8 OUTPUT POWER MEASUREMENT

8.1 Standard Applicable

For frequency hopping system, according to 15.247(b), the maximum peak output power of the transmitter shall not exceed 1 Watt. If Receving antennas of directional gain greater than 6 dBi are used, the power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

According to 15.247 (a) (1), frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25kHz or two-thirds of the 20dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125mW.

8.2 Measurement Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. The setup of the EUT as shown in figure 4. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any measured frequency within its operating range and make sure the instrument is operated in its linear range.
3. Set RBW of spectrum analyzer to 1 MHz and VBW to 3 MHz.
4. Measure the highest amplitude appearing on spectral display and record the level to calculate result data.
5. Repeat above procedures until all frequencies measured were complete.

8.3 Measurement Equipment

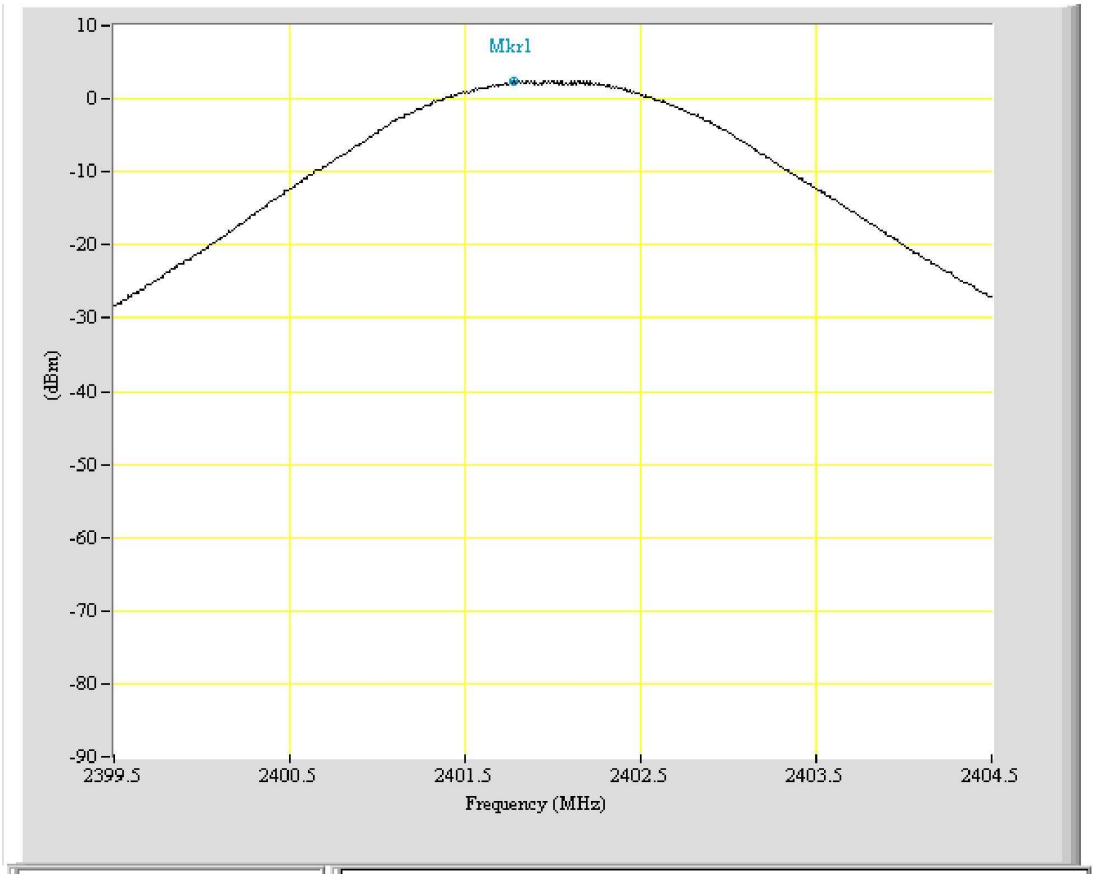
Equipment	Manufacturer	Model No.	Next Cal. Due
Spectrum Analyzer	Agilent	8564EC	09/23/2006

8.4 Measurement Data

Test Date : Nov. 23, 2005 Temperature : 21℃ Humidity : 70%

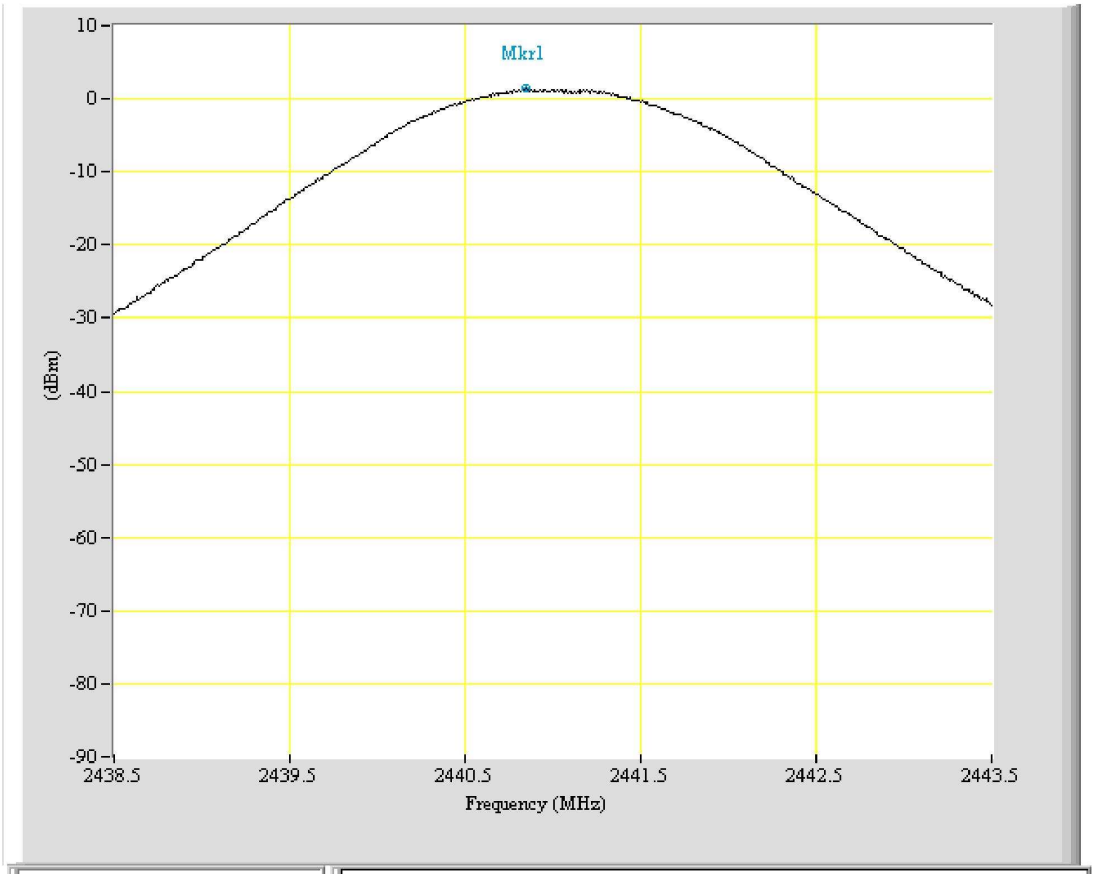
Channel	Frequency (MHz)	Reading (dBm)	Cable Loss (dB)	Maximum Peak Output Power (dBm)	Maximum Peak Output Power (mW)	FCC Limit (mW)	Chart
0	2402	2.34	0.5	2.84	1.92	125	Page 39
39	2441	1.34	0.5	1.84	1.53	125	Page 40
78	2480	-0.16	0.5	0.34	1.08	125	Page 41

Note: Please refer to page 39 to page 41 for chart.



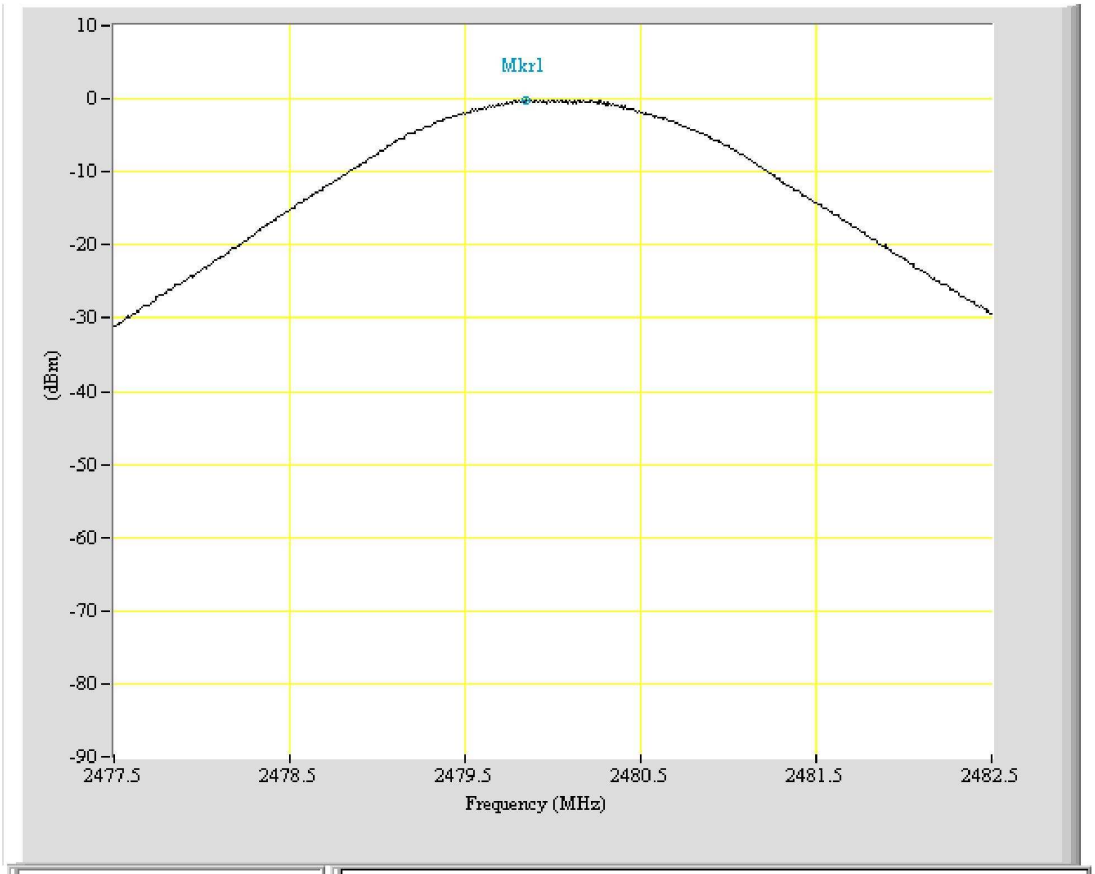
*Center 2402.0000MHz *SPAN 5.0000MHz *RBW 1000.00kHz *VBW 3000.00kHz *SWP 50.00msec *ATTEN 20.00dB *RL 10.00dBm	Marker 2401.775MHz 2.340dBm

EUT: BLUETOOTH
Purpose: Output_Pwr
Condition: CH0
Note:



*Center 2441.0000MHz *SPAN 5.0000MHz *RBW 1000.00kHz *VBW 3000.00kHz *SWP 50.00msec *ATTEN 20.00dB *RL 10.00dBm	Marker 2440.842MHz 1.340dBm

EUT: BLUETOOTH
Purpose: Output_Pwr
Condition: CH39
Note:



*Center 2480.0000MHz *SPAN 5.0000MHz *RBW 1000.00kHz *VBW 3000.00kHz *SWP 50.00msec *ATTEN 20.00dB *RL 10.00dBm	Marker 2479.842MHz -0.160dBm

EUT: BLUETOOTH
Purpose: Output_Pwr
Condition: CH78
Note:

9 OUT-OF-BAND RF CONDUCTED SPURIOUS EMISSION MEASUREMENT

9.1 Standard Applicable

According to 15.247(c), if any 100 kHz bandwidth outside these frequency bands, the radio frequency power that is produced by the modulation products of the spreading sequence, the information sequence and the carrier frequency shall be either at least 20 dB below that in any 100 kHz bandwidth within the band that contains the highest level of the desired power or shall not exceed the general levels specified in §15.209(a), whichever results in the lesser attenuation.

9.2 Measurement Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. The setup of the EUT as shown in figure 4. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set it to any measured frequency within its operating range and make sure the instrument is operated in its linear range.
3. Set RBW of spectrum analyzer to 100 kHz with a convenient frequency span including 100kHz bandwidth from band edge.
4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
5. Repeat above procedures until all measured frequencies were complete.

9.3 Measurement Equipment

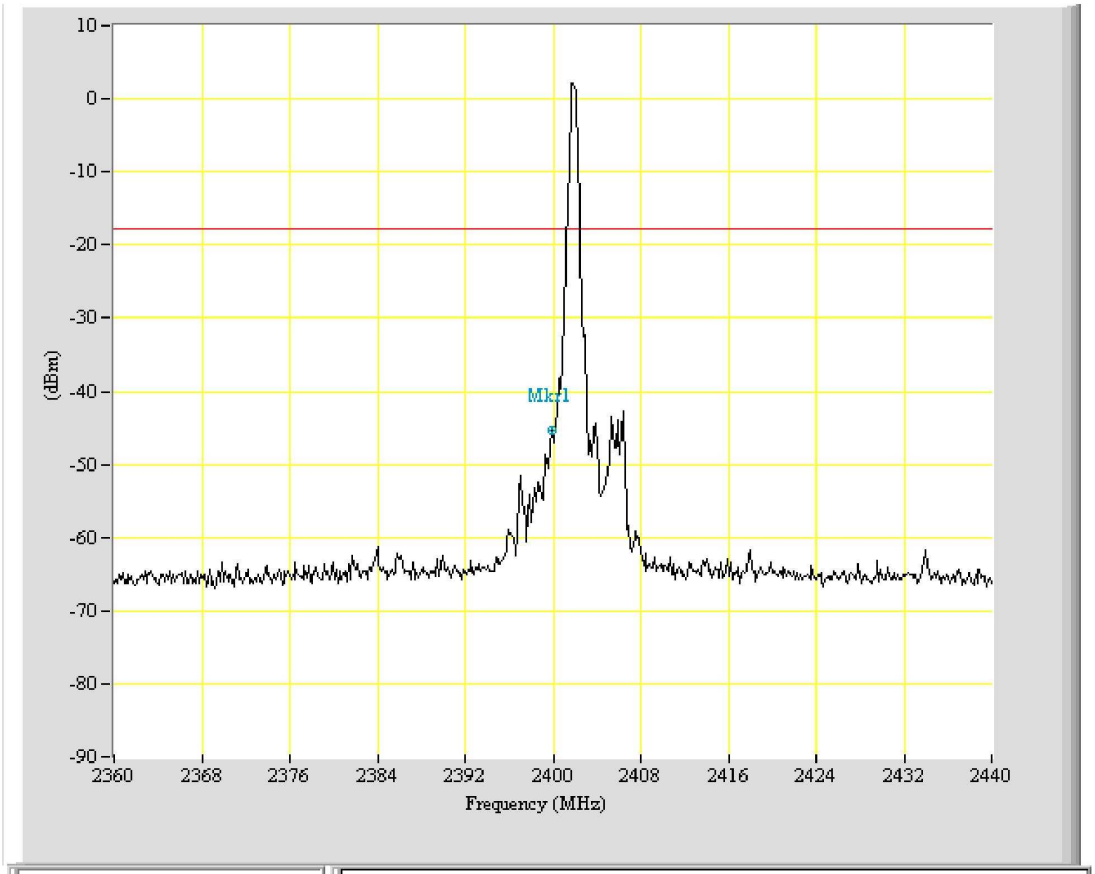
Equipment	Manufacturer	Model No.	Next Cal. Due
Spectrum Analyzer	Agilent	8564EC	09/23/2006

9.4 Measurement Data

Test Date : Nov. 23, 2005 Temperature : 21℃ Humidity : 70%

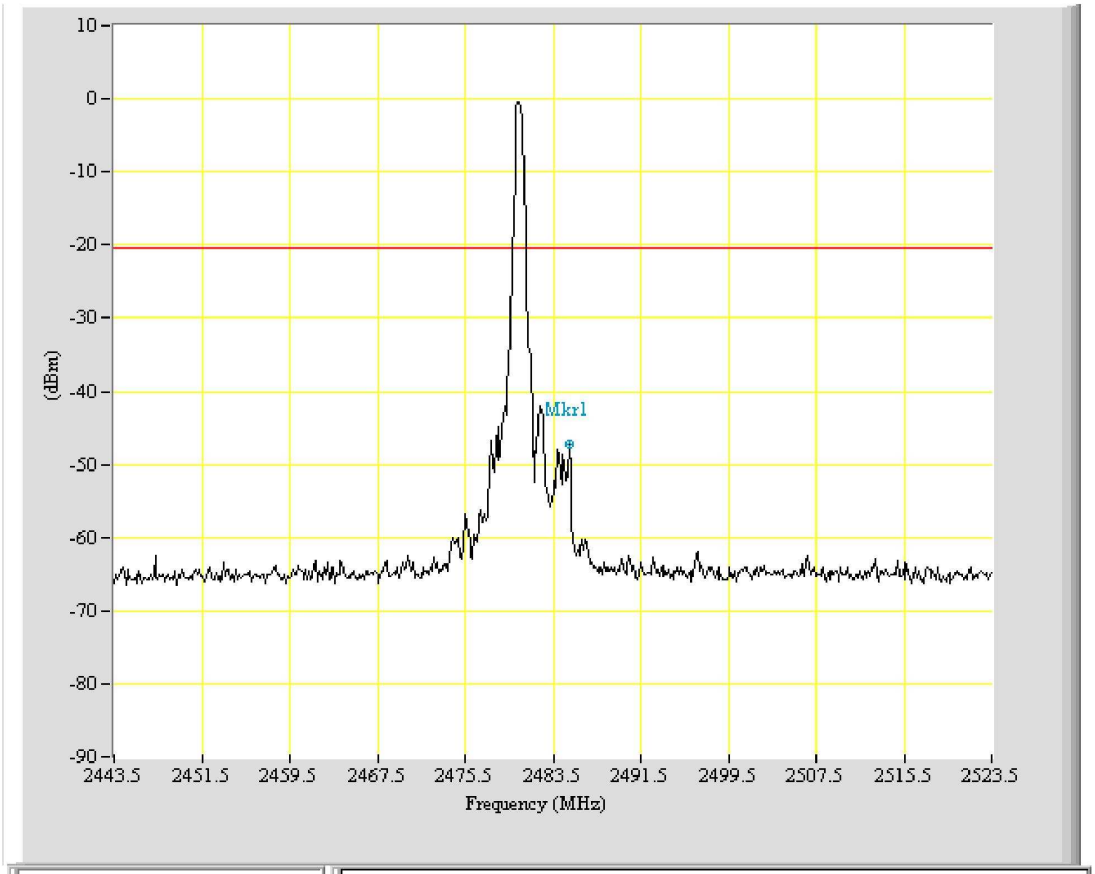
Channel	Test Frequency Range	Note	Chart
0	2360 MHz - 2440 MHz	Lower Band Edge	Page 44
78	2443.5 MHz - 2523.5 MHz	Upper Band Edge	Page 45
0	30 MHz - 25 GHz		Page 46
39	30 MHz - 25 GHz		Page 47
78	30 MHz - 25 GHz		Page 48

Note: Please refer to page 44 to page 48 for chart.



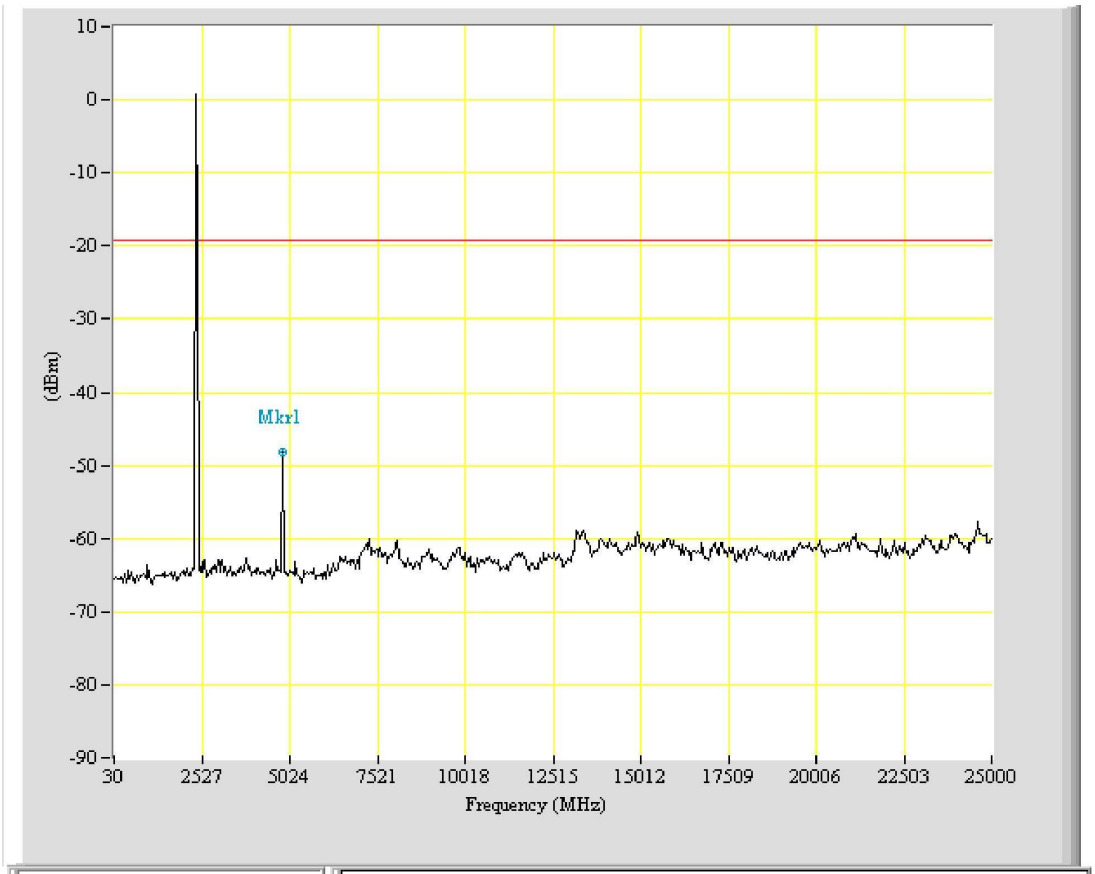
*Center 2400.0000MHz	Display Line -17.830dBm
*SPAN 80.0000MHz	Marker 2399.867MHz -45.330dBm
*RBW 100.00kHz	
*VBW 300.00kHz	
*SWP 50.00msec	
*ATTEN 20.00dB	
*RL 10.00dBm	

EUT: BLUETOOTH
Purpose: Band_Edge
Condition: CH0
Note:



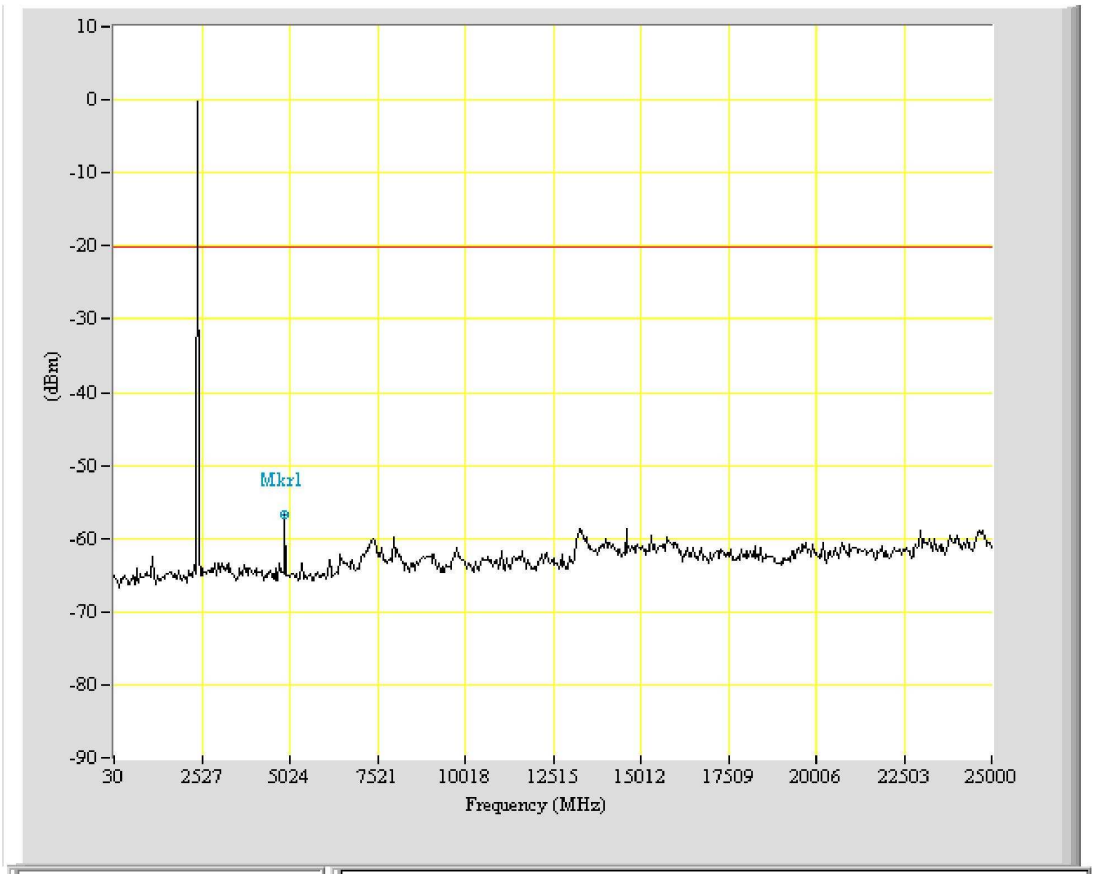
*Center 2483.5000MHz	Display Line -20.500dBm
*SPAN 80.0000MHz	Marker 2484.967MHz -47.330dBm
*RBW 100.00kHz	
*VBW 300.00kHz	
*SWP 50.00msec	
*ATTEN 20.00dB	
*RL 10.00dBm	

EUT: BLUETOOTH
Purpose: Band_Edge
Condition: CH78
Note:



*Center 12515.0000MHz	Display Line -19.330dBm
*SPAN 24970.0000MHz	Marker 4815.917MHz -48.160dBm
*RBW 100.00kHz	
*VBW 300.00kHz	
*SWP 6300.00msec	
*ATTEN 20.00dB	
*RL 10.00dBm	

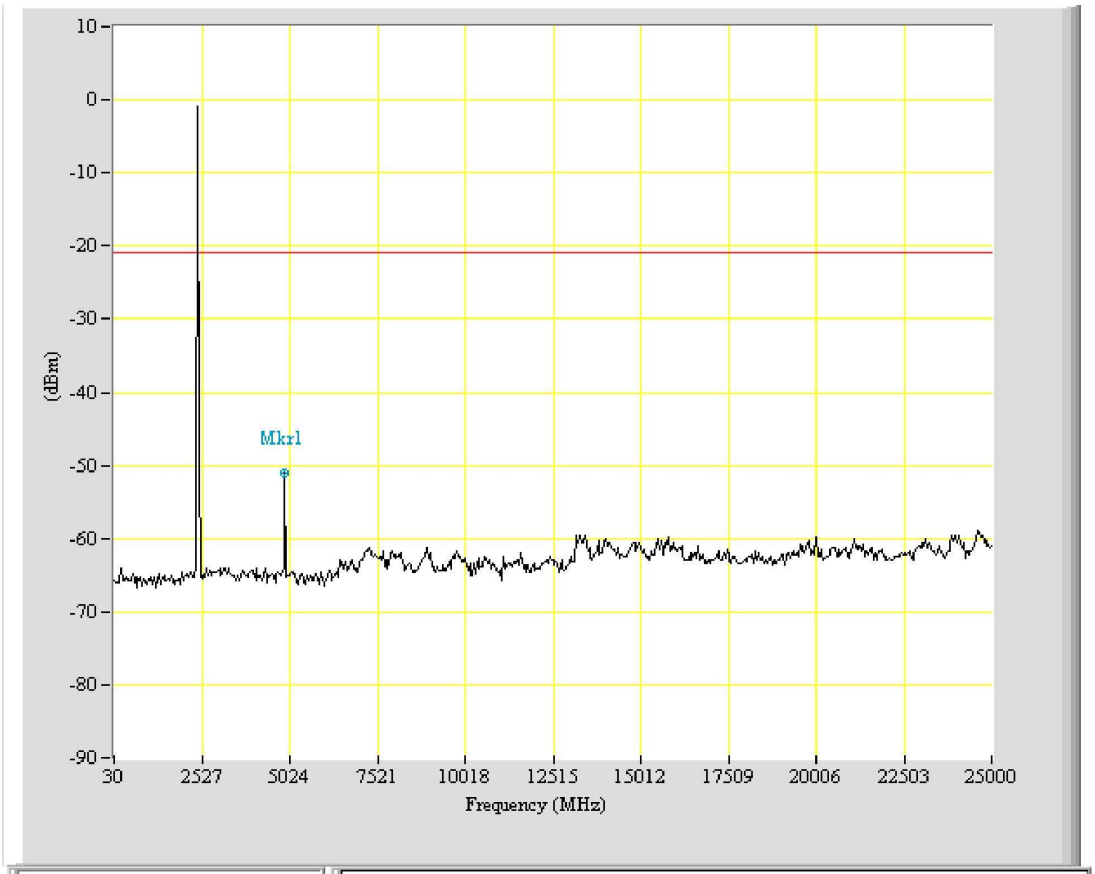
EUT: BLUETOOTH
Purpose: Band_Edge_All
Condition: CH0
Note:



*Center 12515.0000MHz
*SPAN 24970.0000MHz
*RBW 100.00kHz
*VBW 300.00kHz
*SWP 6300.00msec
*ATTEN 20.00dB
*RL 10.00dBm

Display Line -20.160dBm
Marker 4899.150MHz -56.830dBm

EUT: BLUETOOTH
Purpose: Band_Edge_All
Condition: CH39
Note:



*Center 12515.0000MHz	Display Line -20.830dBm
*SPAN 24970.0000MHz	Marker 4899.150MHz -51.000dBm
*RBW 100.00kHz	
*VBW 300.00kHz	
*SWP 6300.00msec	
*ATTEN 20.00dB	
*RL 10.00dBm	

EUT: BLUETOOTH
Purpose: Band_Edge_All
Condition: CH78
Note:

10 NUMBER of HOPPING CHANNELS

10.1 Standard Applicable

According to 15.247(b)(1), for frequency hopping systems, operating in the 2400-2483.5MHz band employing at least 75 hopping channels

10.2 Measurement Procedure

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. The setup of the EUT as shown in figure 4. Turn on the EUT and connect its antenna terminal to measurement instrument via a low loss cable. Then set EUT to hopping operating mode and set spectrum analyzer miximum to measure the number of hopping channels.

10.3 Measurement Equipment

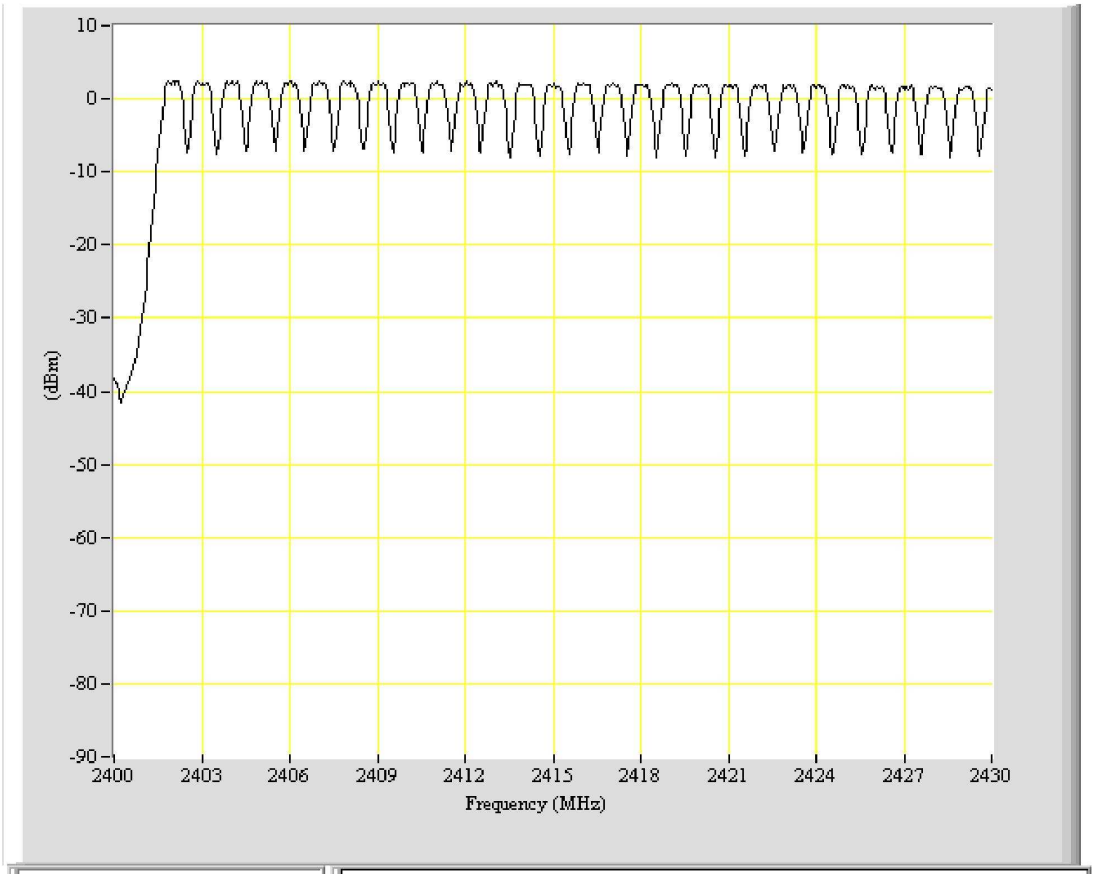
Equipment	Manufacturer	Model No.	Next Cal. Due
Spectrum Analyzer	Agilent	8564EC	09/23/2006

10.4 Measurement Data

Test Date : Nov. 23, 2005 Temperature : 21℃ Humidity : 70%

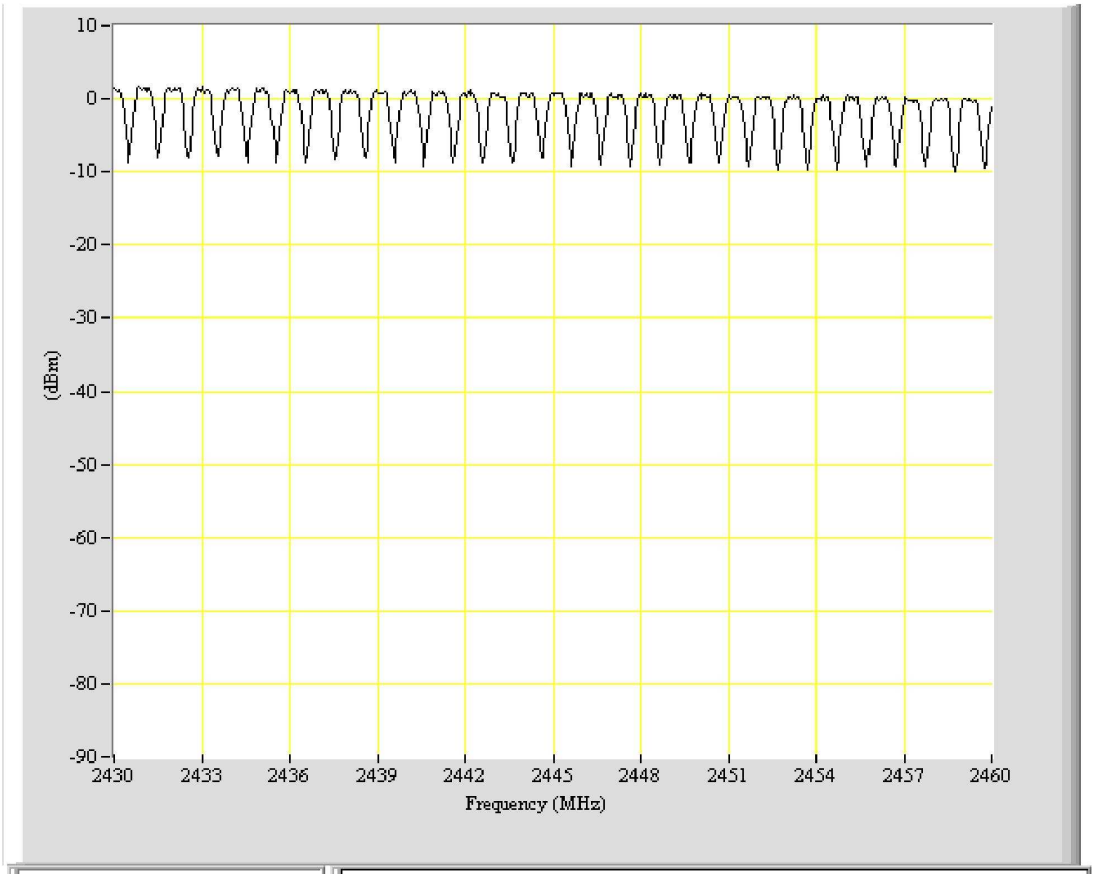
Number of hopping channels = 79 channels

Note: Please refer to page 50 to page 52 for chart.



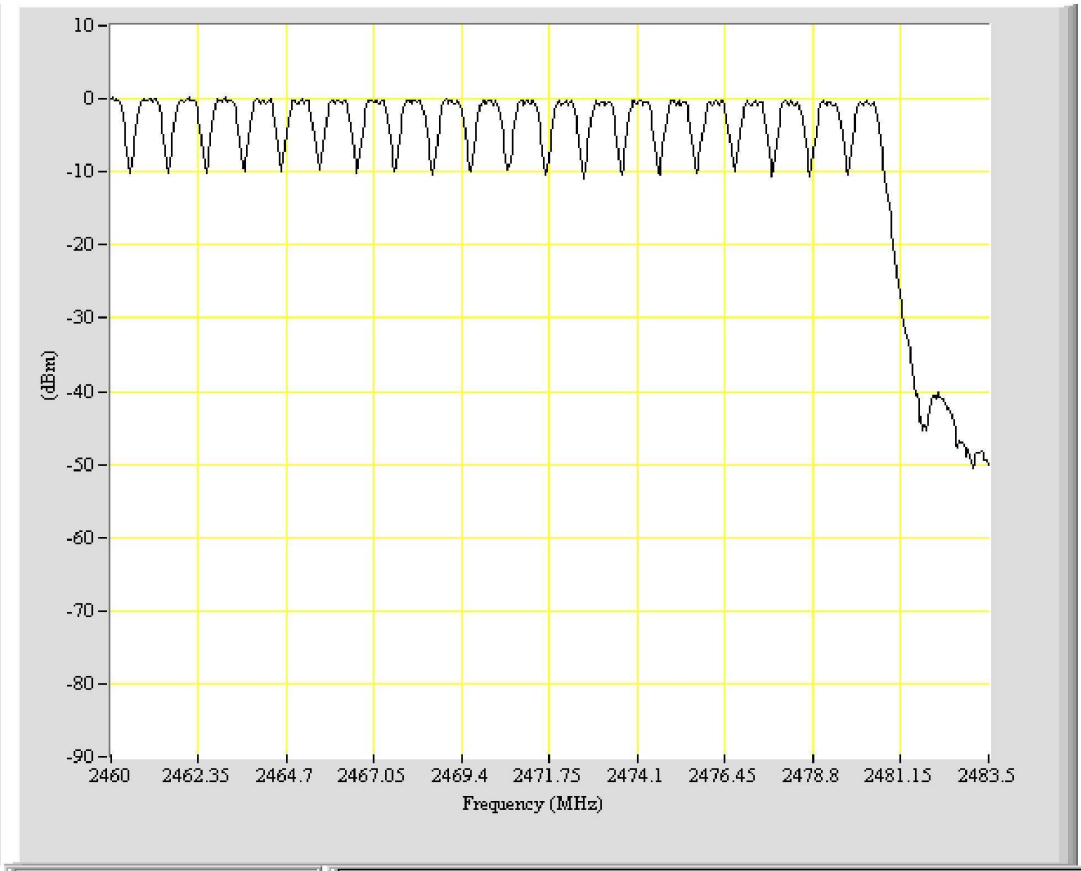
*Center 2415.0000MHz
*SPAN 30.0000MHz
*RBW 300.00kHz
*VBW 300.00kHz
*SWP 50.00msec
*ATTEN 20.00dB
*RL 10.00dBm

EUT: BLUETOOTH
Purpose: No_of_Channel
Condition: HOPPING_1
Note:



*Center 2445.0000MHz
*SPAN 30.0000MHz
*RBW 300.00kHz
*VBW 300.00kHz
*SWP 50.00msec
*ATTEN 20.00dB
*RL 10.00dBm

EUT: BLUETOOTH
Purpose: No_of_Channel
Condition: HOPPING_2
Note:



EUT: BLUETOOTH
Purpose: No_of_Channel
Condition: HOPPING_3
Note: