

## 2.10 Band Edge Measurements

Band Edge measurements were made at a Low Channel and High Channel peak at highest EUT related emission outside the occupied bandwidth. A peak measurement was made of the fundamental, and the emission was measured using a peak setting. A Resolution Bandwidth of  $> 1\%$  of the emission bandwidth was used. This procedure was repeated for the high channel.

The plots shown were verified to be from the antenna used, using a 17 foot, Flexco cable and Horn Antenna. No preamp was used.

The limits were derived as follows:

High Bandedge

$5000 \mu\text{V/m} = -21.2 \text{ dBm}$

$-21.2 \text{ dBm} - 31.8 \text{ dB} (\text{antenna factor and cable loss}) = -53.0 \text{ dBm limit}$

Fundamental measured at High Channel from Table 4c: -31.0

Delta from conducted measurement of band edge from fundamental peak to highest spur 10 MHz outside band edge: -50.87

$(-31.0) - 50.87 = -81.77$

Low Bandedge

$-21.2 \text{ dBm} - 31.6 \text{ dB} (\text{antenna factor and cable loss}) = -52.8 \text{ dBm limit}$

Fundamental measured at Low Channel from Table 4c: -33.2

Delta from conducted measurement of band edge from fundamental peak to highest spur 10 MHz outside band edge: -59.86

$(-33.2) - 59.86 = -93.06$

Figure 6a. Band Edge Compliance  
Antenna Conducted, High Channel

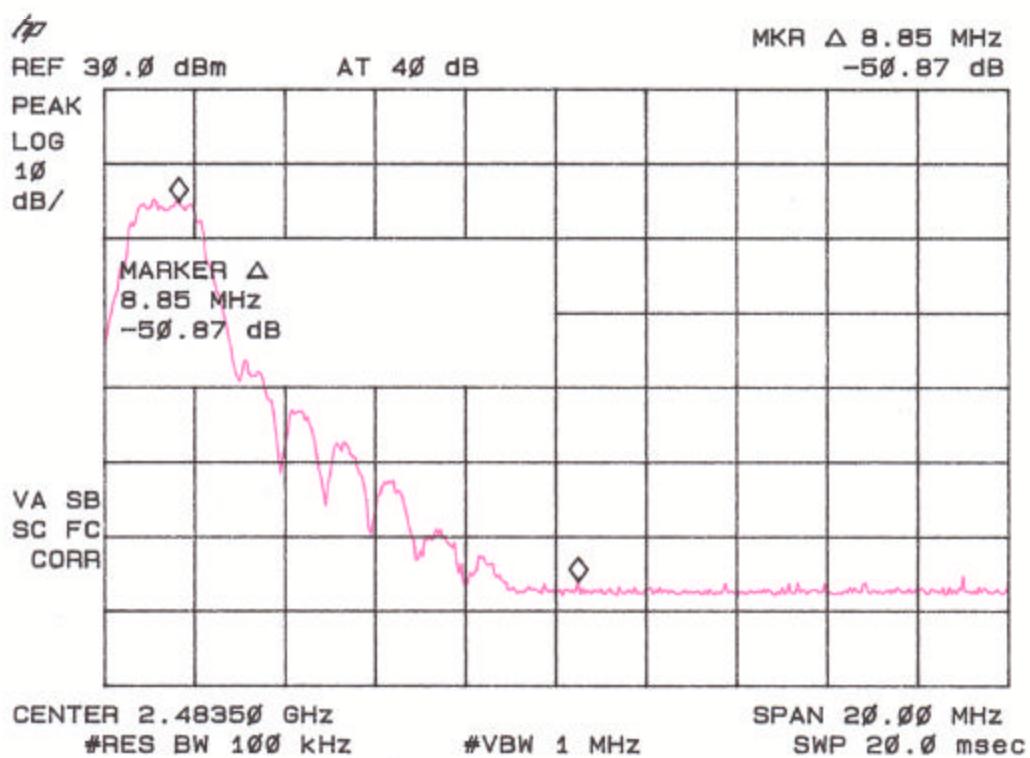
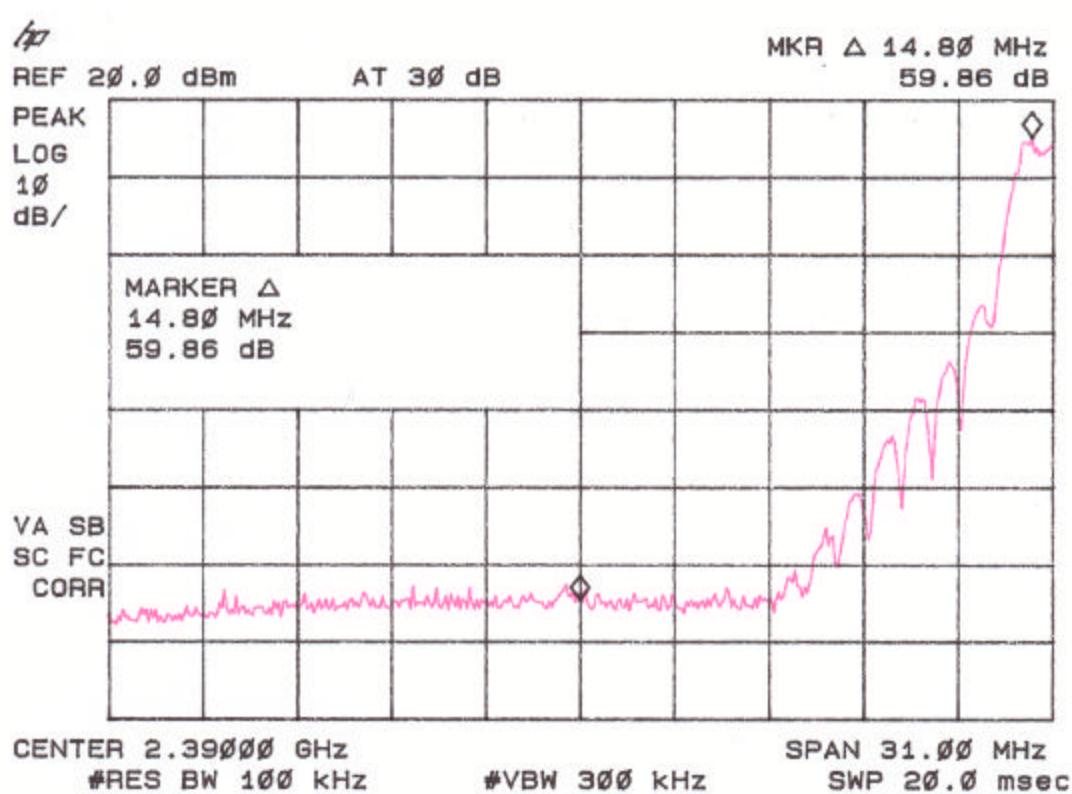


