

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 maximum to measure the number of hopping channels.

10.3 Measurement Equipment

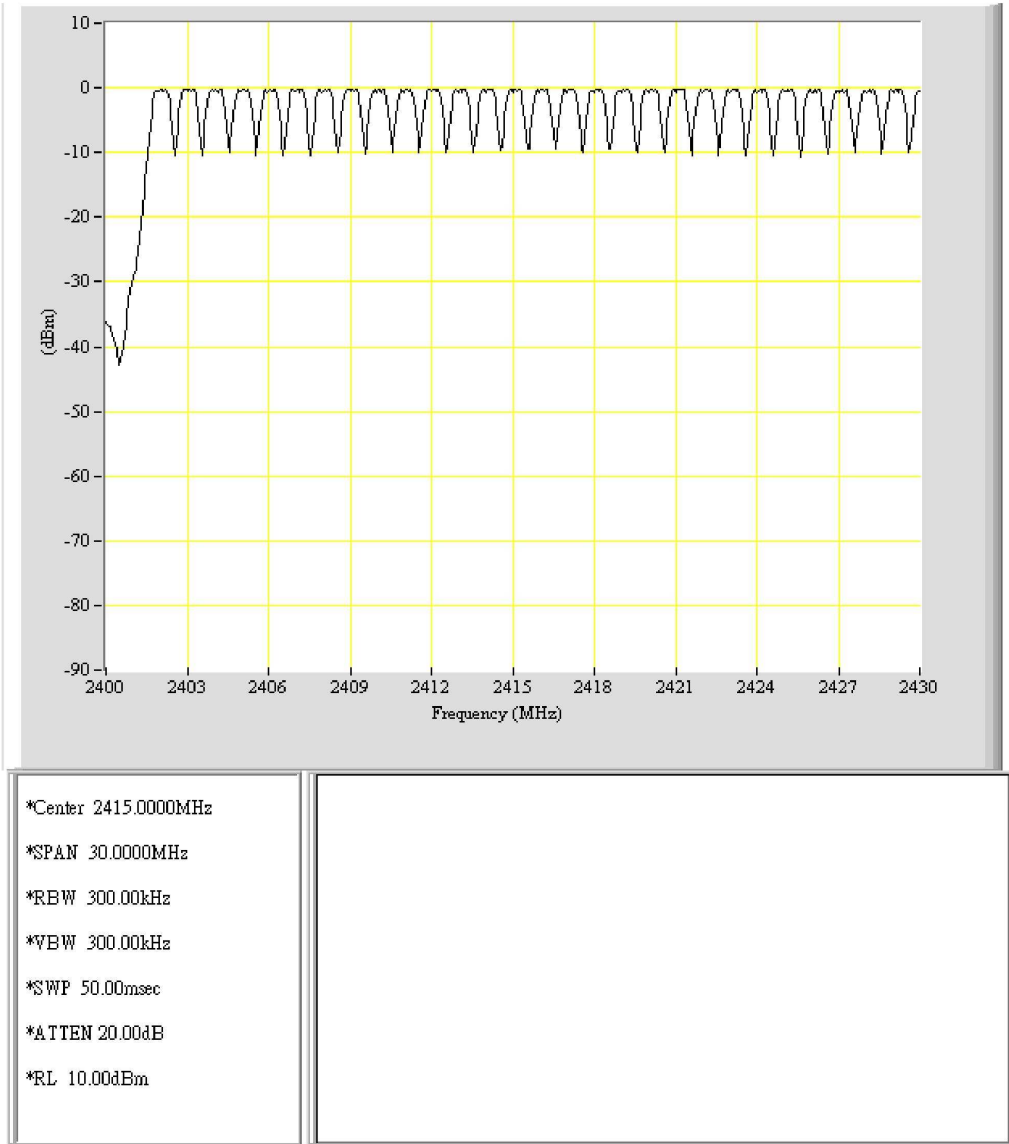
Equipment	Manufacturer	Model No.	Next Cal. Due
Spectrum Analyzer	Agilent	8564EC	09/22/2007

10.4 Measurement Data

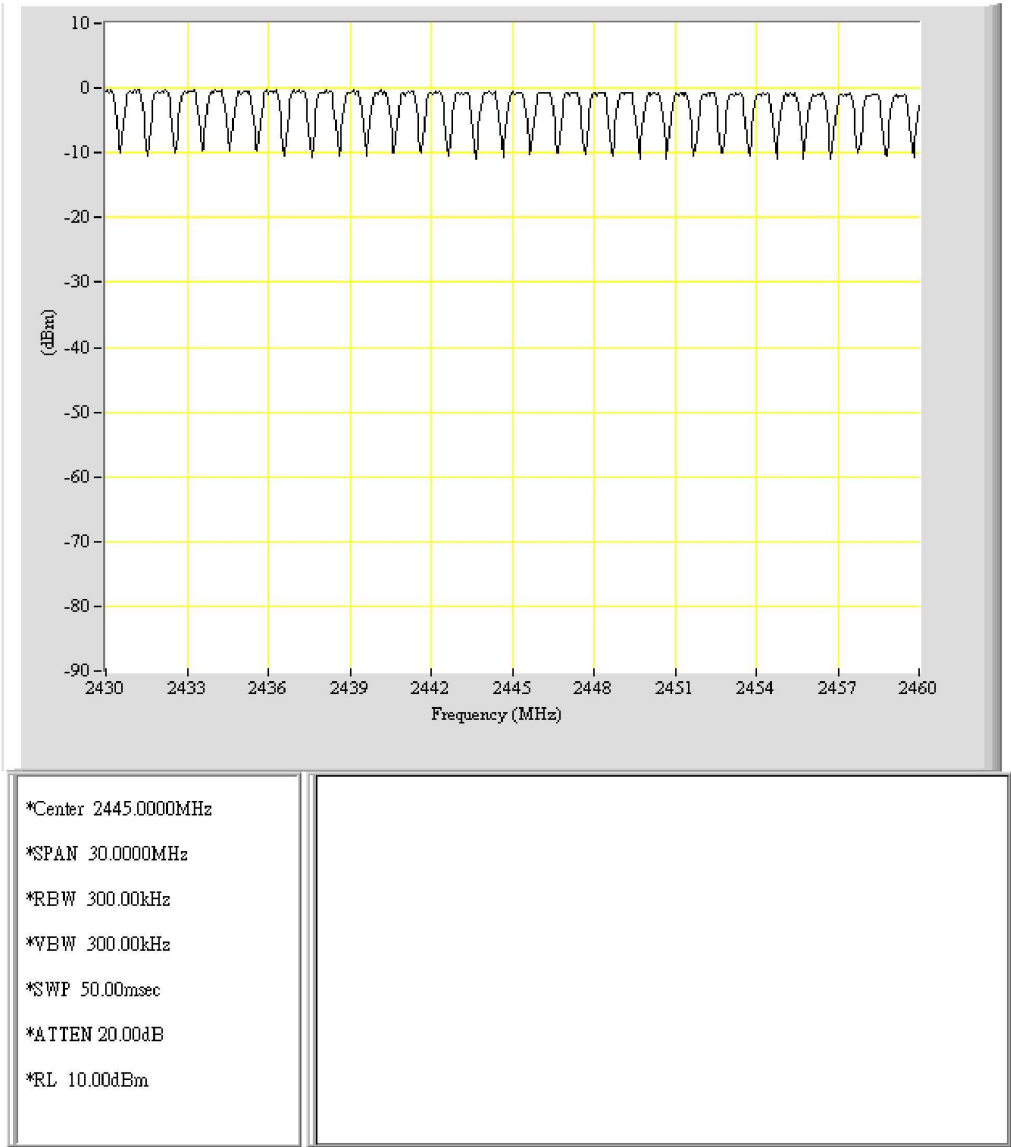
Test Date : Apr. 14, 2006 Temperature : 23°C Humidity : 62%

