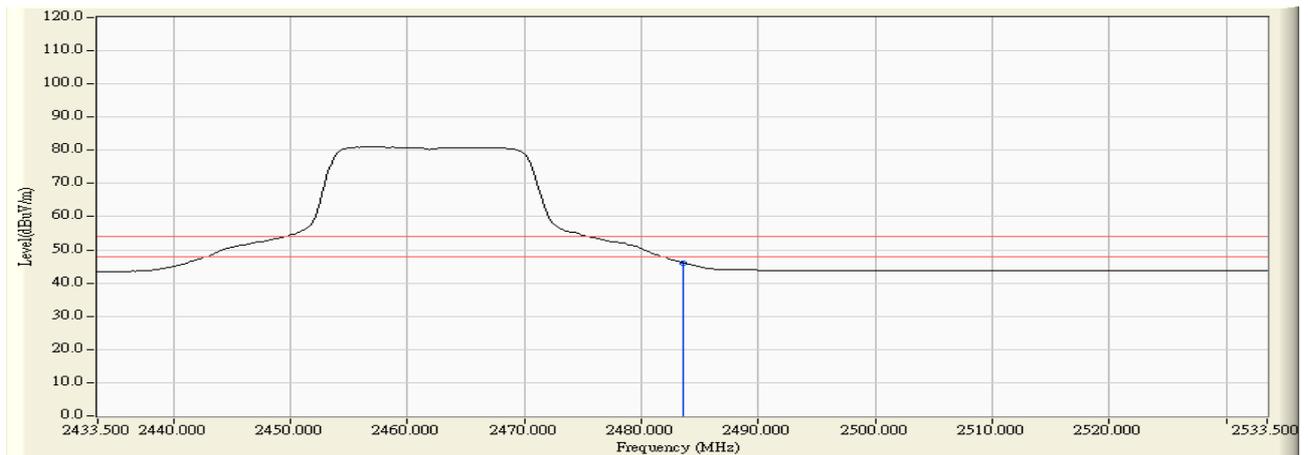
Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11 (Peak)	2483.500	32.182	26.549	58.731	74.00	54.00	Pass
11 (Peak)	2484.100	32.186	27.946	60.133	74.00	54.00	Pass
11 (Average)	2483.500	32.182	13.978	46.160	74.00	54.00	Pass

**Figure Channel 11: Horizontal (Peak)**



Note: RBW=1MHz, VBW=1MHz, Sweep=500ms

**Figure Channel 11: Horizontal (Average)**

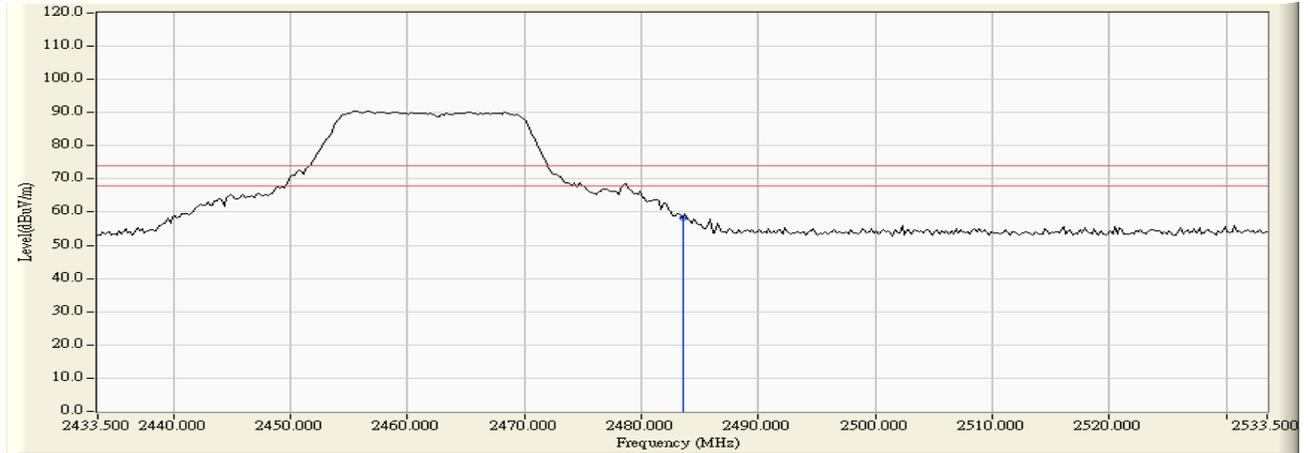


Note: RBW=1MHz, VBW=10Hz, Sweep=500ms

**RF Radiated Measurement (Vertical):**

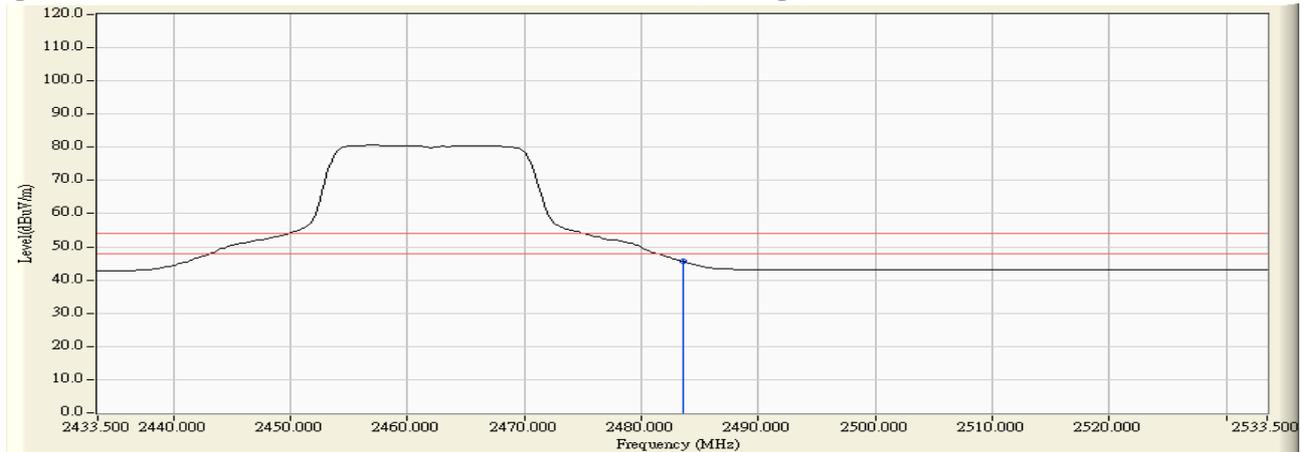
Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11 (Peak)	2483.500	31.435	26.876	58.311	74.00	54.00	Pass
11 (Average)	2483.500	31.435	14.195	45.630	74.00	54.00	Pass

**Figure Channel 11: Vertical (Peak)**



Note: RBW=1MHz, VBW=1MHz, Sweep=500ms

**Figure Channel 11: Vertical (Average)**



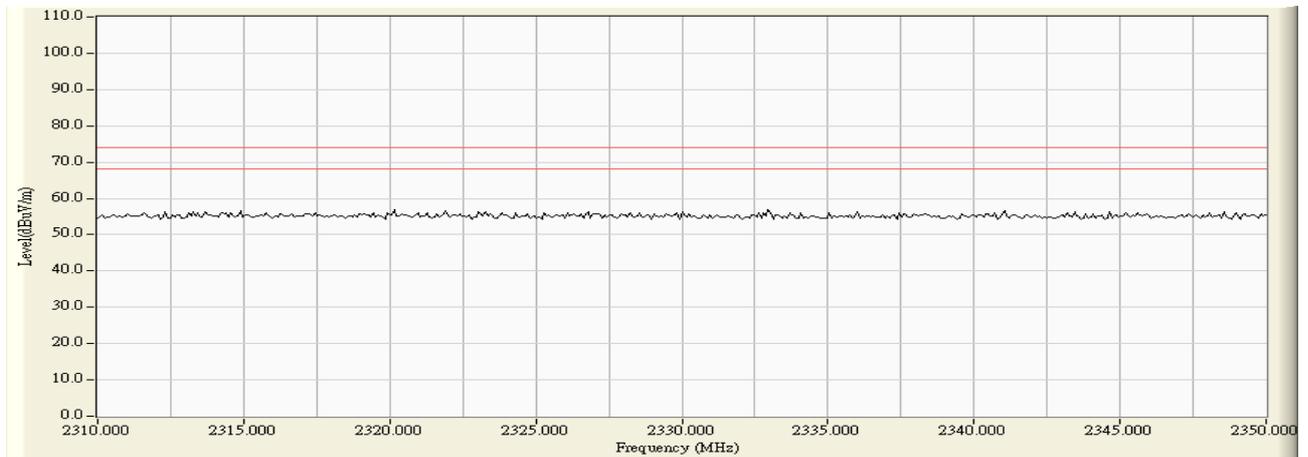
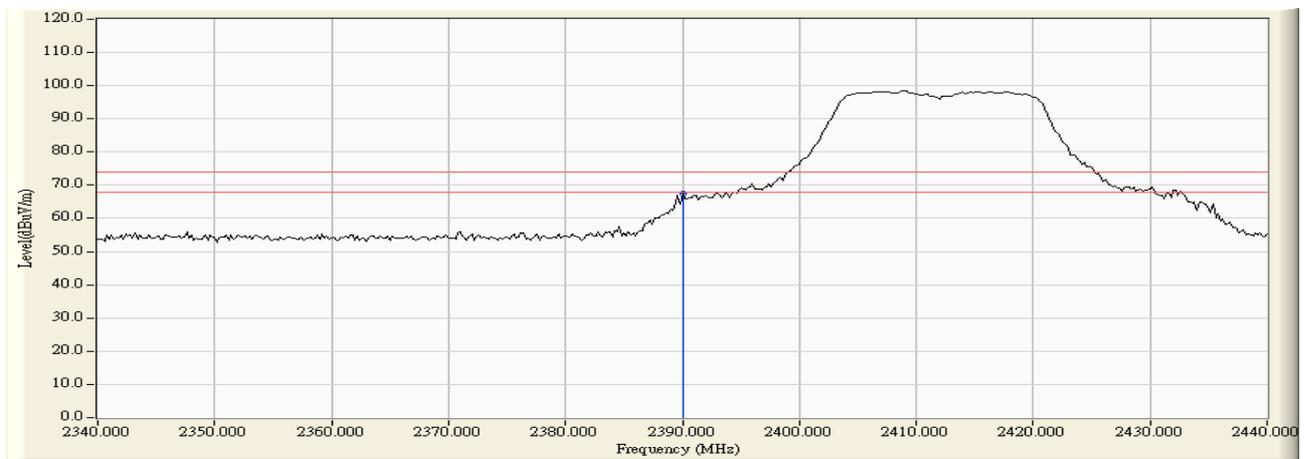
Note: RBW=1MHz, VBW=10Hz, Sweep=500ms

Product : Mobile HD Snap Camera  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)

**RF Radiated Measurement (Horizontal):**

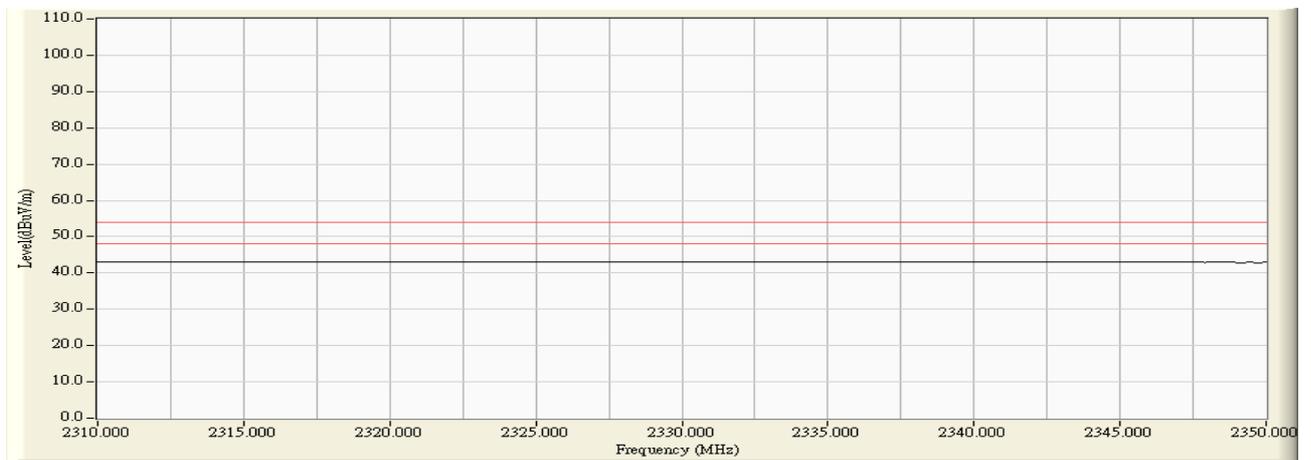
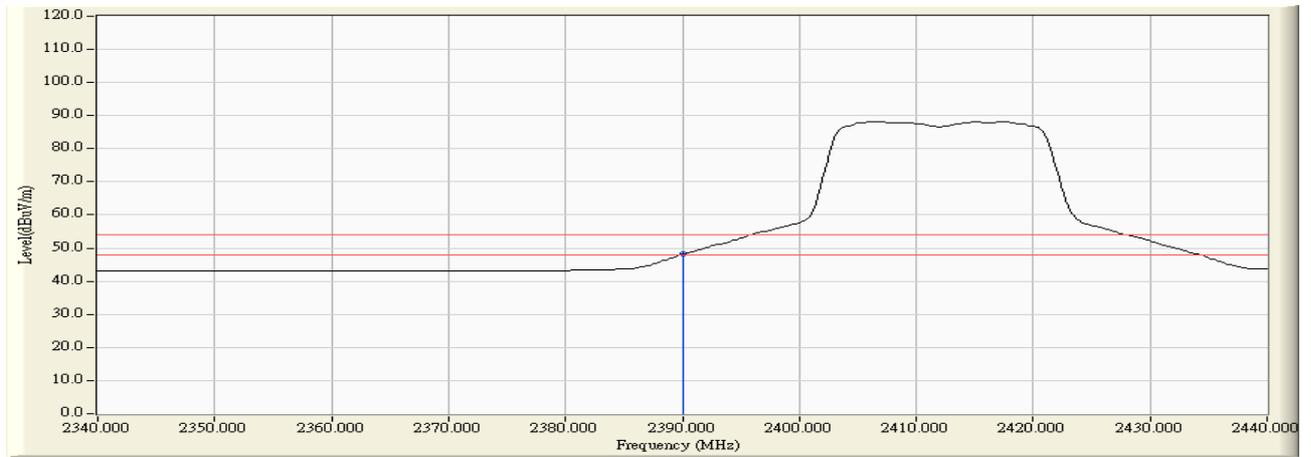
Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2390.000	31.509	35.978	67.487	74.00	54.00	Pass
01 (Average)	2390.000	31.509	16.592	48.101	74.00	54.00	Pass

**Figure Channel 01: Horizontal (Peak)**



Note: RBW=1MHz, VBW=1MHz, Sweep=500ms

Figure Channel 01: Horizontal (Average)

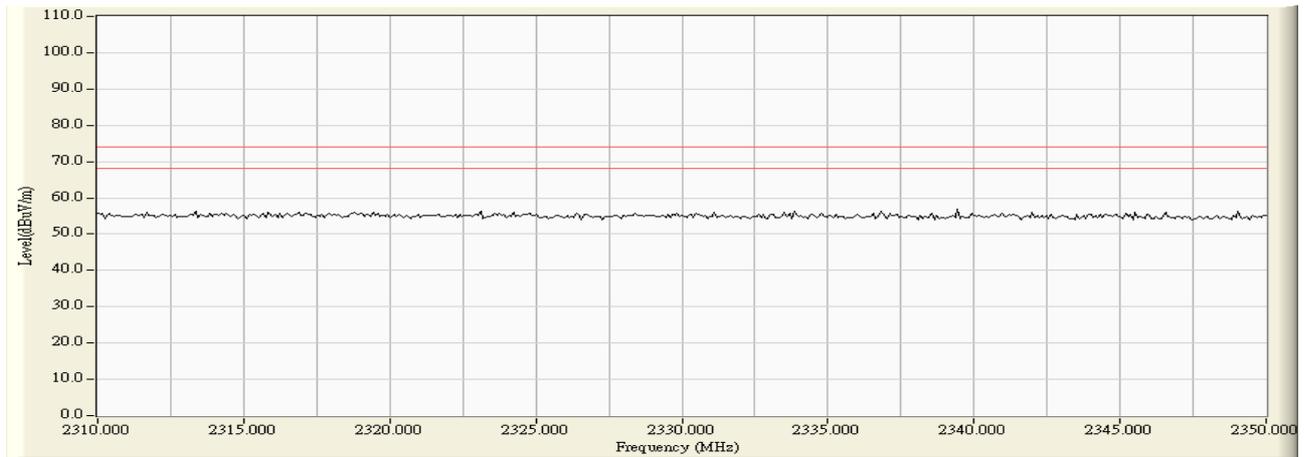
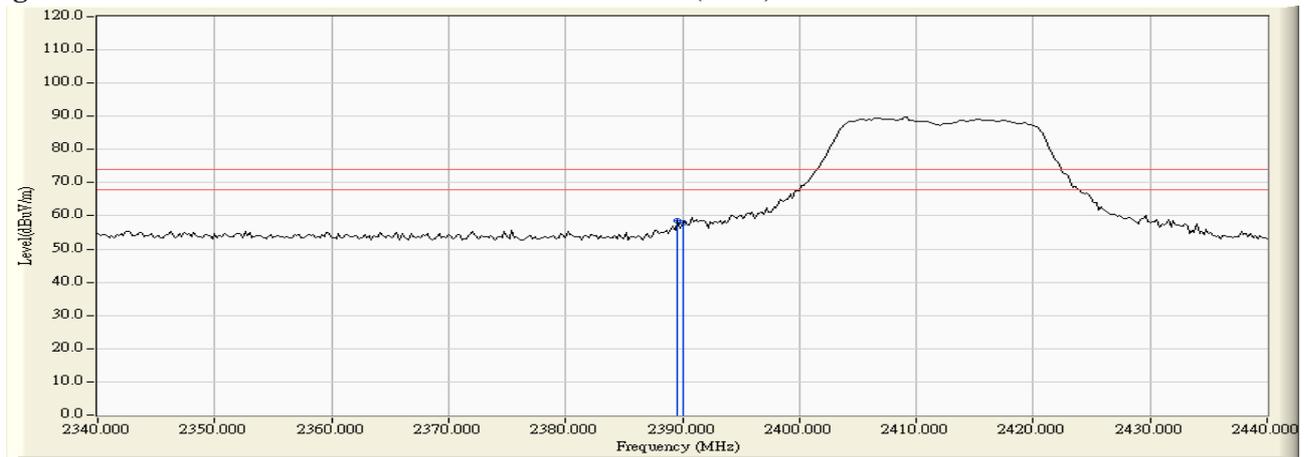


Note: RBW=1MHz, VBW=10Hz, Sweep=500ms

**RF Radiated Measurement (Vertical):**

Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
01 (Peak)	2389.600	30.917	27.548	58.465	74.00	54.00	Pass
01 (Peak)	2390.000	30.915	27.041	57.956	74.00	54.00	Pass
01 (Average)	2390.000	30.915	12.769	43.684	74.00	54.00	Pass

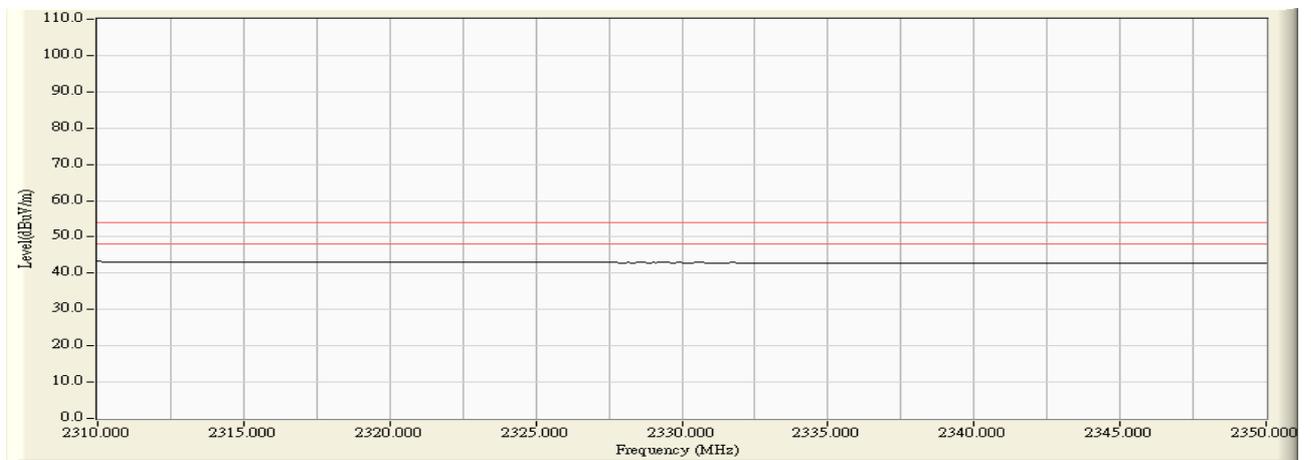
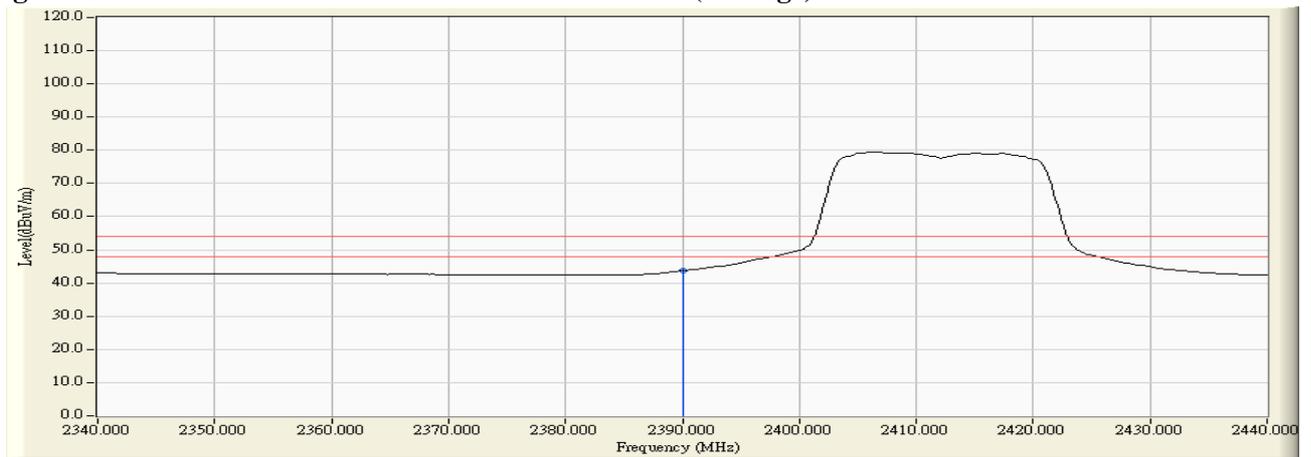
**Figure Channel 01: Vertical (Peak)**



Note: RBW=1MHz, VBW=1MHz, Sweep=500ms

Figure Channel 01:

Vertical (Average)



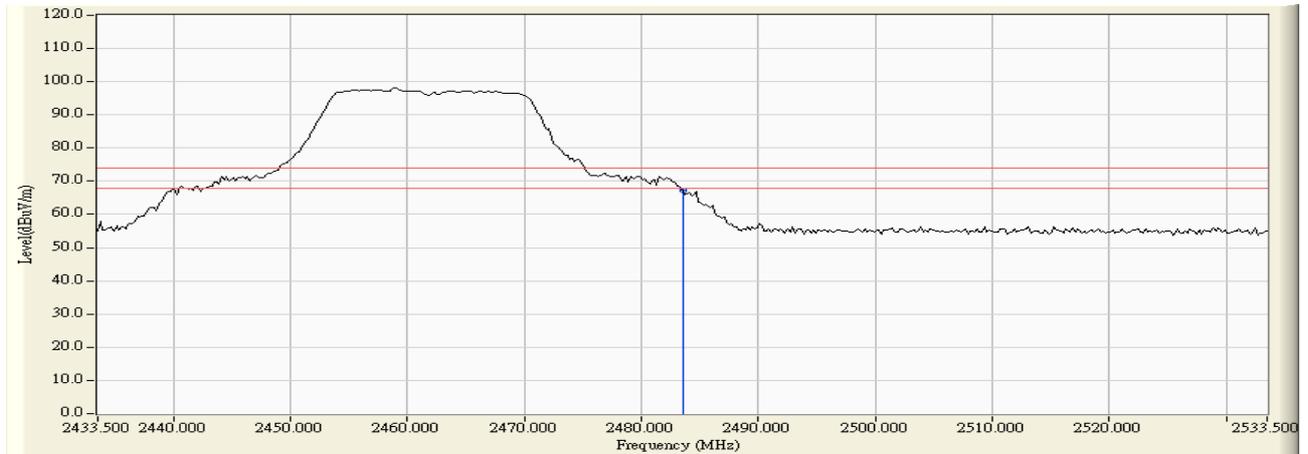
Note: RBW=1MHz, VBW=10Hz, Sweep=500ms

Product : Mobile HD Snap Camera  
 Test Item : Band Edge Data  
 Test Site : No.3 OATS  
 Test Mode : Mode 3: Transmit (802.11n MCS0 7.2Mbps 20M-BW)

**RF Radiated Measurement (Horizontal):**

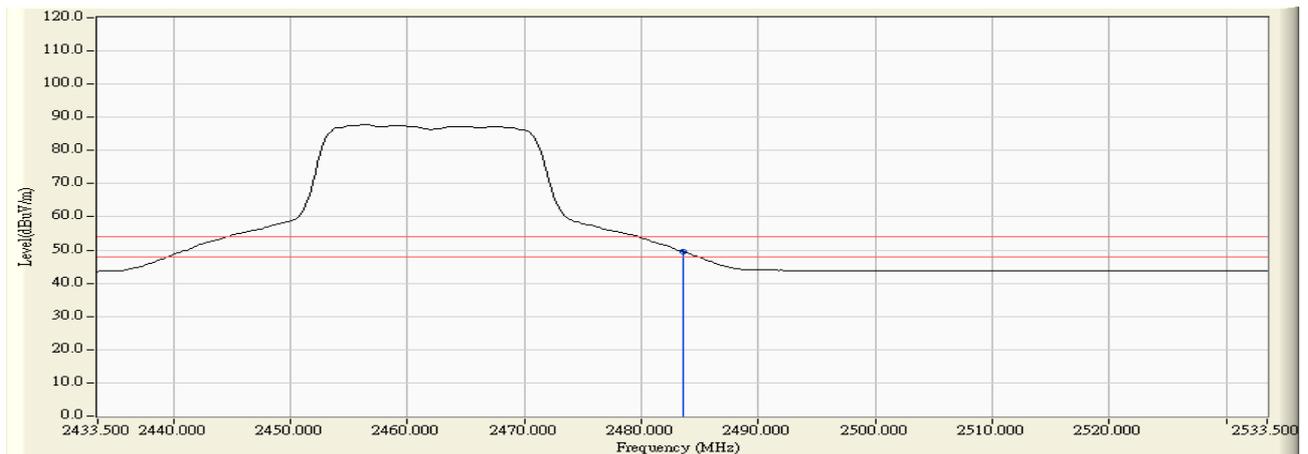
Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11 (Peak)	2483.500	32.182	35.084	67.266	74.00	54.00	Pass
11 (Average)	2483.500	32.182	17.329	49.511	74.00	54.00	Pass

**Figure Channel 11: Horizontal (Peak)**



Note: RBW=1MHz, VBW=1MHz, Sweep=500ms

**Figure Channel 11: Horizontal (Average)**

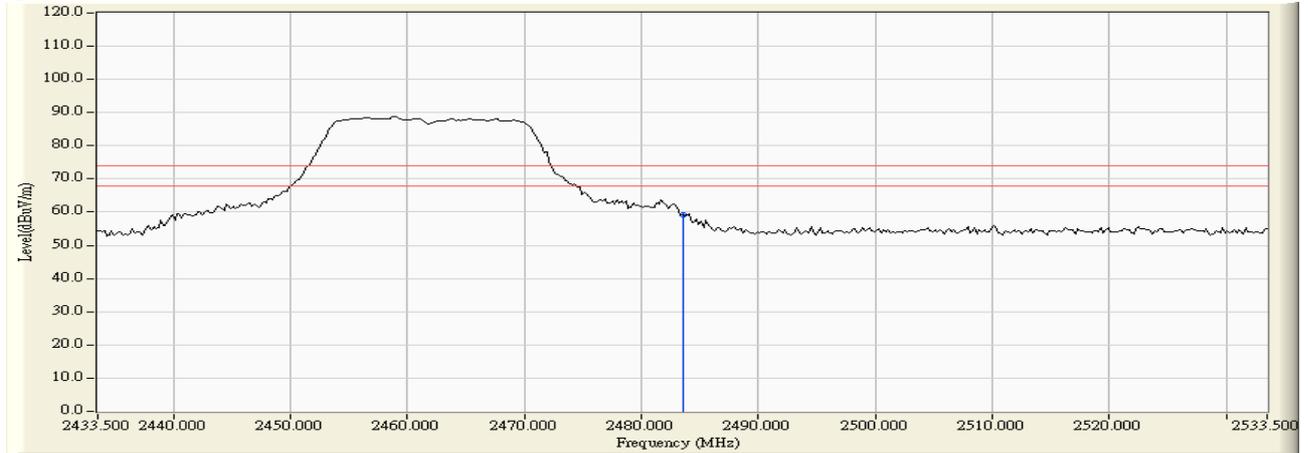


Note: RBW=1MHz, VBW=10Hz, Sweep=500ms

**RF Radiated Measurement (Vertical):**

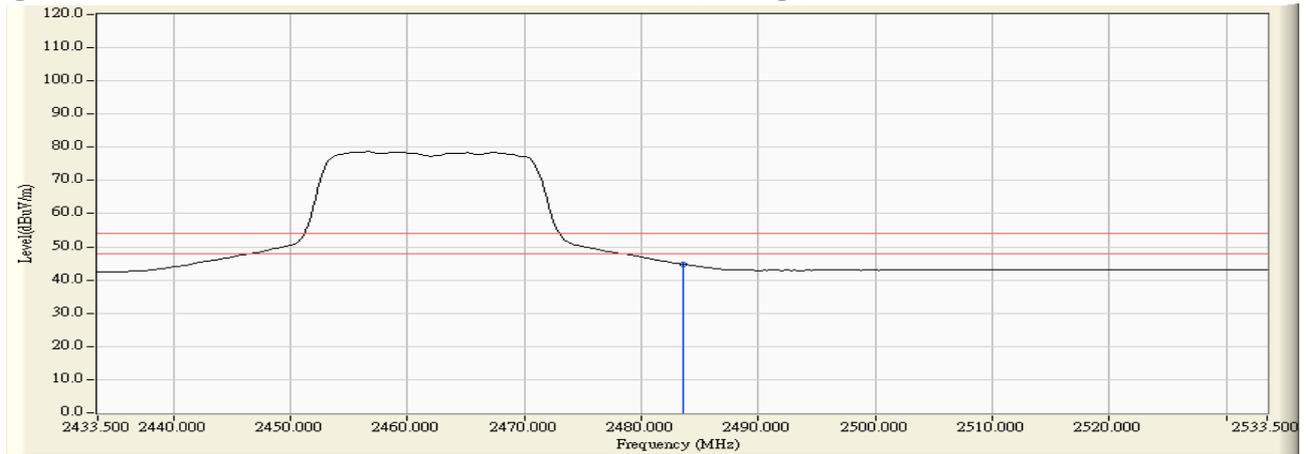
Channel No.	Frequency (MHz)	Correct Factor (dB)	Reading Level (dBuV)	Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Average Limit (dBuV/m)	Result
11 (Peak)	2483.500	31.435	27.680	59.115	74.00	54.00	Pass
11 (Average)	2483.500	31.435	13.292	44.727	74.00	54.00	Pass

**Figure Channel 11: Vertical (Peak)**



Note: RBW=1MHz, VBW=1MHz, Sweep=500ms

**Figure Channel 11: Vertical (Average)**



Note: RBW=1MHz, VBW=10Hz, Sweep=500ms

## 7. Occupied Bandwidth

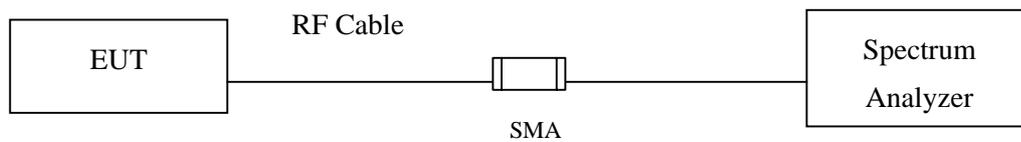
### 7.1. Test Equipment

	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, 2009; 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

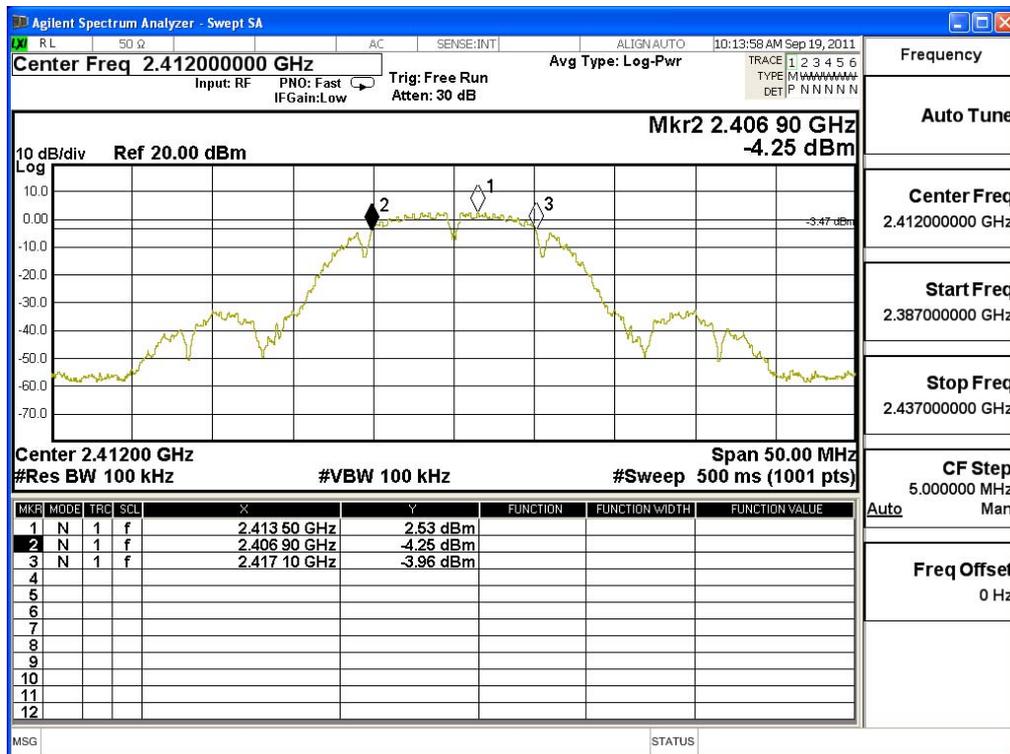
± 150Hz

### 7.6. Test Result of Occupied Bandwidth

Product : Mobile HD Snap Camera  
 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	10200	>500	Pass

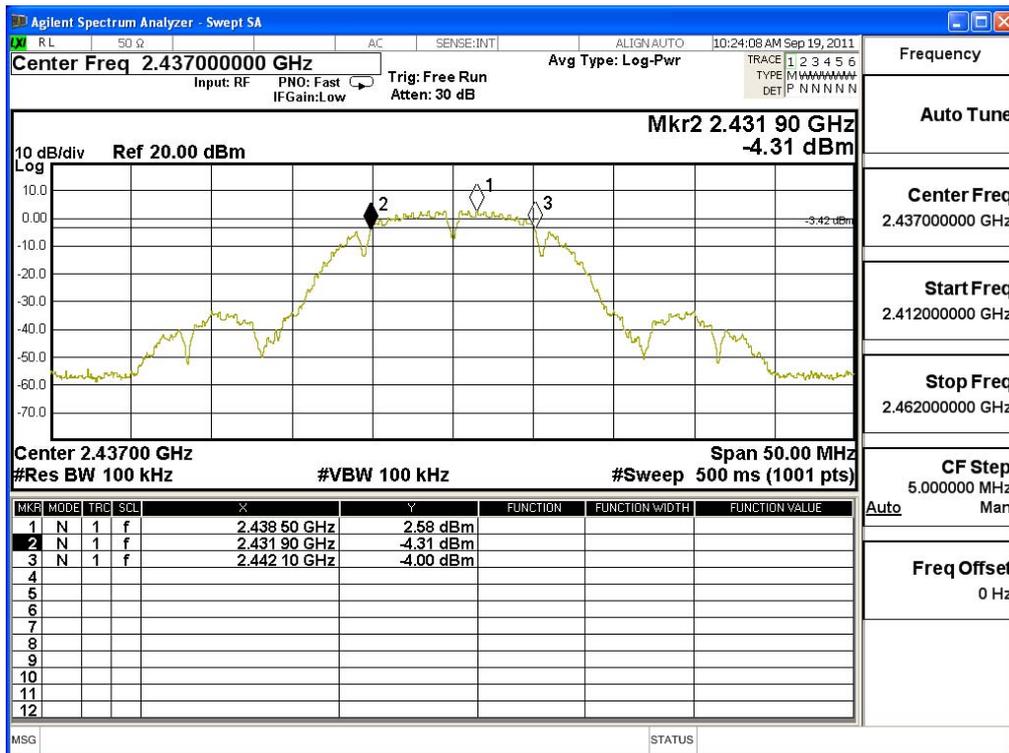
Figure Channel 1:



Product : Mobile HD Snap Camera  
 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	10200	>500	Pass

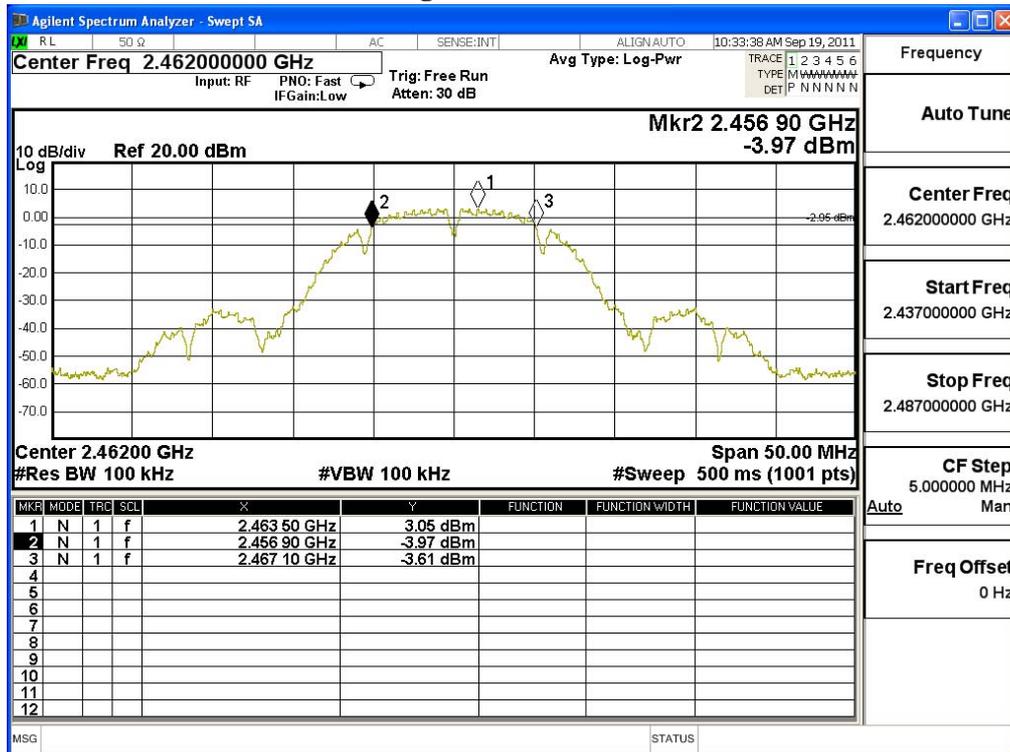
Figure Channel 6:



Product : Mobile HD Snap Camera  
 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	10200	>500	Pass

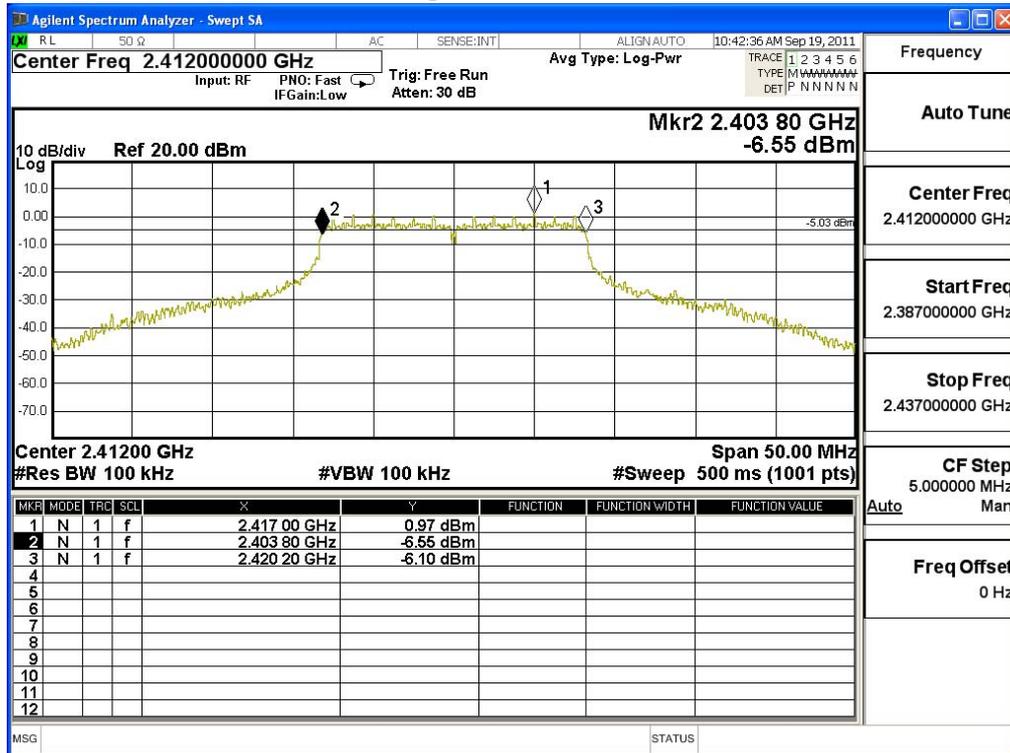
Figure Channel 11:



Product : Mobile HD Snap Camera  
 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	16400	>500	Pass

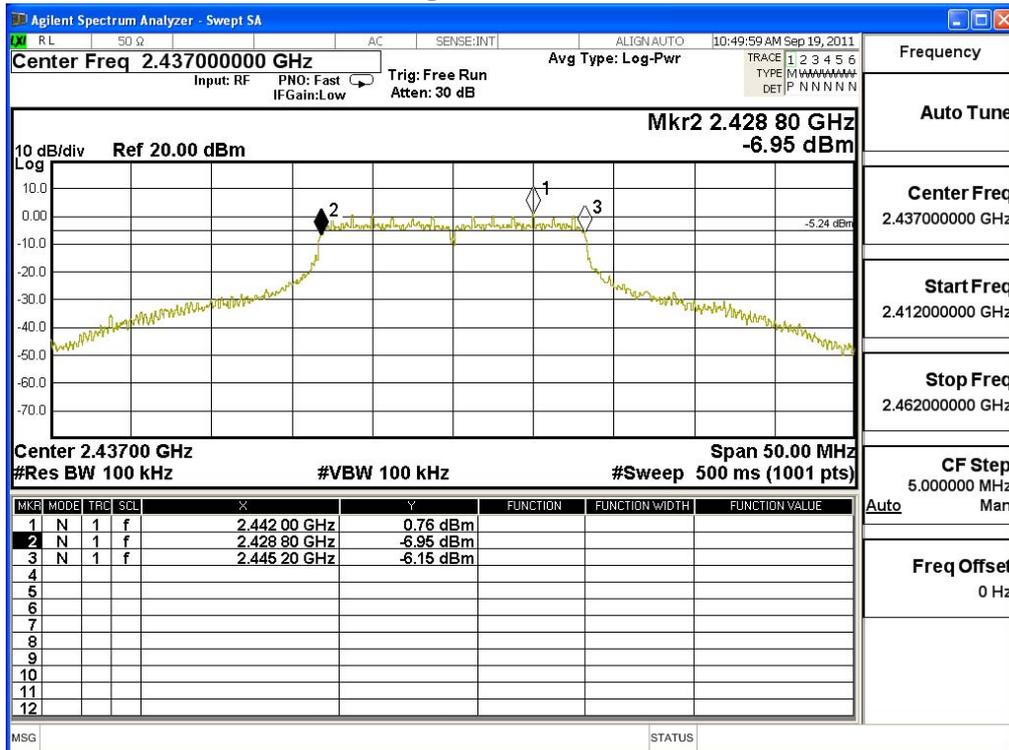
**Figure Channel 1:**



Product : Mobile HD Snap Camera  
 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	16400	>500	Pass

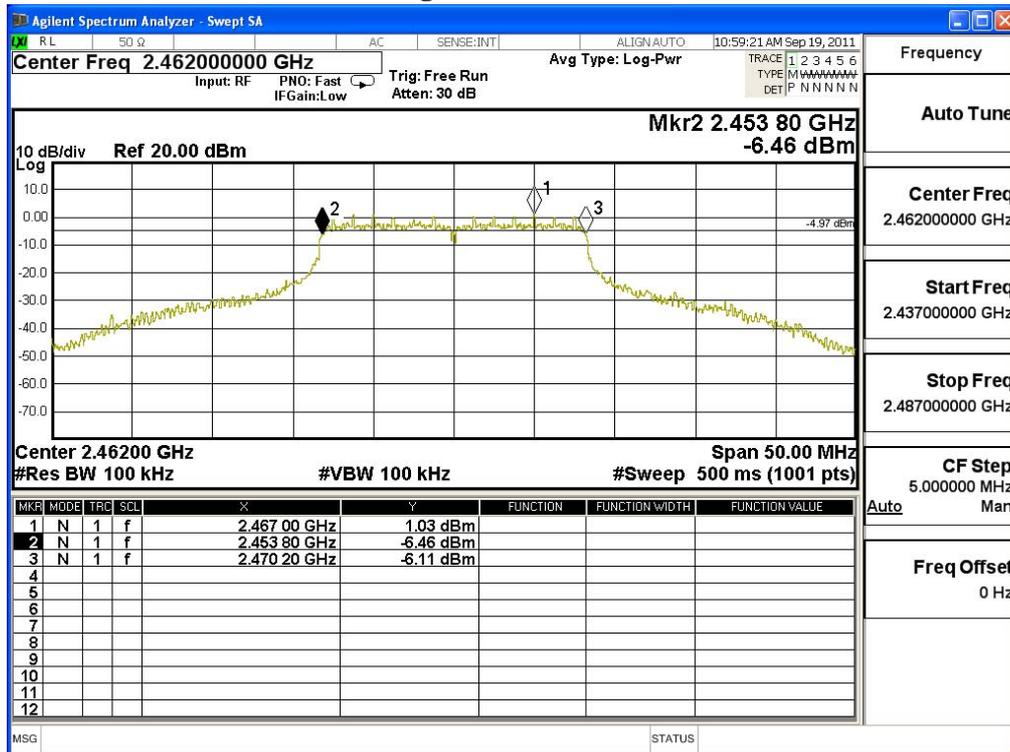
**Figure Channel 6:**



Product : Mobile HD Snap Camera  
 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	16400	>500	Pass

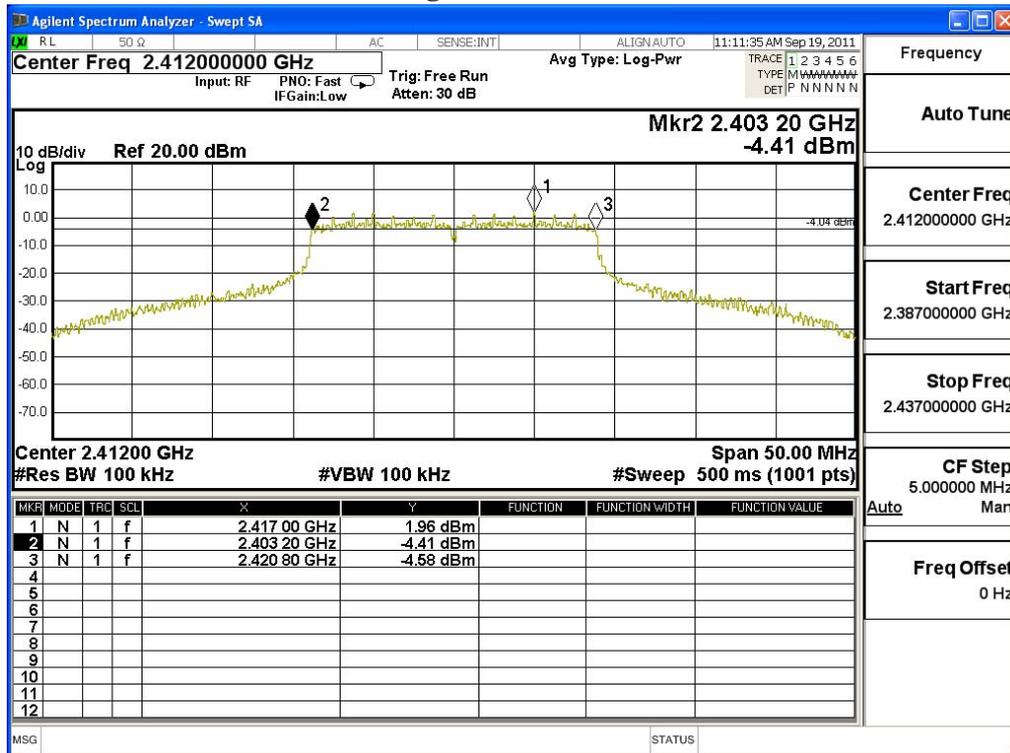
**Figure Channel 11:**



Product : Mobile HD Snap Camera  
 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	17600	>500	Pass

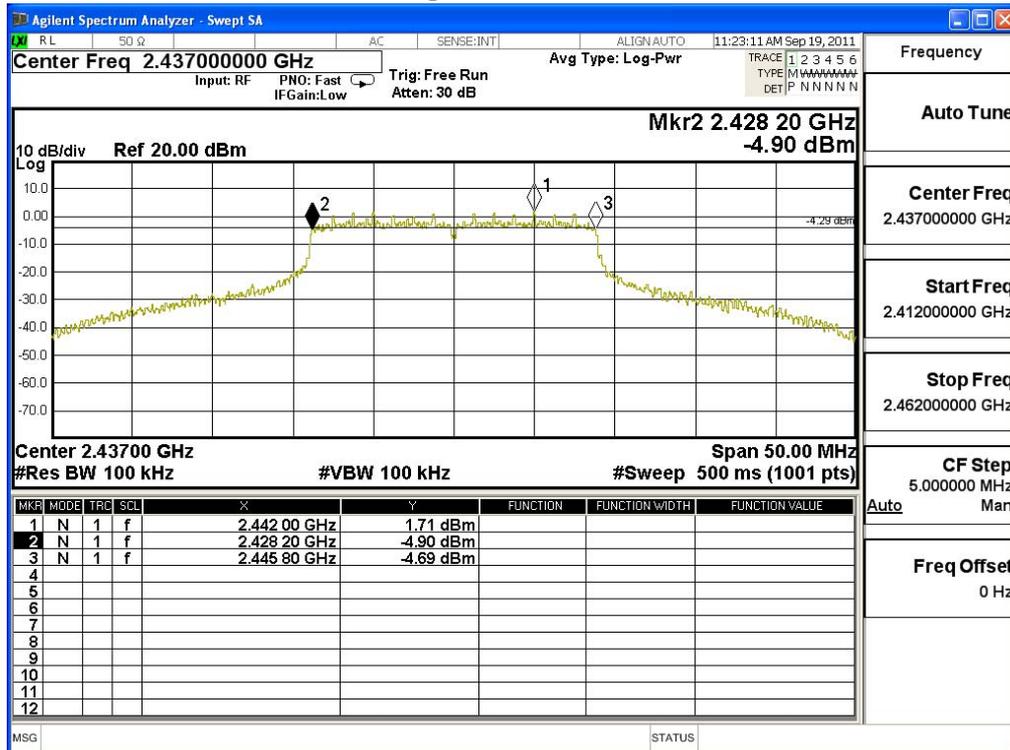
Figure Channel 1:



Product : Mobile HD Snap Camera  
 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	17600	>500	Pass

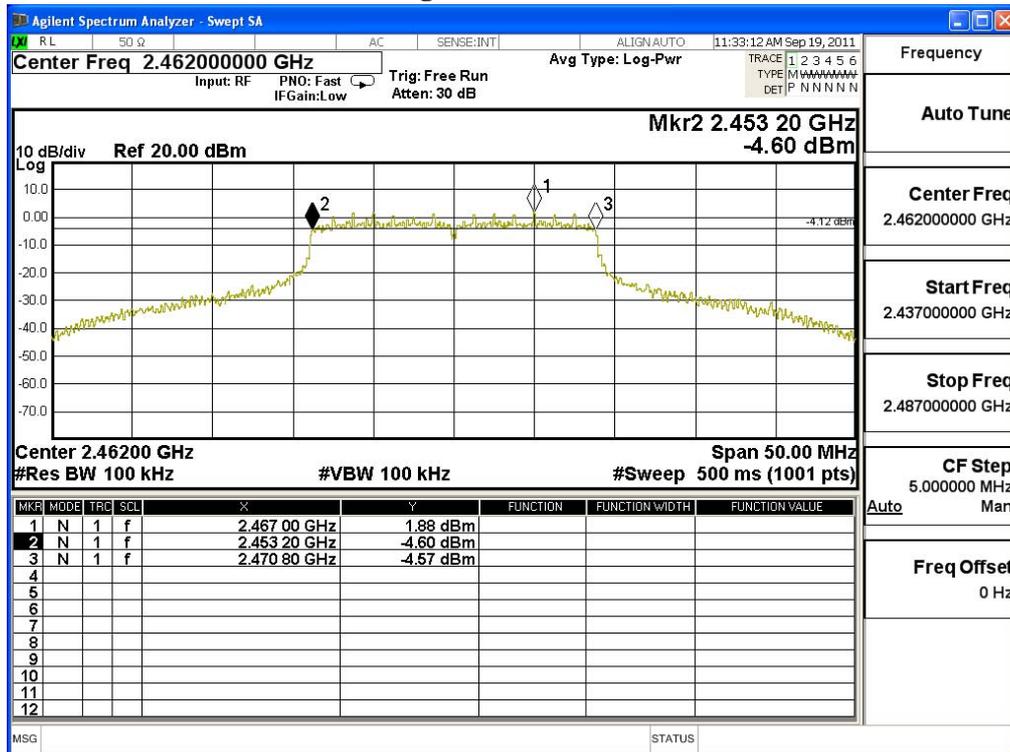
**Figure Channel 6:**



Product : Mobile HD Snap Camera  
 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	17600	>500	Pass

**Figure Channel 11:**



## 8. Power Density

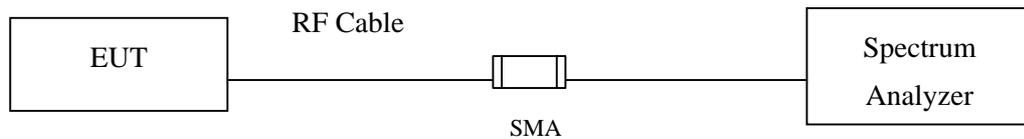
### 8.1. Test Equipment

	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, 2009; 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

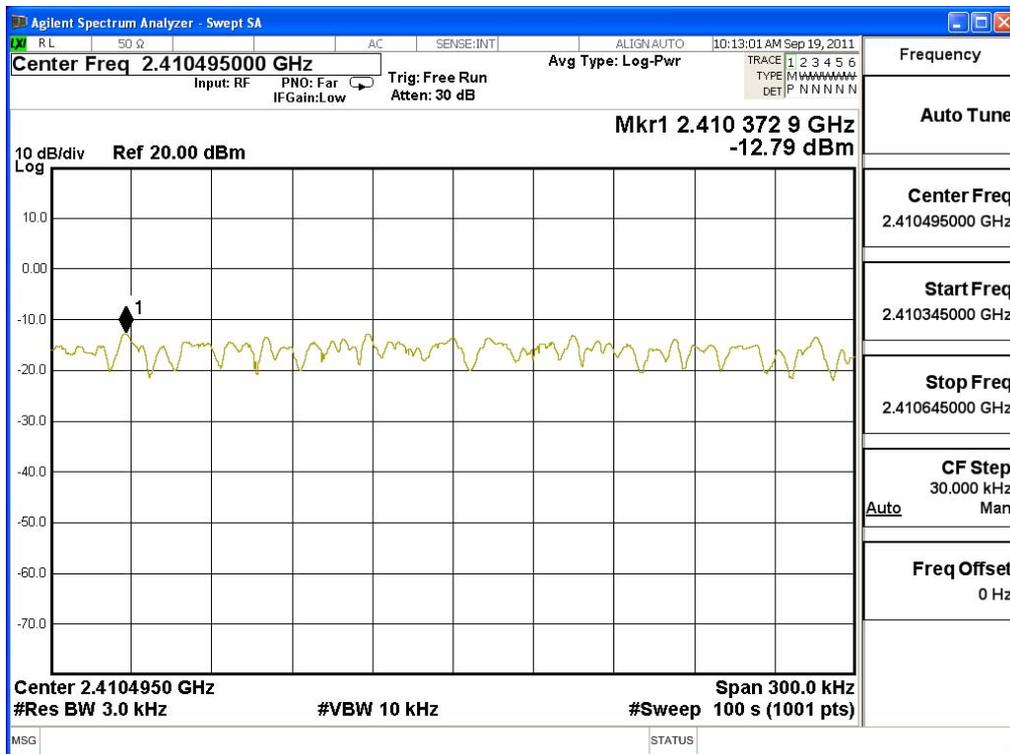
± 1.27 dB

### 8.6. Test Result of Power Density

Product : Mobile HD Snap Camera  
 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	-12.79	< 8dBm	Pass

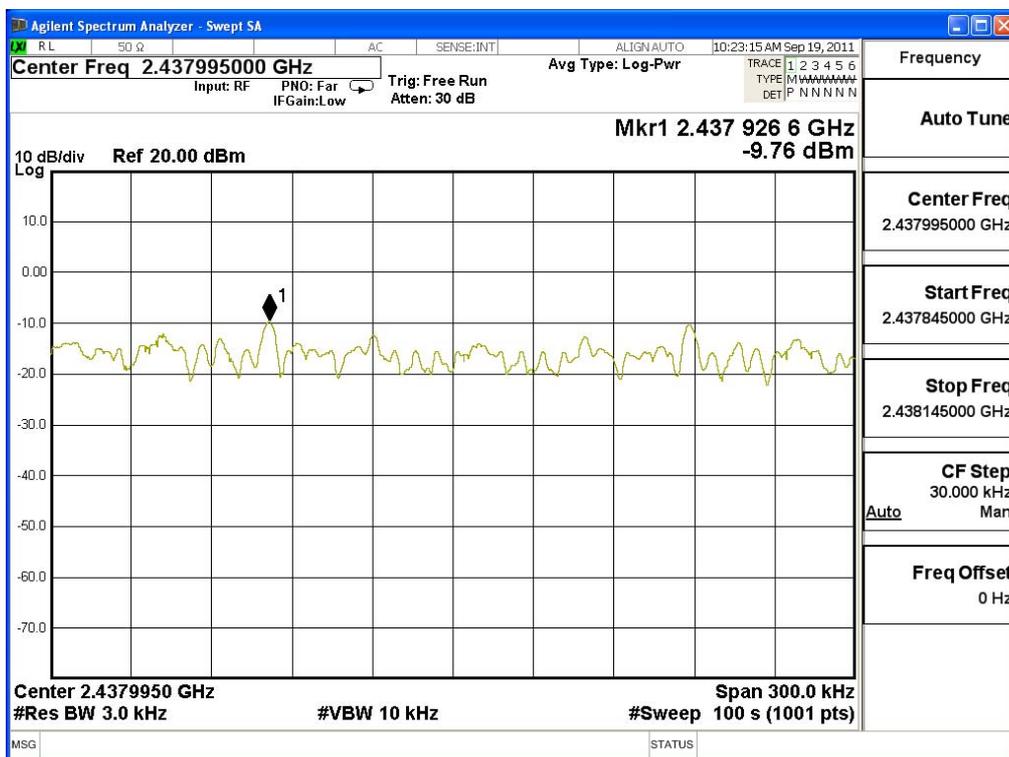
Figure Channel 1:



Product : Mobile HD Snap Camera  
 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	-9.76	< 8dBm	Pass

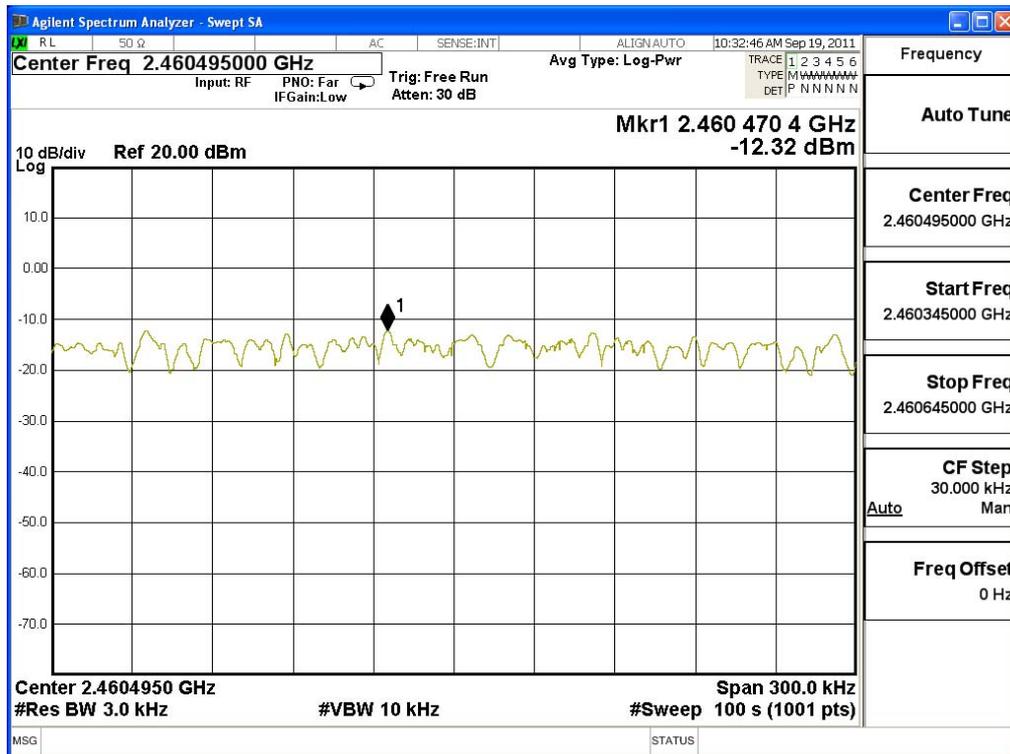
**Figure Channel 6:**



Product : Mobile HD Snap Camera  
 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	-12.32	< 8dBm	Pass

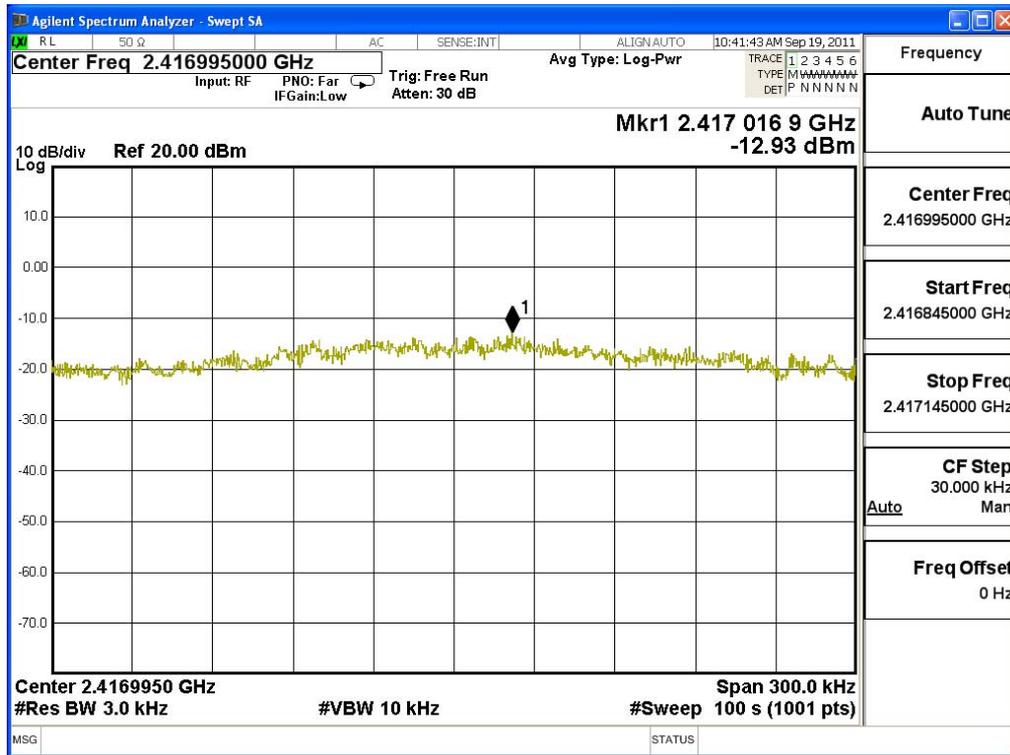
**Figure Channel 11:**



Product : Mobile HD Snap Camera  
 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	-12.93	< 8dBm	Pass

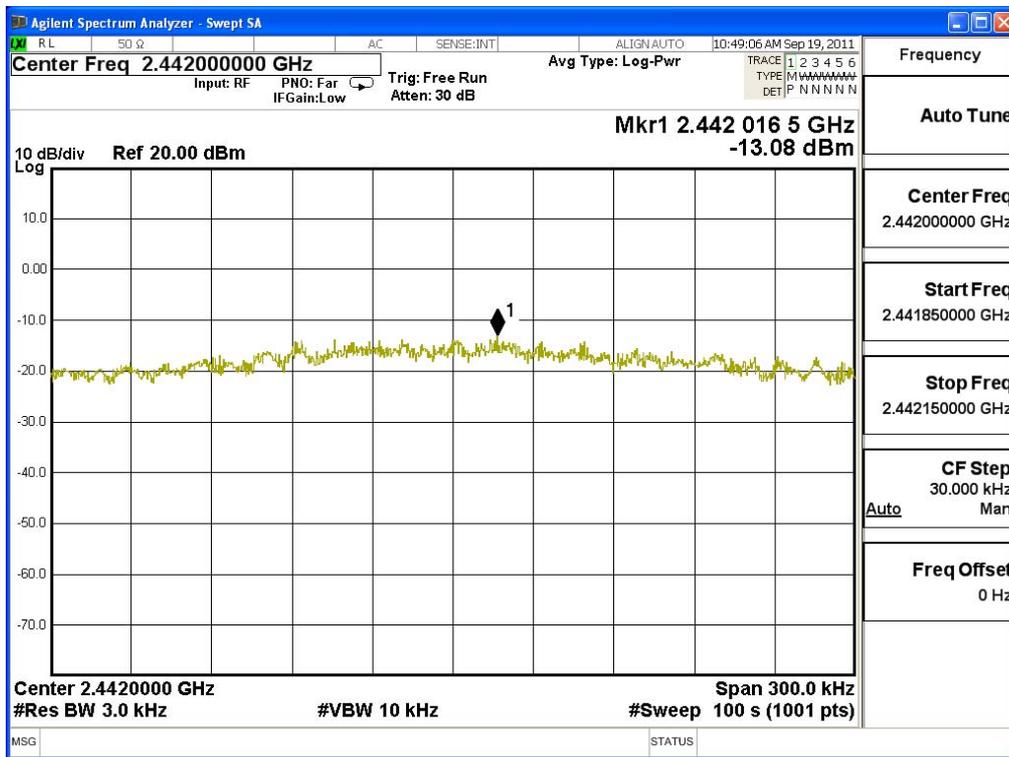
**Figure Channel 1:**



Product : Mobile HD Snap Camera  
 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	-13.08	< 8dBm	Pass

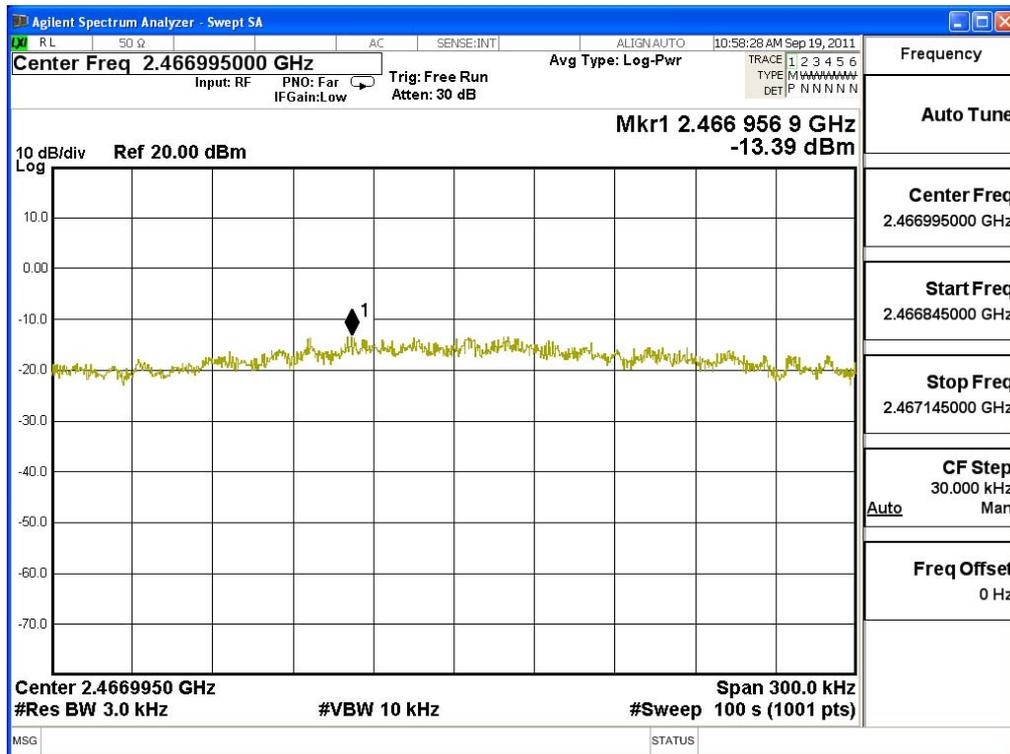
**Figure Channel 6:**



Product : Mobile HD Snap Camera  
 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	-13.39	< 8dBm	Pass

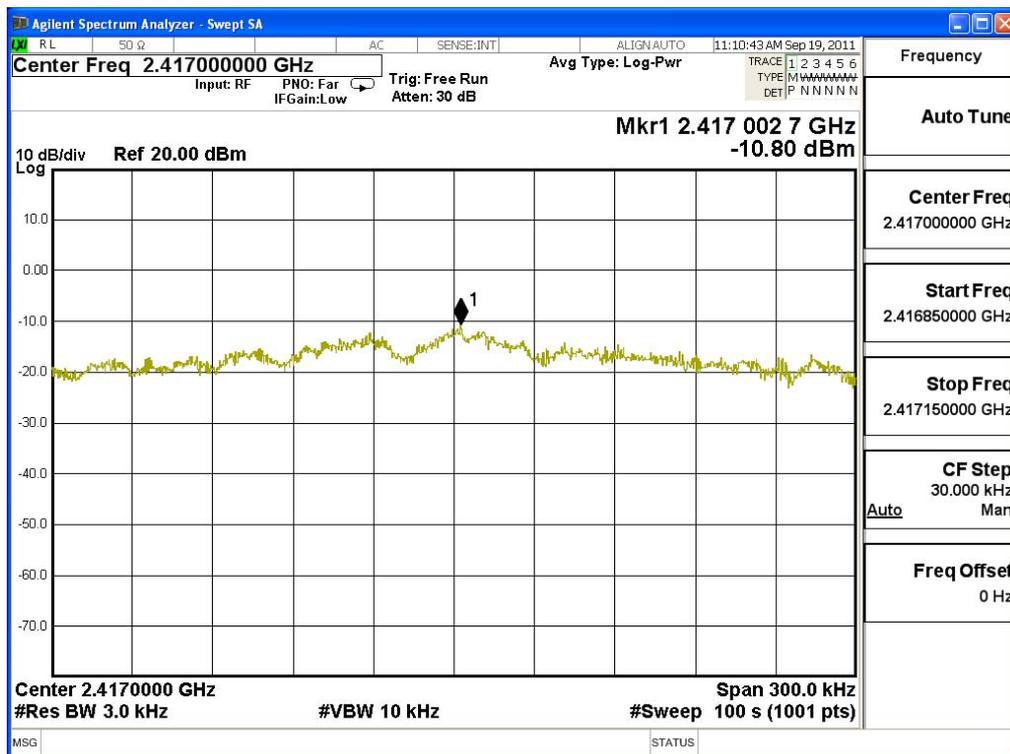
**Figure Channel 11:**



Product : Mobile HD Snap Camera  
 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	-10.80	< 8dBm	Pass

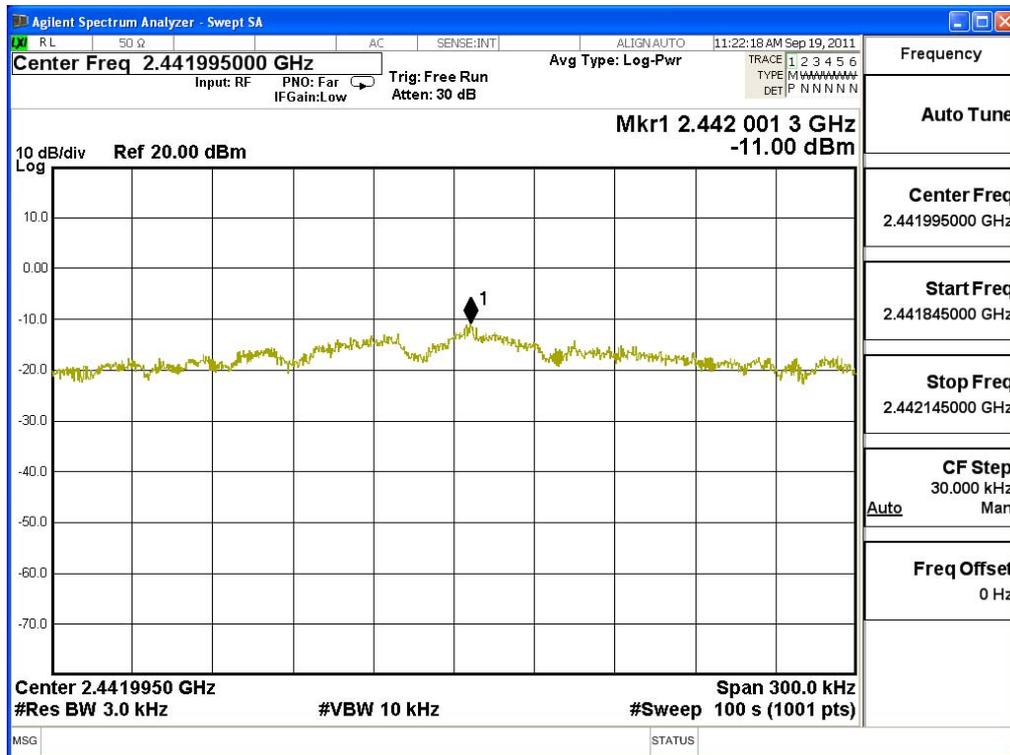
**Figure Channel 1:**



Product : Mobile HD Snap Camera  
 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	-11.00	< 8dBm	Pass

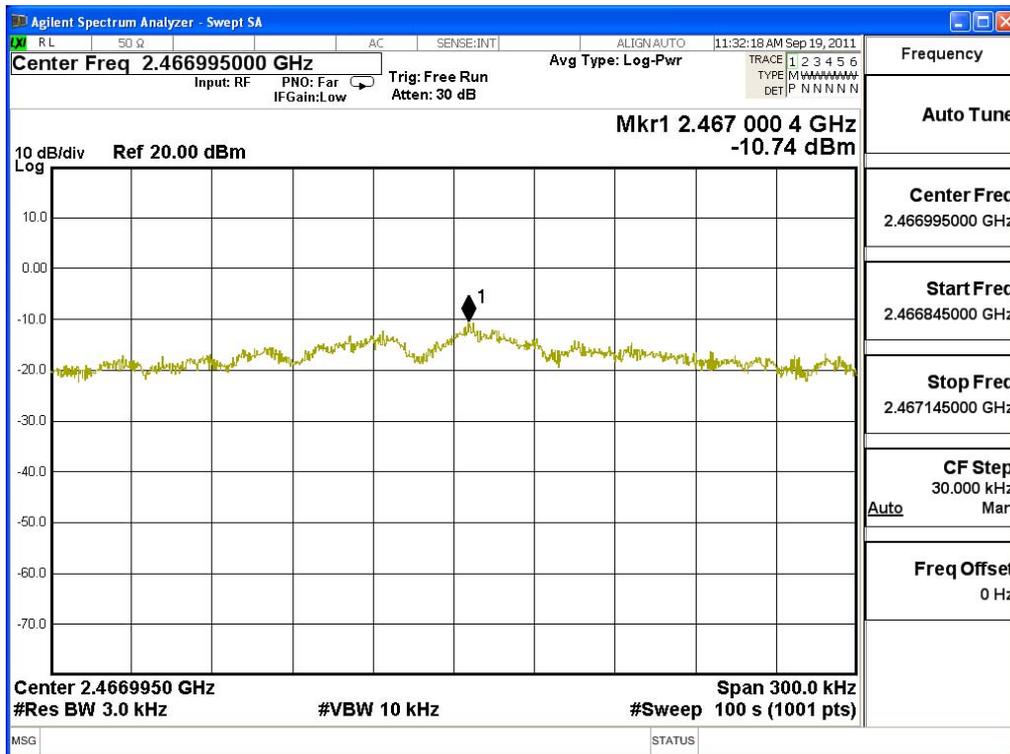
**Figure Channel 6:**



Product : Mobile HD Snap Camera  
 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	-10.74	< 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