Figure 6b. Band Edge Compliance  
Antenna Conducted, Low Channel

## **2.11 6 dB Bandwidth per FCC Section 15.247(a)(1)(ii)**

The antenna port was connected to a spectrum analyzer that was set for a  $50 \Omega$  impedance with the RBW = approximately 1/100 of the manufacturers claimed RBW & VBW > RBW. The results of this test are given in Table 6 and Figure 7.

**TABLE 6**  
**6 dB Bandwidth**

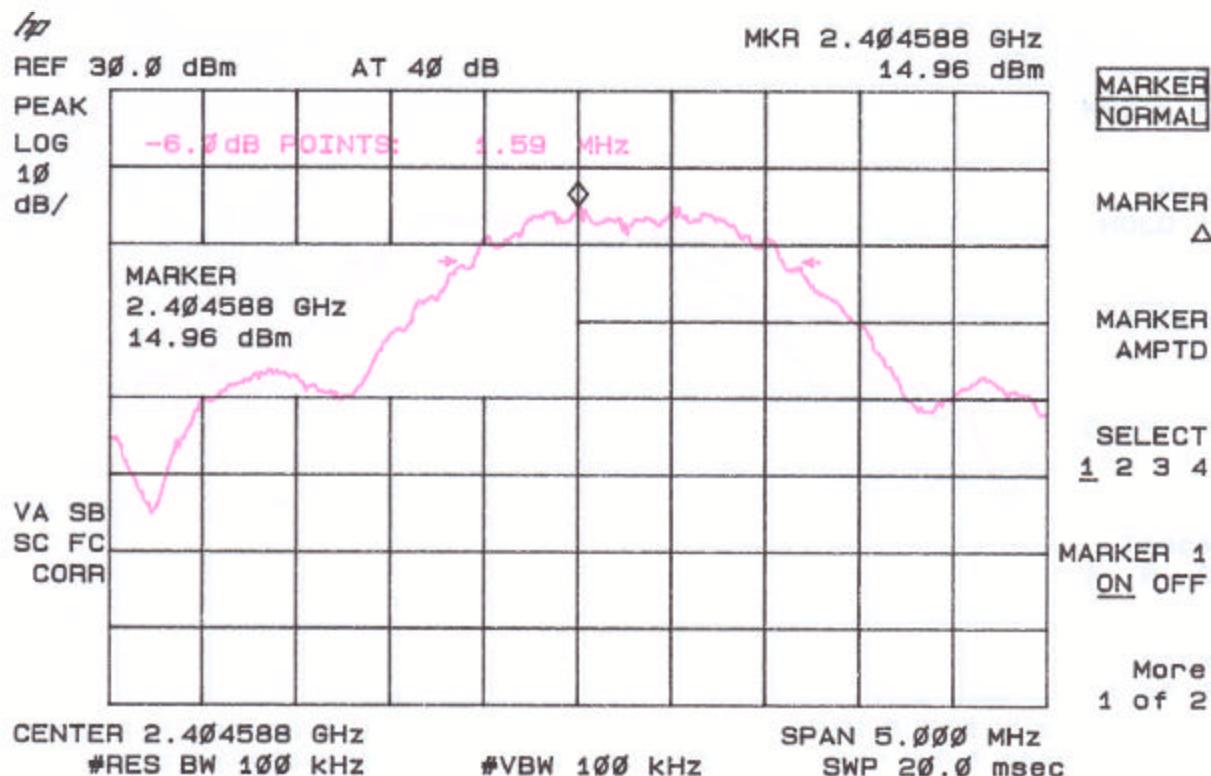
Test Date: July 25, 2006  
UST Project: 06-0159  
Customer: Cirronet Corporation  
Model: EM2420HP Zigbee Radio

Frequency (GHz)	6 dB Bandwidth (MHz)	FCC LIMIT >/= (kHz)
2.404588	1.59	500
2.444605	1.58	500
2.480105	1.60	500

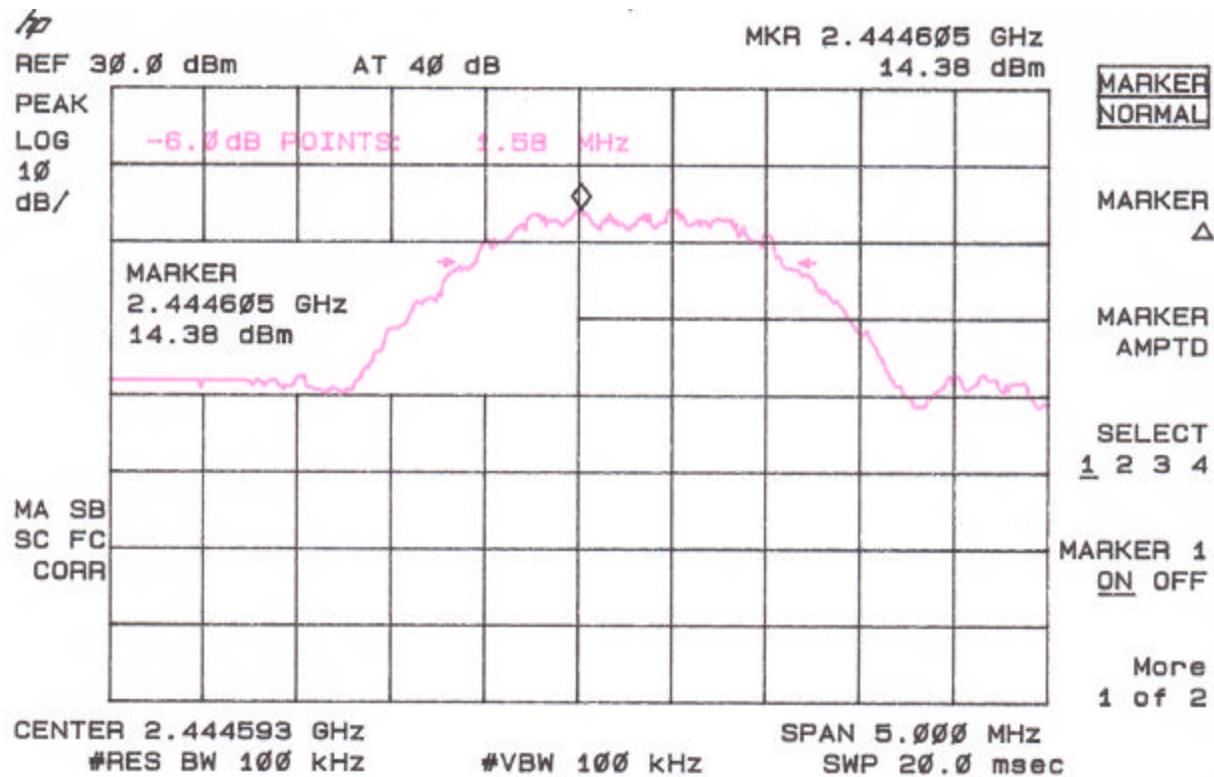
Tester  
Signature: 

Name: Austin Thompson

**Figure 7a.**  
6 dB Bandwidth per FCC Section 15.247(a)(1)(ii) Low



**Figure 7b.**  
6 dB Bandwidth per FCC Section 15.247(a)(1)(ii) Mid



**Figure 7c.**  
6 dB Bandwidth per FCC Section 15.247(a)(1)(ii) High

