NOTES:

§ 74.637 Emissions and emission limitations.

(a) The mean power of emissions shall be attenuated below the mean transmitter power (PMEAN) in accordance with the following schedule:

(1) When using frequency modulation:

(i) On any frequency removed from the assigned (center) frequency by more than 50% up to and including 100% of the authorized bandwidth: At least 25 dB in any 100 kHz reference bandwidth (BREF);

(ii) On any frequency removed from the assigned (center) frequency by more than 100% up to and including 250% of the authorized bandwidth: At least 35 dB in any 100 kHz reference bandwidth;

(iii) On any frequency removed from the assigned (center) frequency by more than 250% of the authorized bandwidth: At least 43+10 log10 (PMEAN in watts) dB, or 80 dB, whichever is the lesser attenuation, in any 100kHz reference bandwidth.

(2) For Digital Modulation:

(i) For operating frequencies below 15 GHz, in any 4 kHz reference bandwidth (BREF), the center frequency of which is removed from the assigned frequency by more than 50 percent up to and including 250 percent of the authorized bandwidth: As specified by the following equation but in no event less than 50 decibels:

A = 35 + 0.8 (G _ 50) + 10 Log10 B.
(Attenuation greater than 80 decibels is not required.)
Where:
A = Attenuation (in decibels) below the mean output power level.
G = Percent removed from the carrier frequency.
B = Authorized bandwidth in megahertz.

Compliance curves drawn at **A(dB)=35+ 0.8(G-50) + 10 LOG B – 13.9**
Where:
A= Attenuation required
G= percent of bandwidth removed from carrier
B=authorized Bandwidth in Mhz
Compliance curves include the compliance factor for measurements made with a 100KHz resolution bandwidth which is:

10 log (B RES / B REF) = 10log (4E3 / 100E3) = -13.9db

Reference Level Offset Note:
The following Measurements where made with the transmitter output connected to a 20 db directional coupler connected to the spectrum analyzer by a three foot coaxial cable. The thru path of the directional coupler was connected directly to a 30 db attenuator connected to a power meter used to monitor the output power. A 21dB reference level offset was entered into the spectrum analyzer in order to show the true output level of the Transmitter.

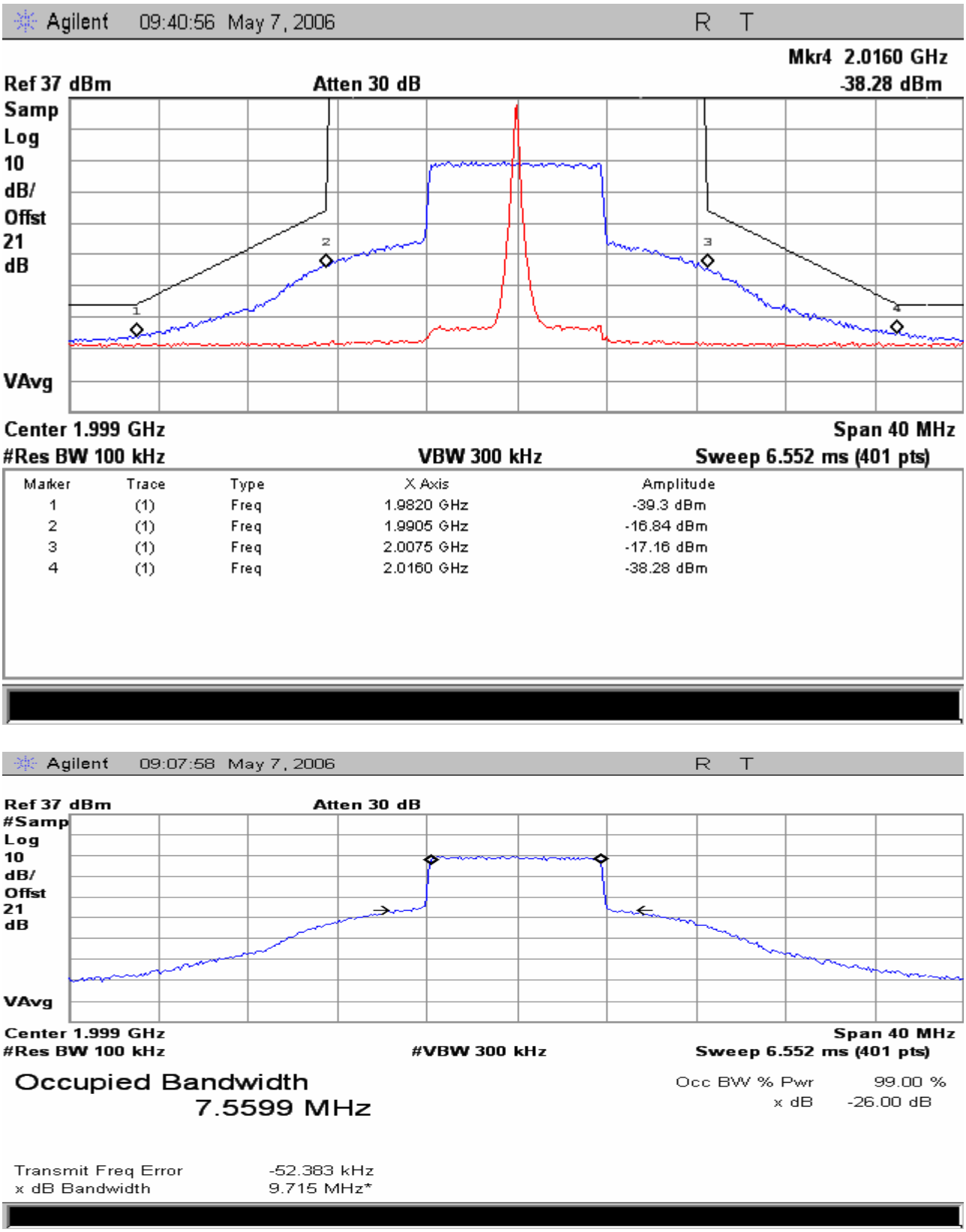


Figure 1
Occupied Bandwidth measurement; Modulation overlaying Mask and measured Power Bandwidth. COFDM modulation, 8 MHz 16QAM, Color Bars with Audio Channel 1

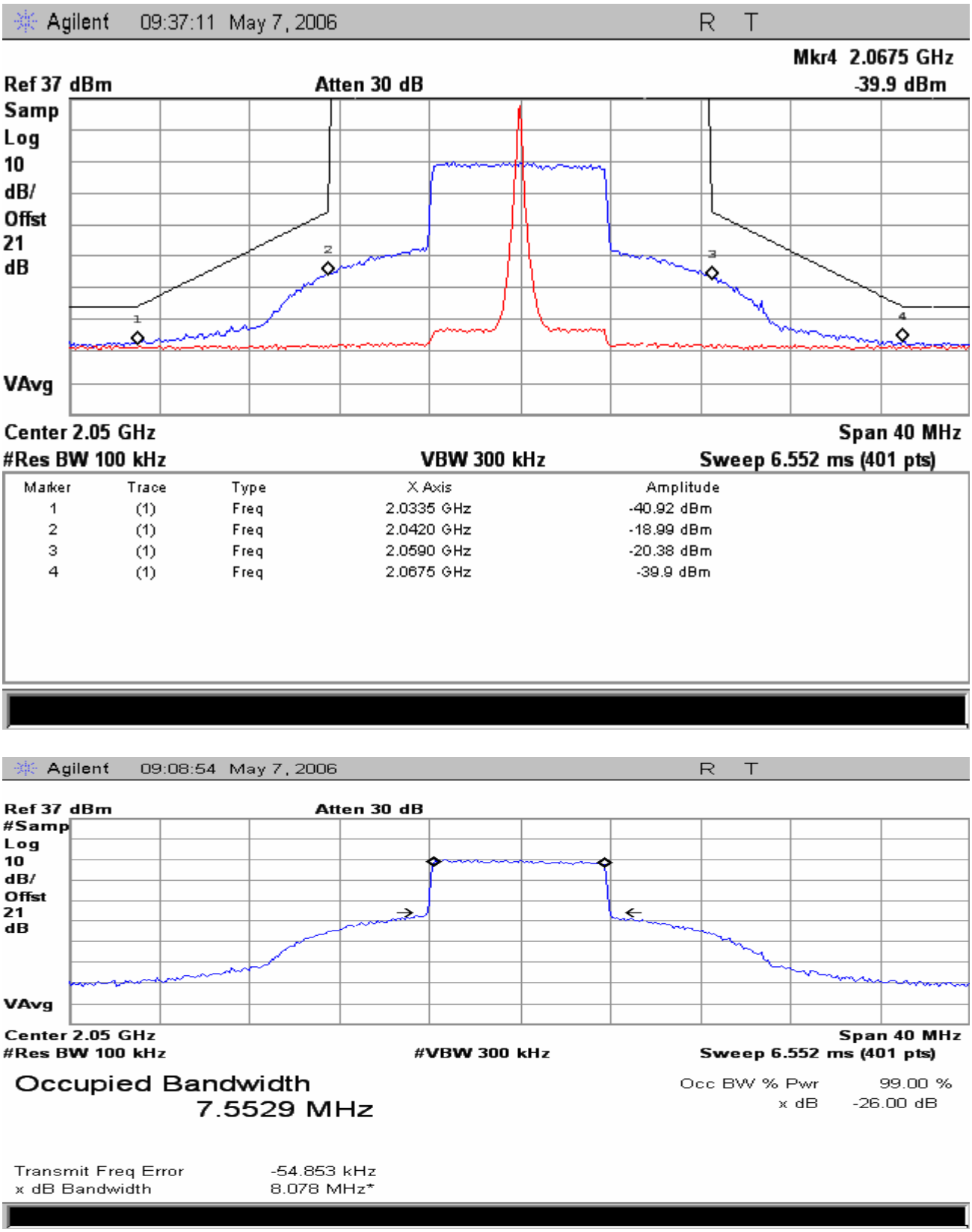


Figure 2
Occupied Bandwidth measurement; Modulation overlaying Mask and measured Power Bandwidth. COFDM modulation, 8 MHz 16QAM, Color Bars with Audio

Channel 4

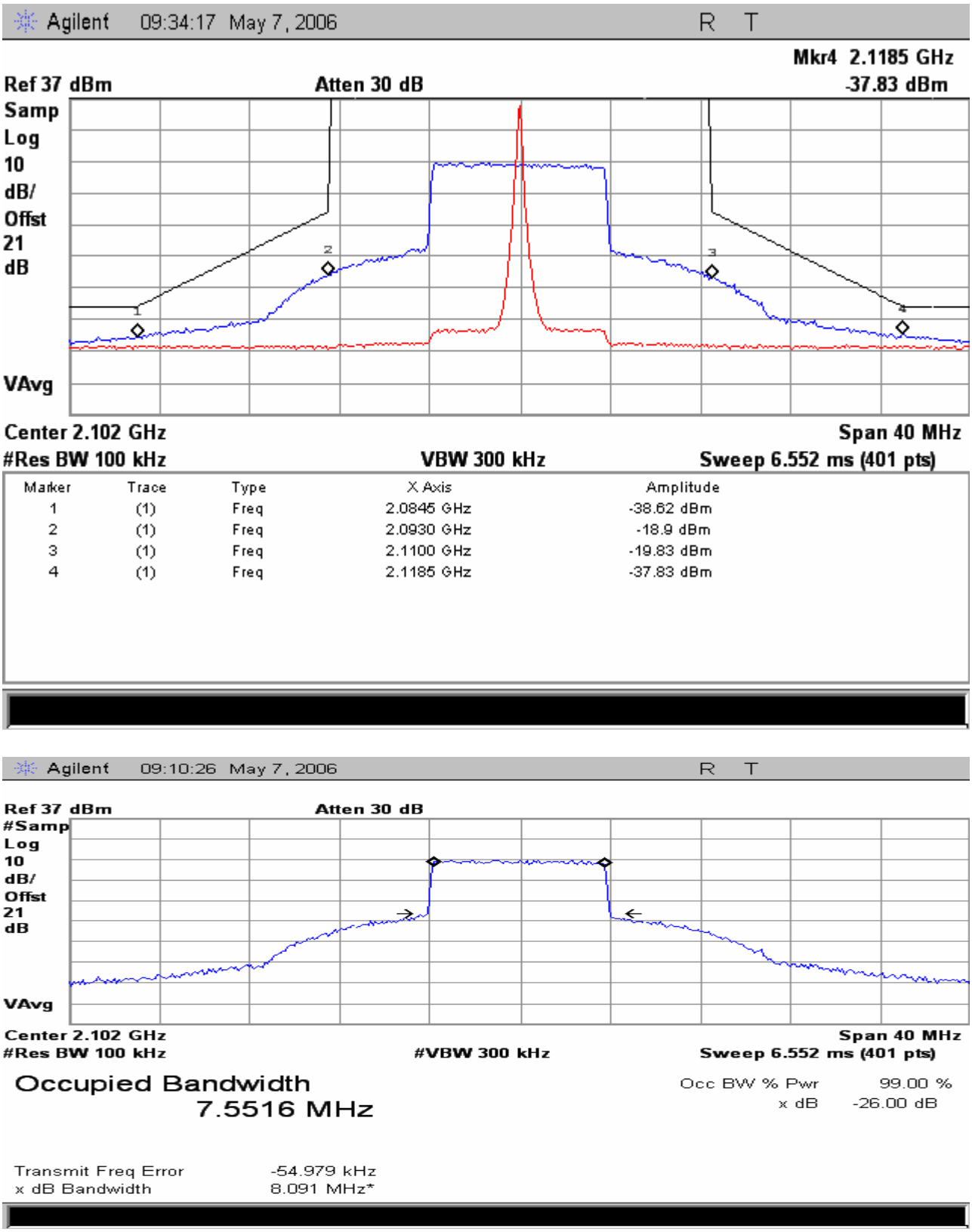


Figure 3
Occupied Bandwidth measurement; Modulation overlaying Mask and measured Power Bandwidth. COFDM modulation, 8 MHz 16QAM, Color Bars with Audio

Channel 7

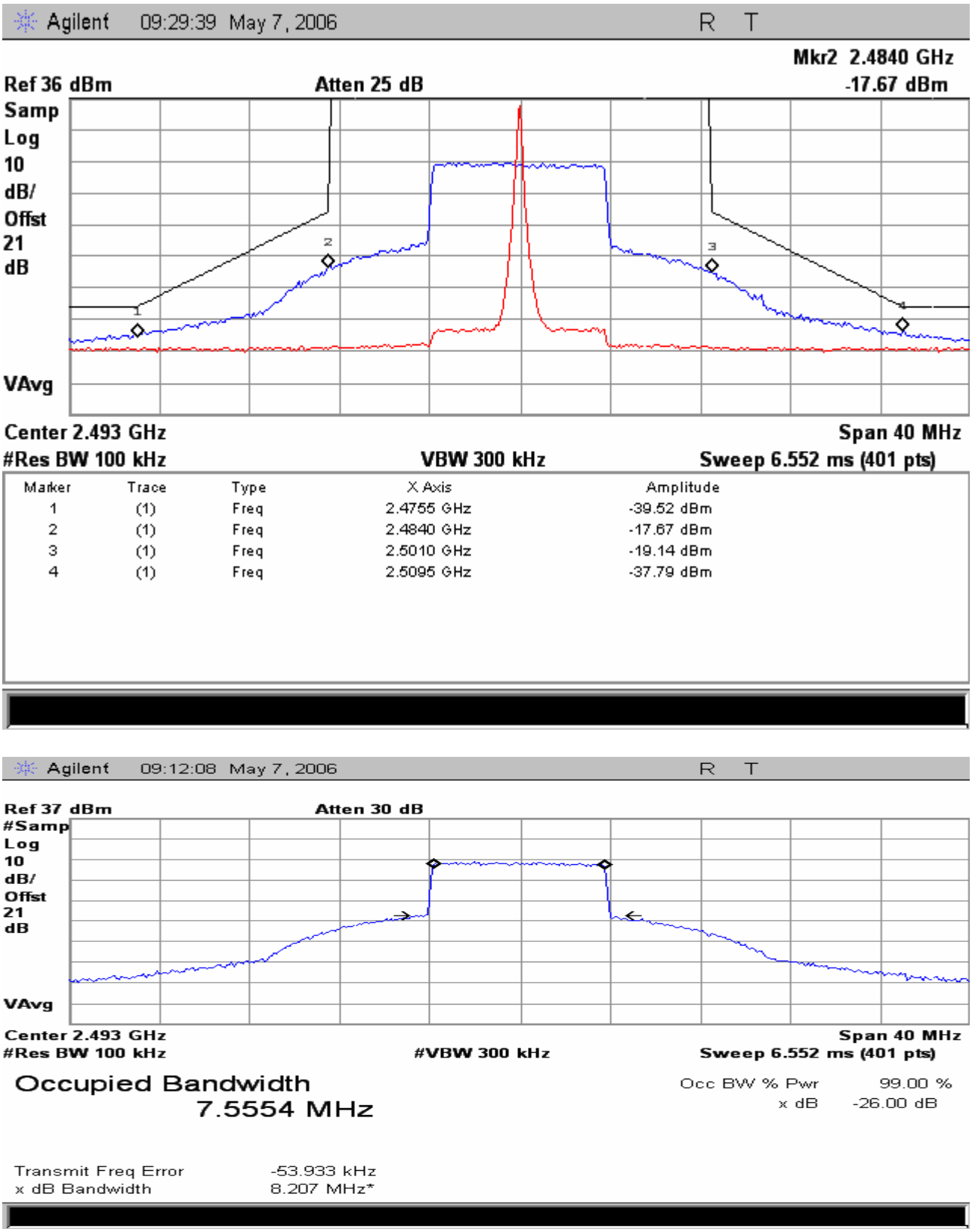


Figure 4
Occupied Bandwidth measurement; Modulation overlaying Mask and measured Power Bandwidth. COFDM modulation, 8 MHz 16QAM, Color Bars with Audio

Channel 10

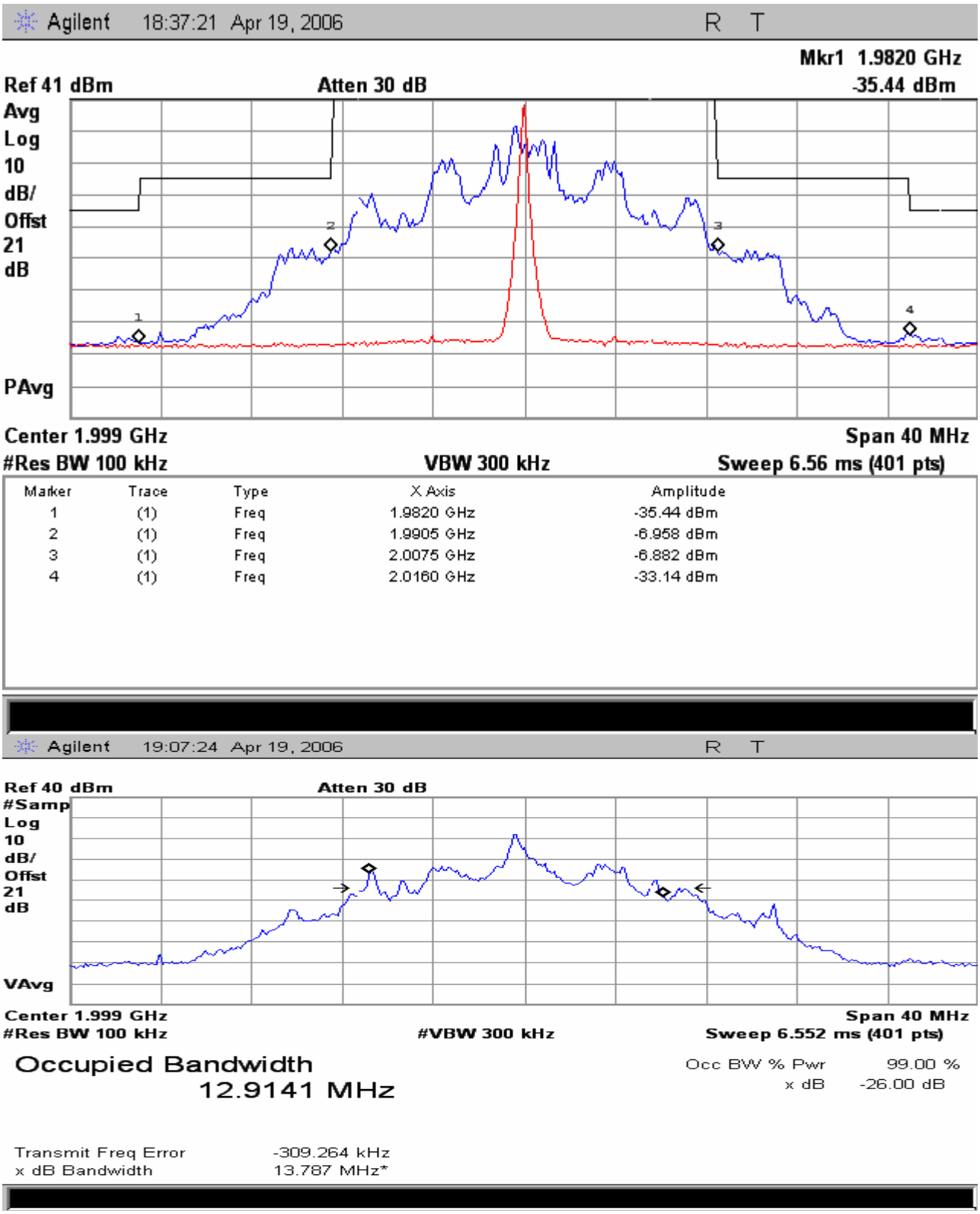


Figure 5
Occupied Bandwidth measurement; Modulation overlaying Mask and measured Power Bandwidth. FM , +/- 4 MHz Deviation ,Color Bars with Audio

Channel 1

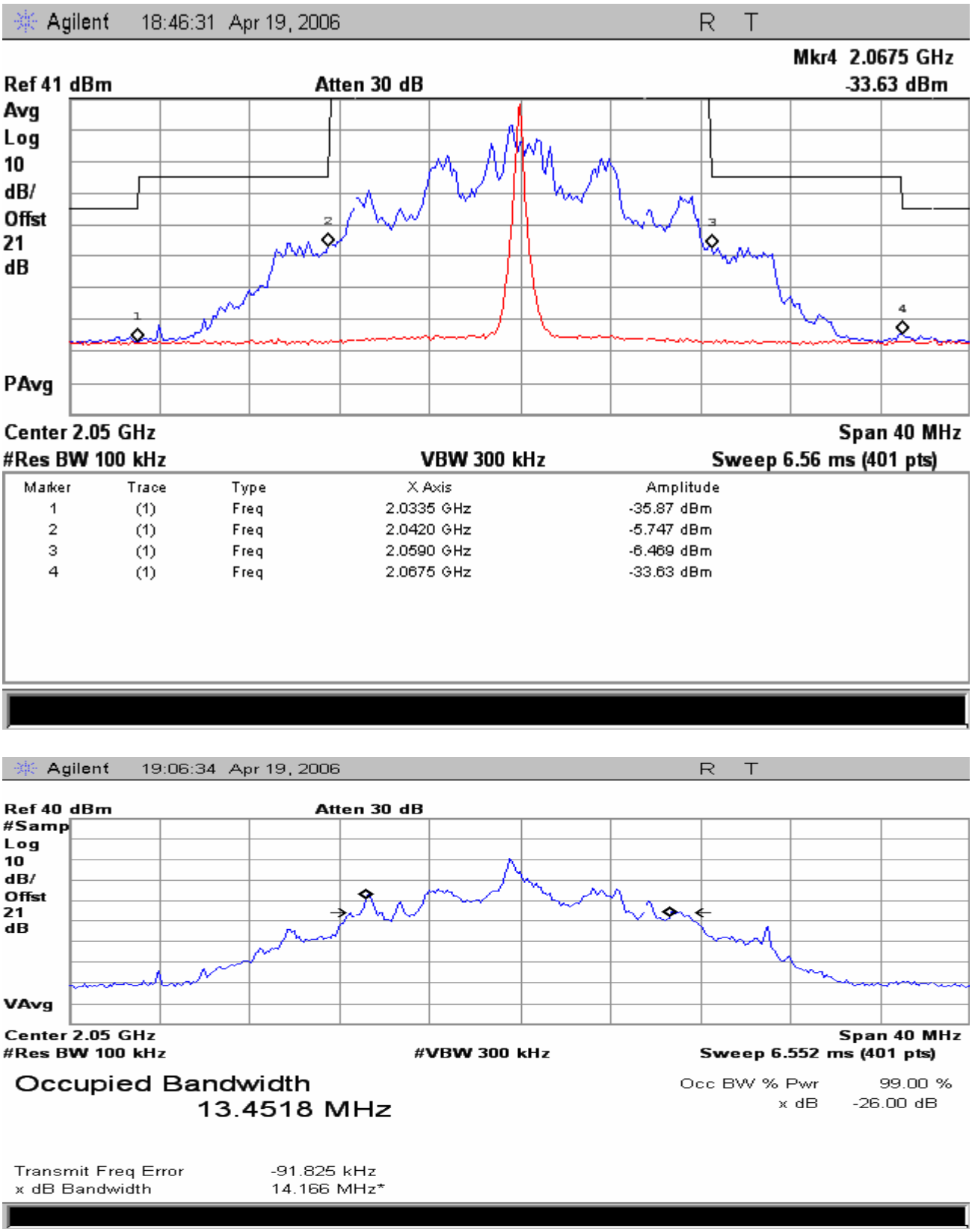
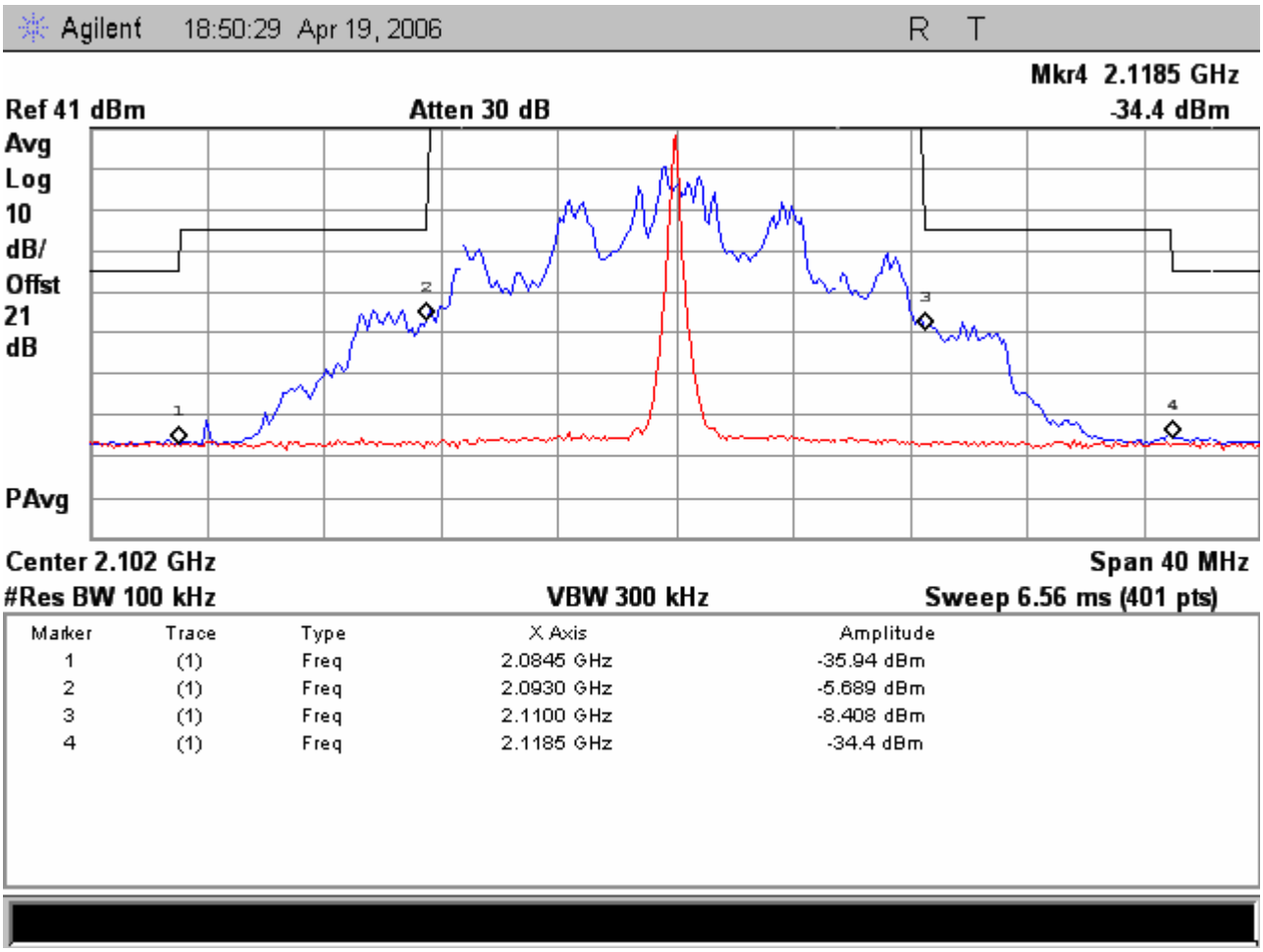


Figure 6
Occupied Bandwidth measurement; Modulation overlaying Mask and measured Power Bandwidth. FM , +/- 4 MHz Deviation ,Color Bars with Audio

Channel 4



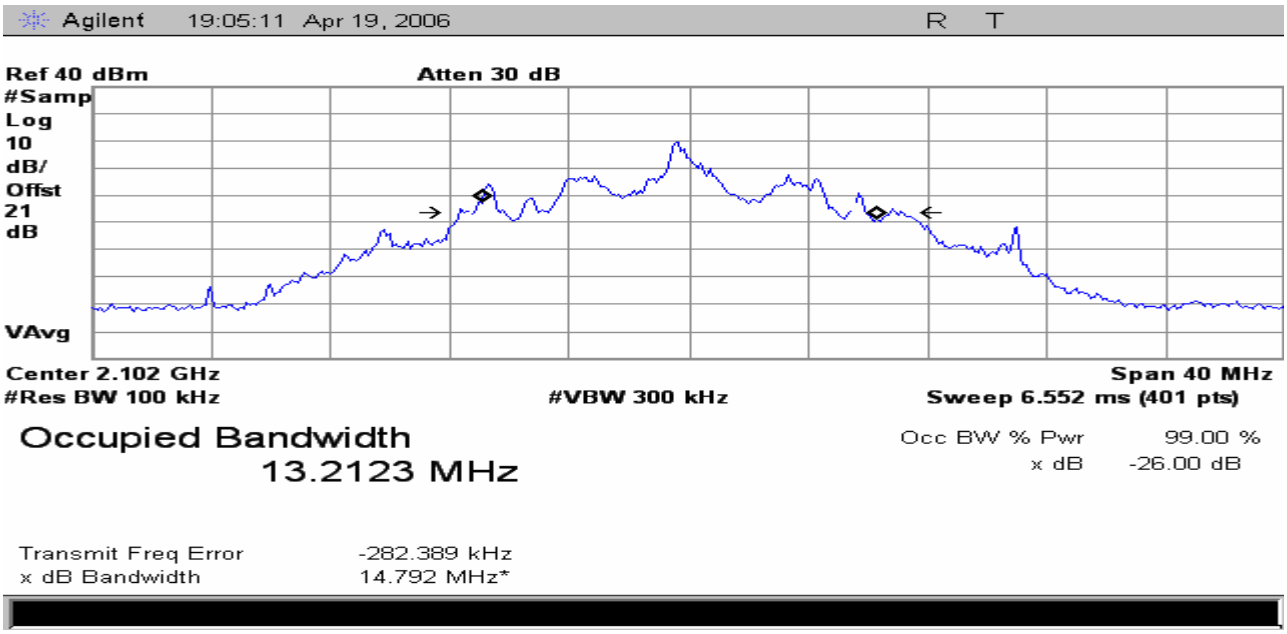


Figure 7
Occupied Bandwidth measurement; Modulation overlaying Mask and measured Power Bandwidth. FM , +/- 4 MHz Deviation ,Color Bars with Audio

Channel 7

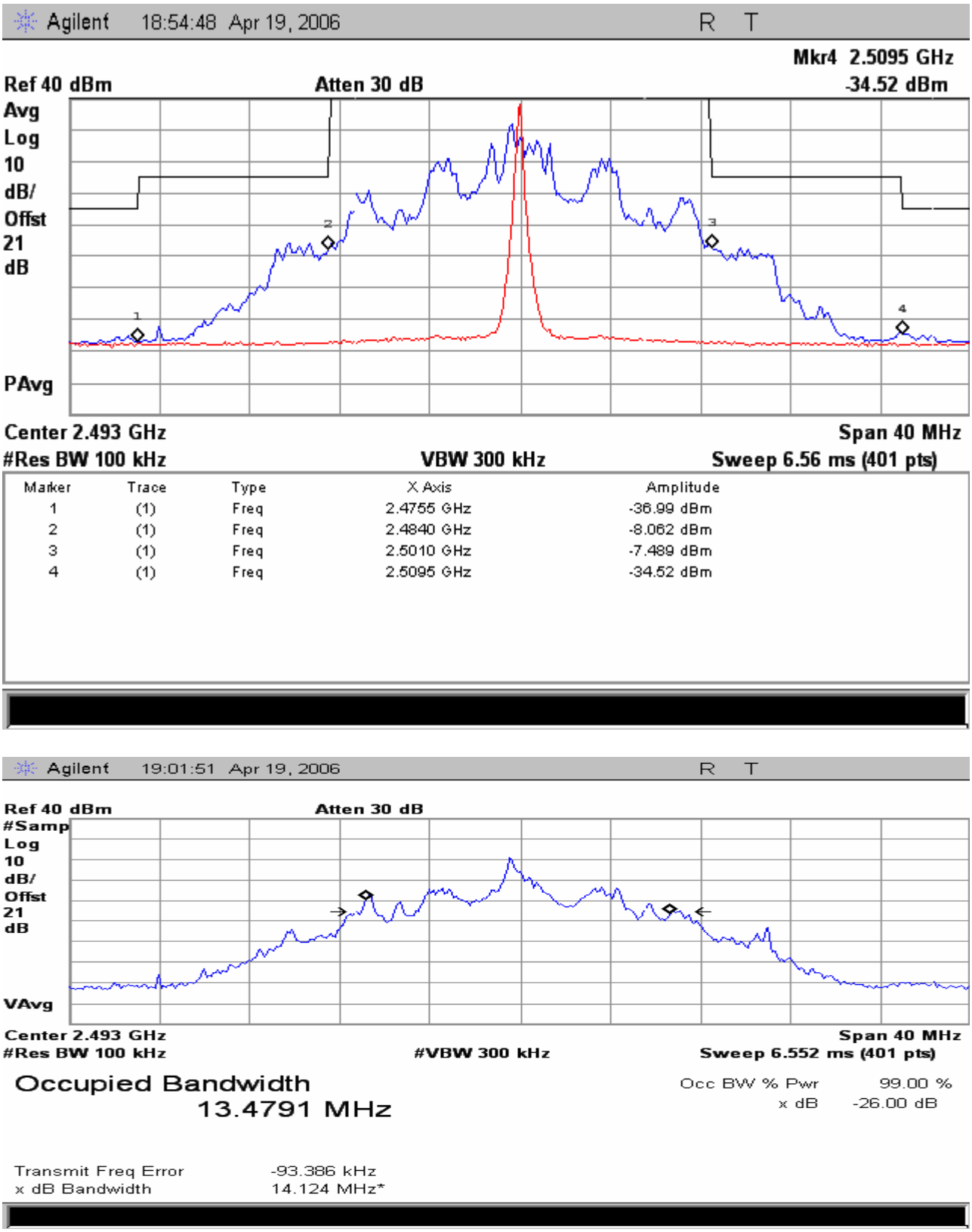


Figure 8
Occupied Bandwidth measurement; Modulation overlaying Mask and measured Power Bandwidth. FM , +/- 4 MHz Deviation ,Color Bars with Audio

Channel 10