Number of hopping channels = 79 channels

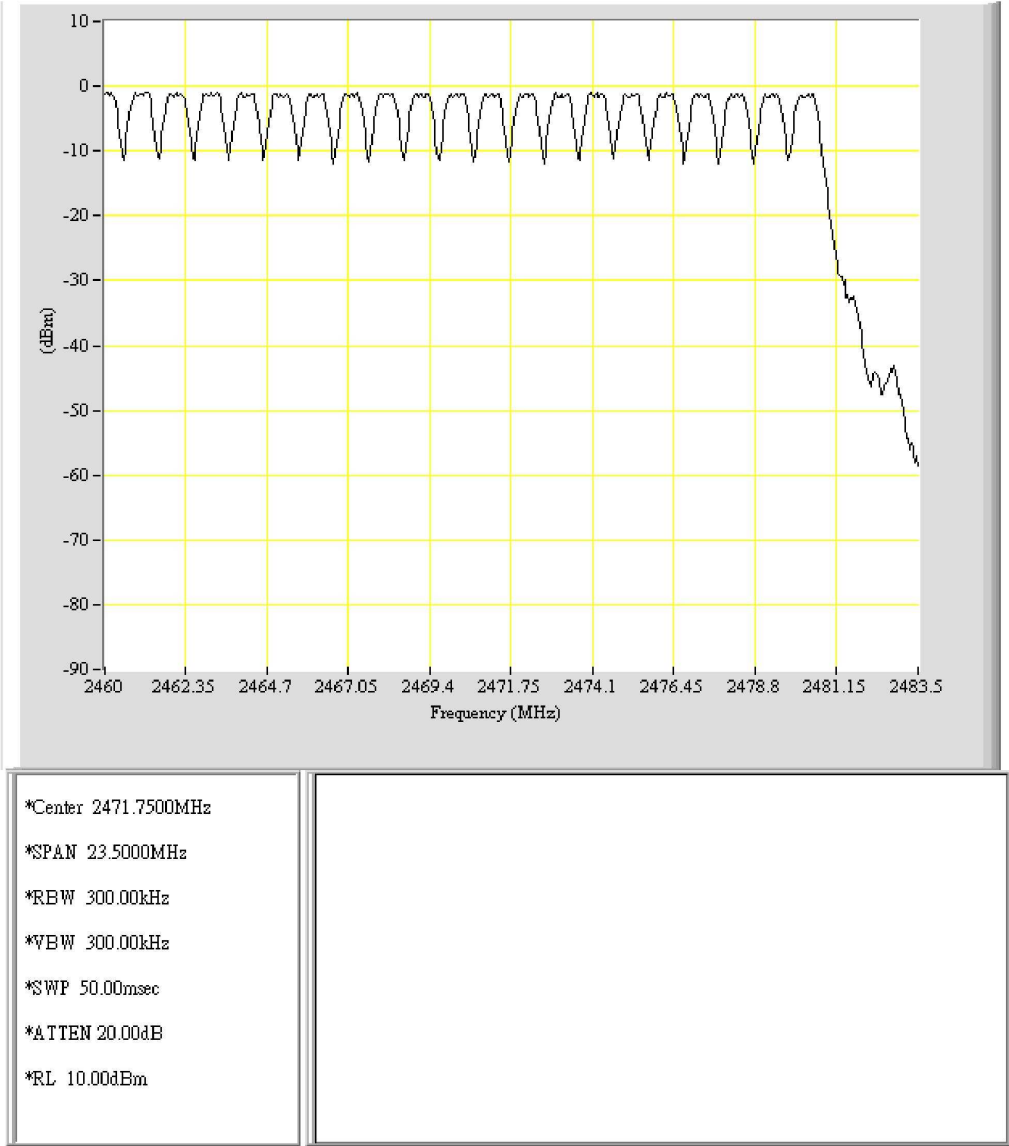
Note: Please refer to page 50 to page 52 for chart.



EUT: BLUETOOTH
Purpose: No_of_Channel
Condition: HOPPING_1
Note:



EUT: BLUETOOTH
Purpose: No_of_Channel
Condition: HOPPING_2
Note:



EUT: BLUETOOTH
Purpose: No_of_Channel
Condition: HOPPING_3
Note:

11 HOPPING CHANNEL CARRIER FREQUENCY SEPARATED

11.1 Standard Applicable

According to 15.247(a)(1), the frequency hopping system shall have hopping channel carrier frequencies separated by minimum of 25kHz or the 20dB bandwidth of hopping channel, whichever is greater.

11.2 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 measurement frequency within its operating range and make sure the instrument is operated in its linear range.
3. Set spectrum analyzer maximum hold to measure channel carrier frequency , then adjust channel carrier frequency to adjacent channel.
4. Repeat above procedure until all measured frequencies were complete.

11.3 Measurement Equipment

Equipment	Manufacturer	Model No.	Next Cal. Due
Spectrum Analyzer	Agilent	8564EC	09/22/2007

11.4 Measurement Data

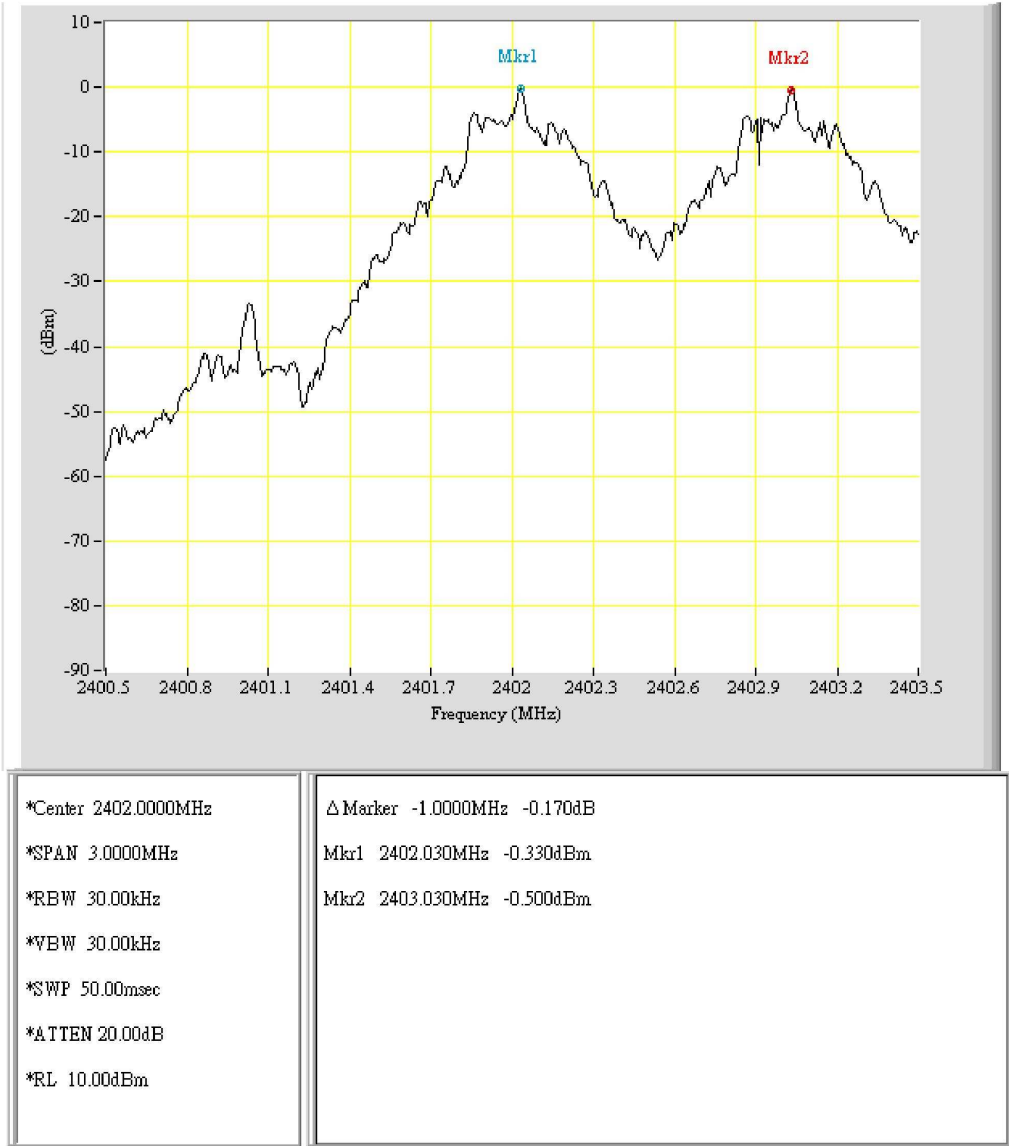
Test Date : Apr. 14, 2006

Temperature : 23°C

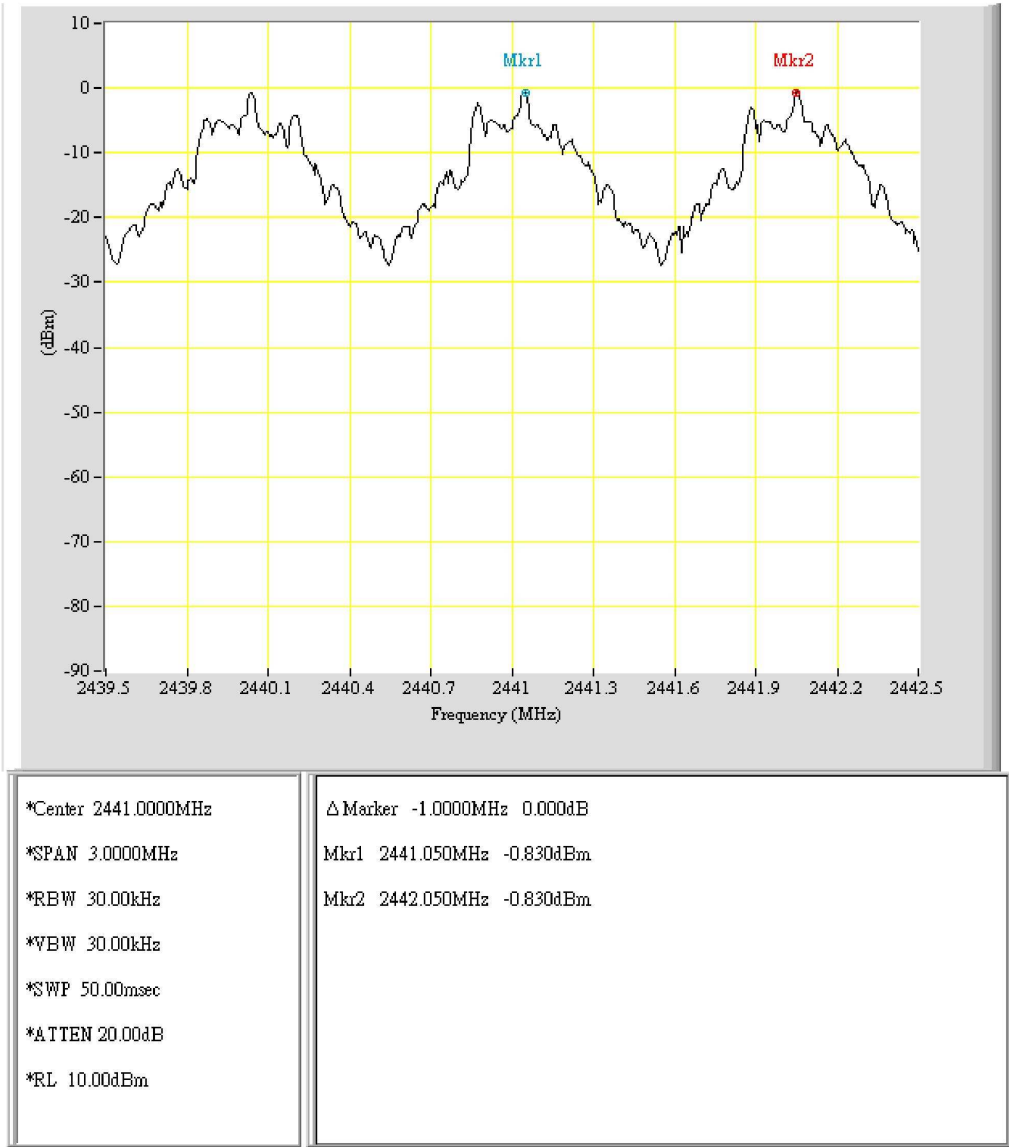
Humidity : 62%

Channel	Frequency (MHz)	Hopping Channel Carrier Frequency Separated (MHz)	Chart
0	2402	1	Page 55
39	2441	1	Page 56
78	2480	1	Page 57

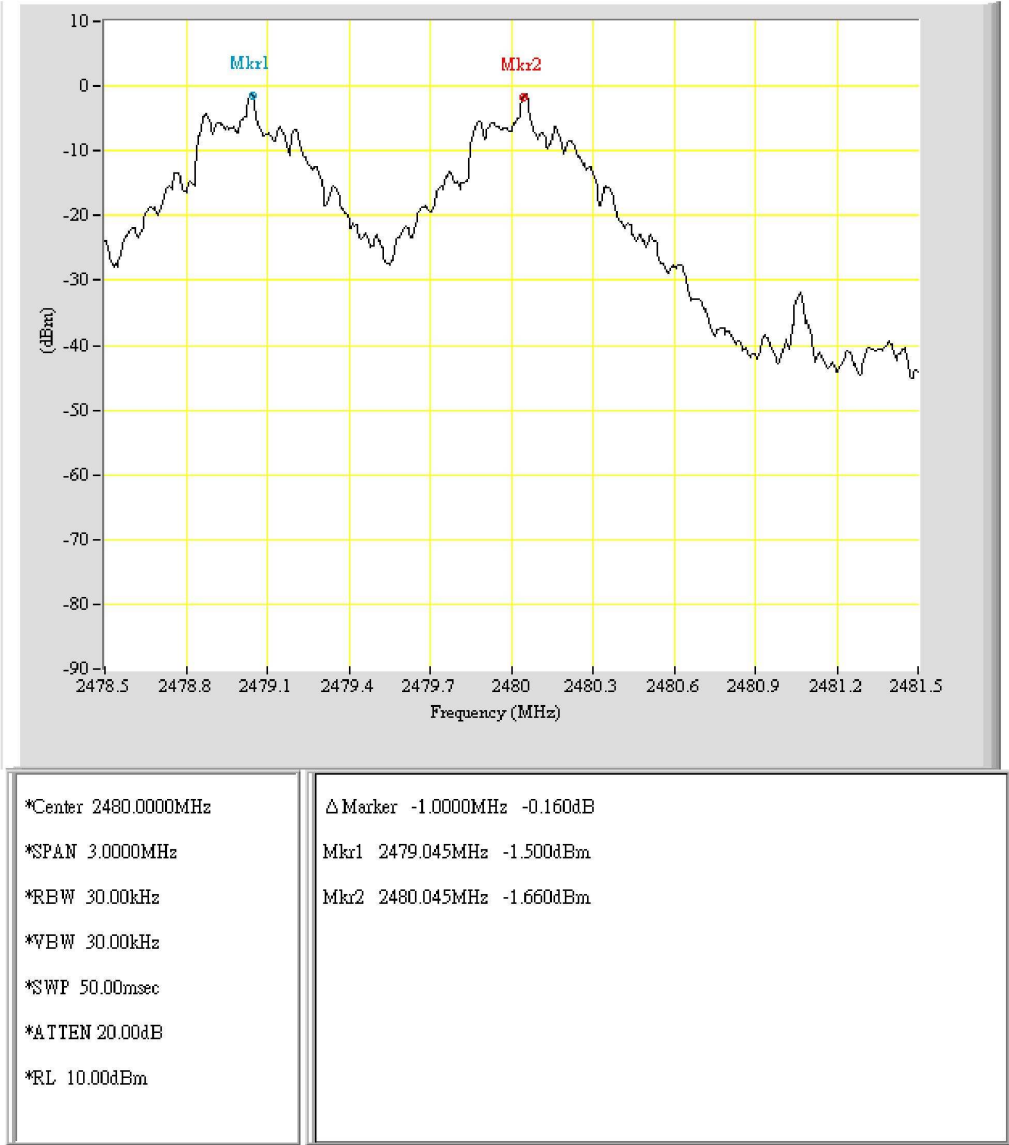
Note: Please refer to page 55 to page 57 for chart.



EUT: BLUETOOTH
Purpose: Channel_Seperation
Condition: CH0
Note:



EUT: BLUETOOTH
Purpose: Channel_Seperation
Condition: CH39
Note:



EUT: BLUETOOTH
Purpose: Channel_Seperation
Condition: CH78
Note:

12 Dwell Time

12.1 Standard Applicable

According to 15.247(a)(1)(iii), frequency hopping system in the 2400-2483.5MHz band employing at least 15 non-overlapping channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 second multiplied by the number of hopping channels employed.

12.2 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.

12.3 Measurement Equipment

Equipment	Manufacturer	Model No.	Next Cal. Due
Spectrum Analyzer	Agilent	8564EC	09/22/2007

12.4 Measurement Data

Test Date : Apr. 14, 2006

Temperature : 23°C

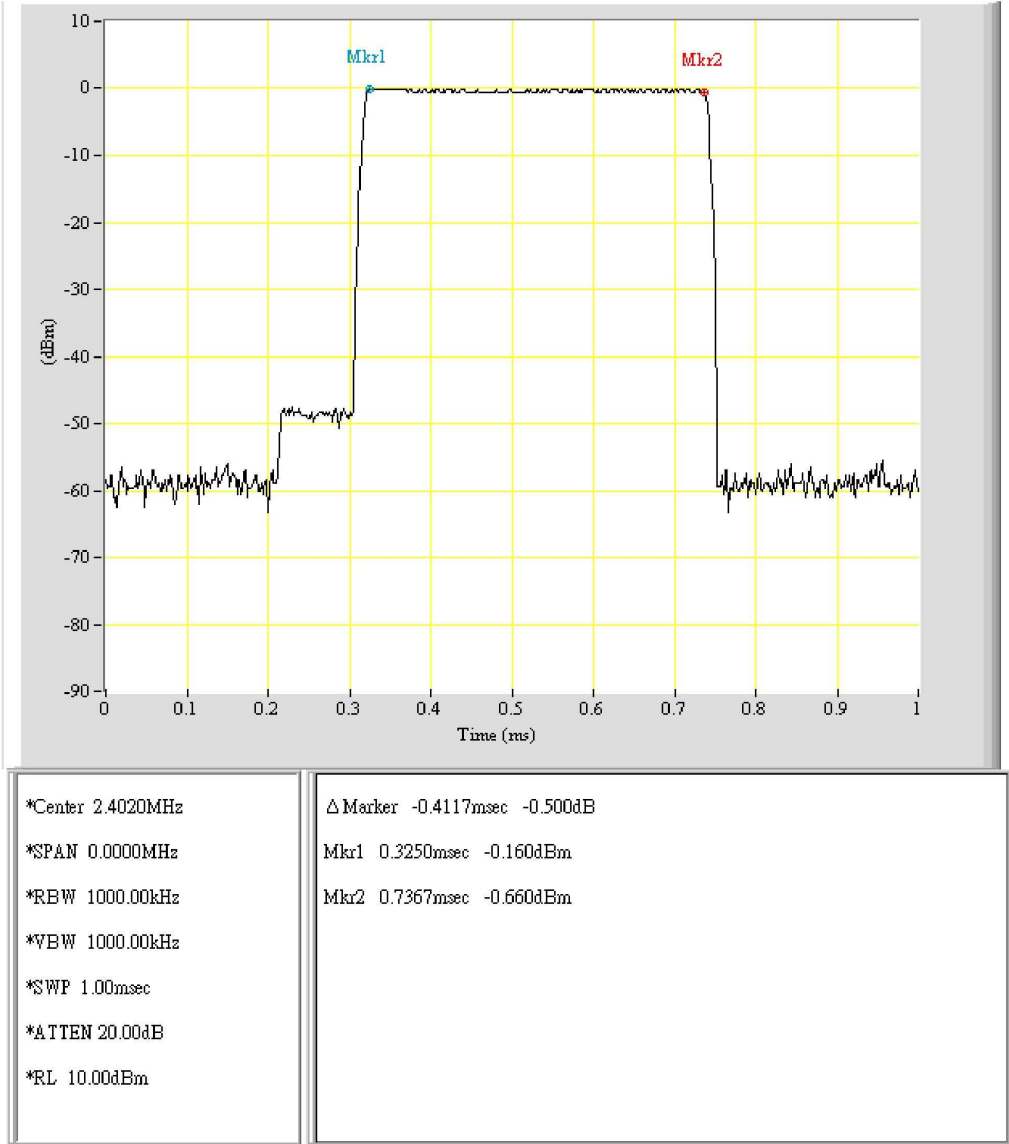
Humidity : 62%

13.4.1 DH1

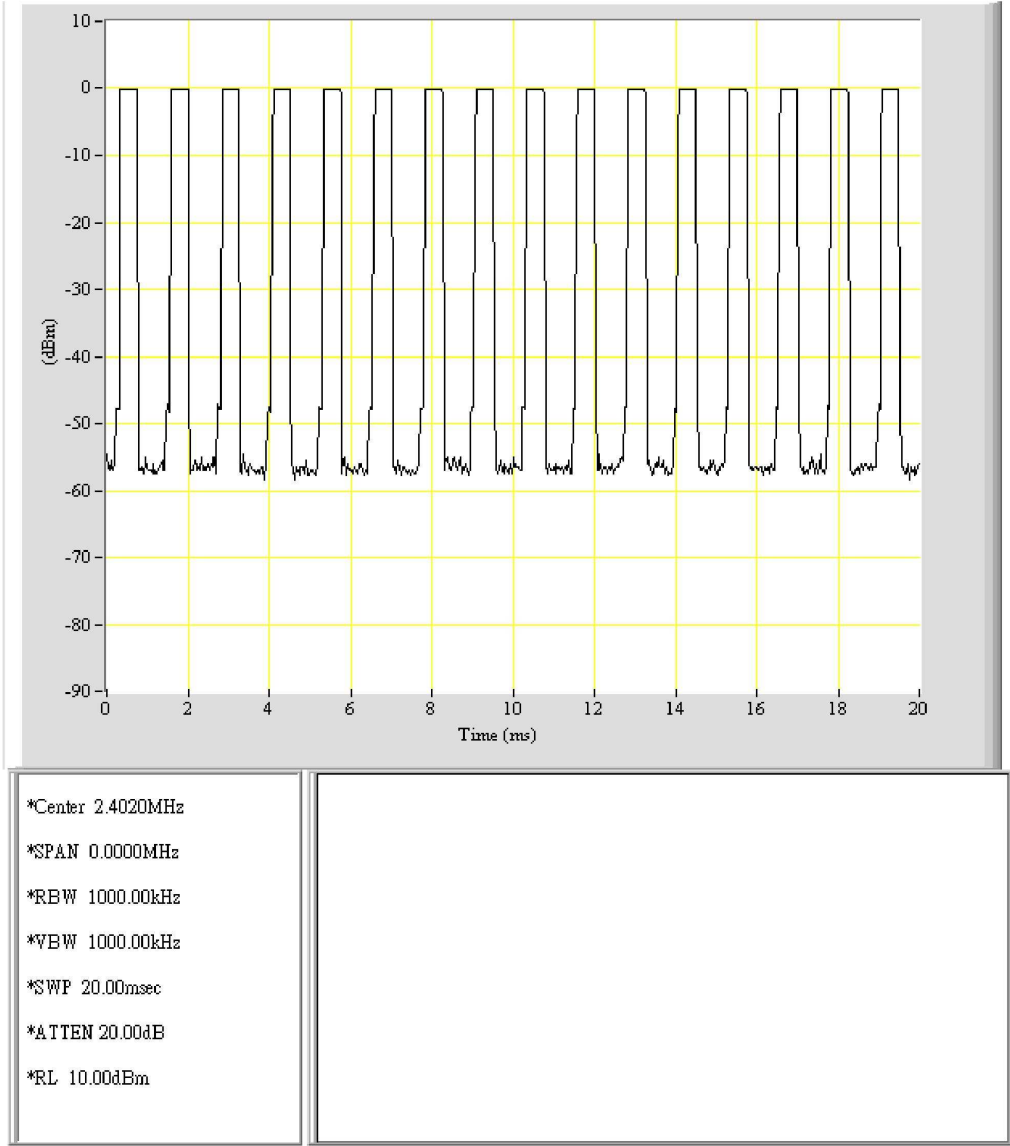
Test period=0.4(second/channel)×79 channel=31.6sec

2402MHz dwell time= $411.7 \text{ us} \times \frac{800}{79} \times 31.6 = 131.744 \text{ ms}$

Note: Please refer to page 59 to page 60 for chart.



EUT: BLUETOOTH
Purpose: Dwell_Time
Condition: DH1_CH0
Note:



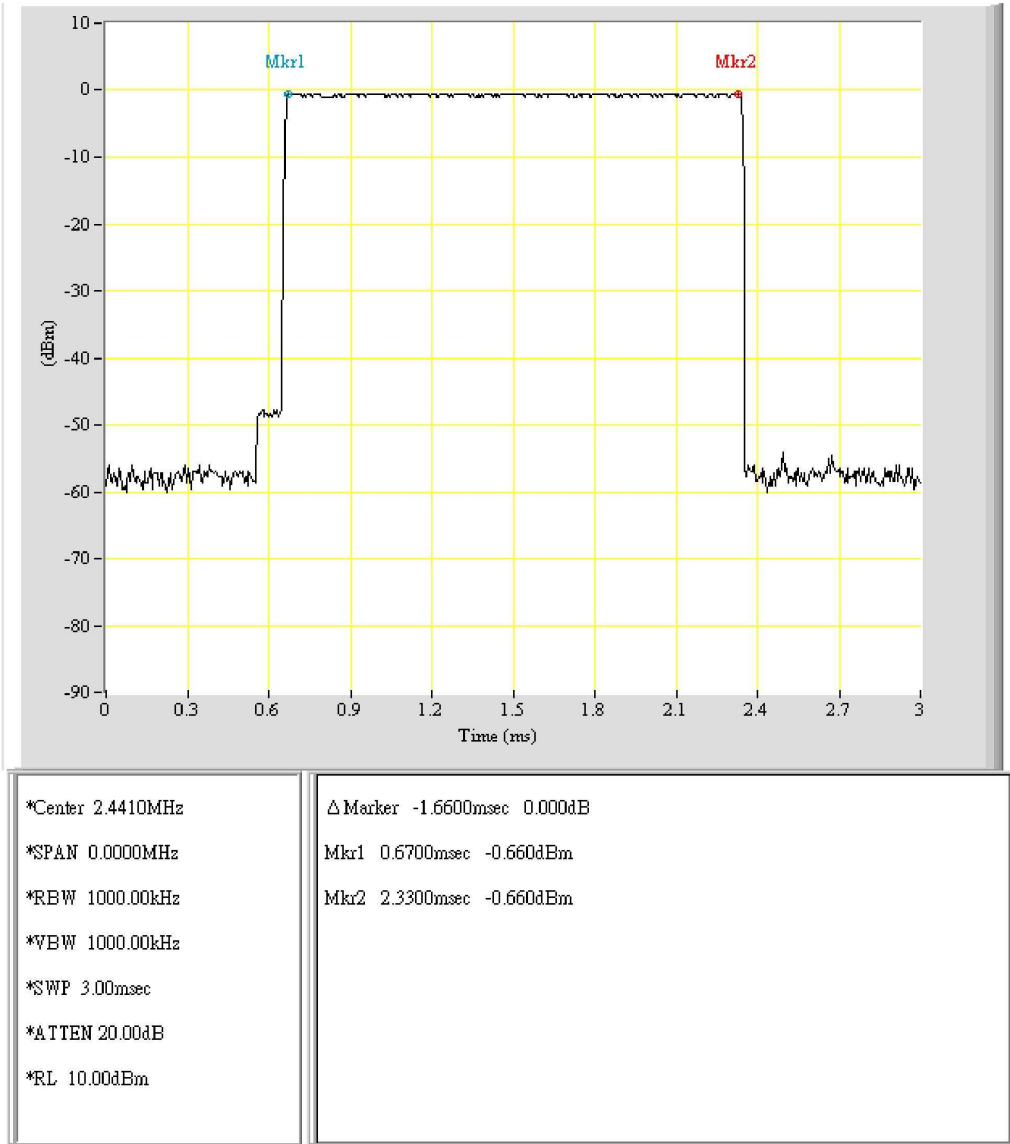
EUT: BLUETOOTH
Purpose: Dwell_Time_Peroid
Condition: DH1_CH0
Note:

12.4.2 DH3

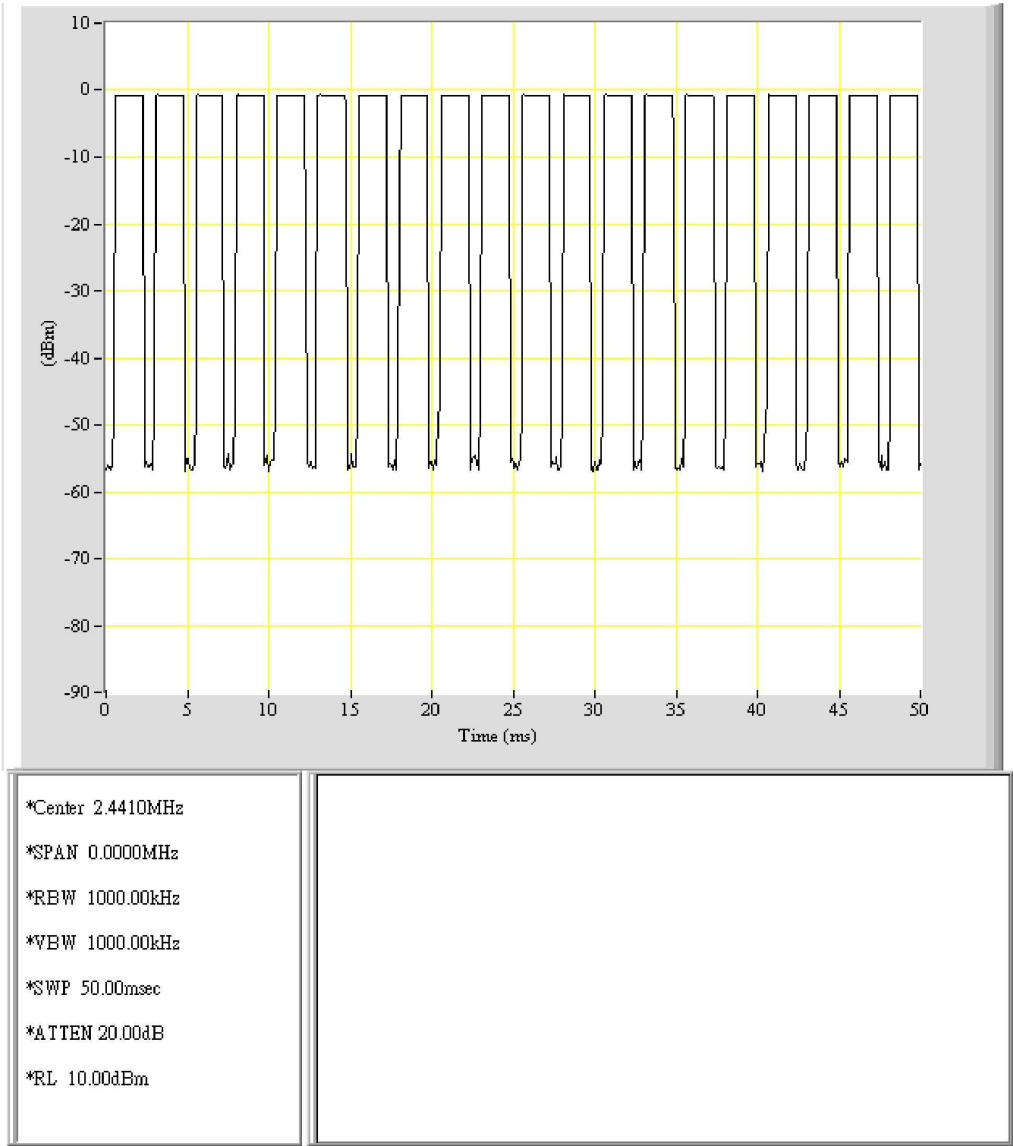
Test period=0.4(second/channel)×79 channel=31.6sec

$$2441\text{MHz dwell time}=1.66\text{ ms}\times\frac{400}{79}\times31.6=265.6\text{ ms}$$

Note: Please refer to page 62 to page 63 for chart.



EUT: BLUETOOTH
Purpose: Dwell_Time
Condition: DH3_CH39
Note:



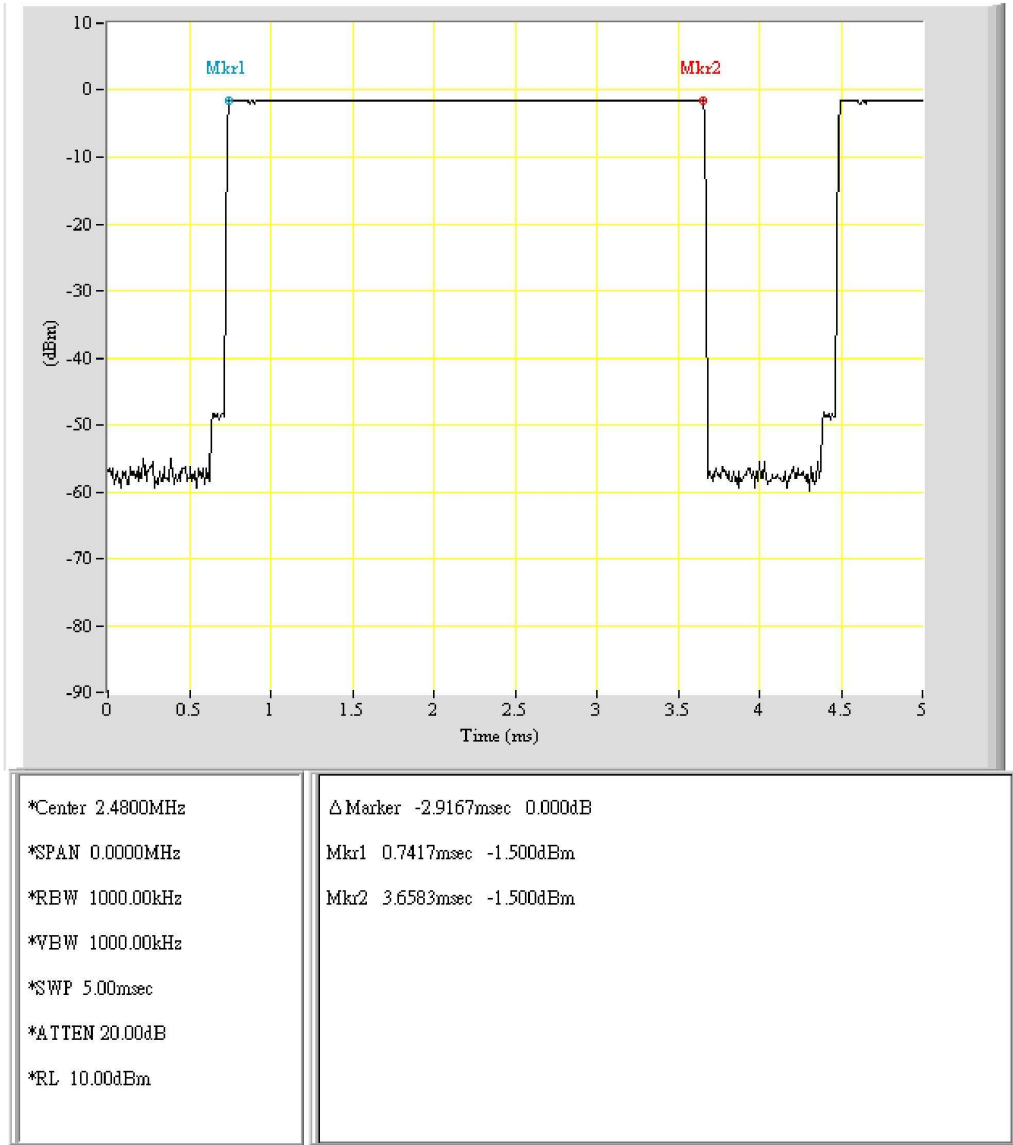
EUT: BLUETOOTH
Purpose: Dwell_Time_Peroid
Condition: DH3_CH39
Note:

12.4.3 DH5

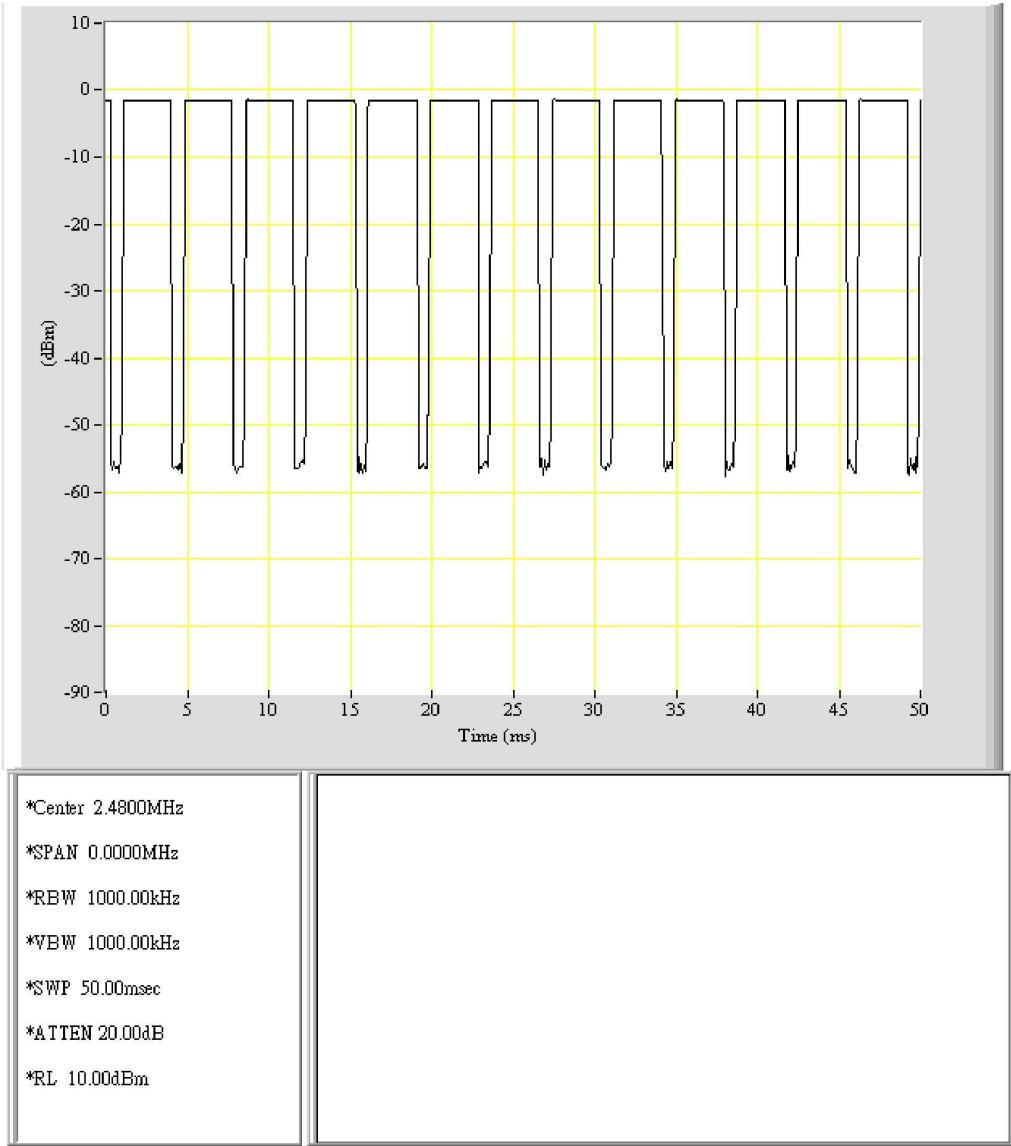
Test period=0.4(second/channel)×79 channel=31.6sec

$$2480\text{MHz dwell time} = 2.9167 \text{ ms} \times \frac{260}{79} \times 31.6 = 303.3368 \text{ ms}$$

Note: Please refer to page 65 to page 66 for chart.



EUT: BLUETOOTH
Purpose: Dwell_Time
Condition: DH5_CH78
Note:



EUT: BLUETOOTH
Purpose: Dwell_Time_Peroid
Condition: DH5_CH78
Note: