4.3 Emission Limitations per FCC Part 25.202(f)

Radiated spurious emissions must comply with the requirements of §25.202 (f) of FCC. The limits for the spurious emissions for FCC Part 25 are as follows:

FCC Part 25.202(f):

Spurious emissions must comply with the requirements of §25.202(f). The limits for the spurious emissions are as follows:

The mean power of emissions shall be attenuated below the mean output power of the transmitter in accordance with the following schedule:

(1) In any 4 kHz band, the center frequency of which is removed from the assigned frequency by more than 50 percent up to and including 100 percent of the authorized bandwidth: 25 dB;

(2) In any 4 kHz band, the center frequency of which is removed from the assigned frequency by more than 100 percent up to and including 250 percent of the authorized bandwidth: 35 dB;

(3) In any 4 kHz band, the center frequency of which is removed from the assigned frequency by more than 250 percent of the authorized bandwidth: An amount equal to 43 dB plus 10 times the logarithm (to the base 10) of the transmitter power in watts.

4.3.1 Test Procedure

For the FCC Part 25 requirements the unit was set to transmit at 1643MHz and the emissions were measured to +/-250% of the authorized bandwidth and compared to the emission mask specified in FCC Part 25.202(f). The authorized bandwidth used in the calculations for the limit was 10kHz.

4.3.2 Test Results

The EUT complies with the emissions mask requirements FCC Part 25.202(f). The following plots provide the test results for the modulation modes.

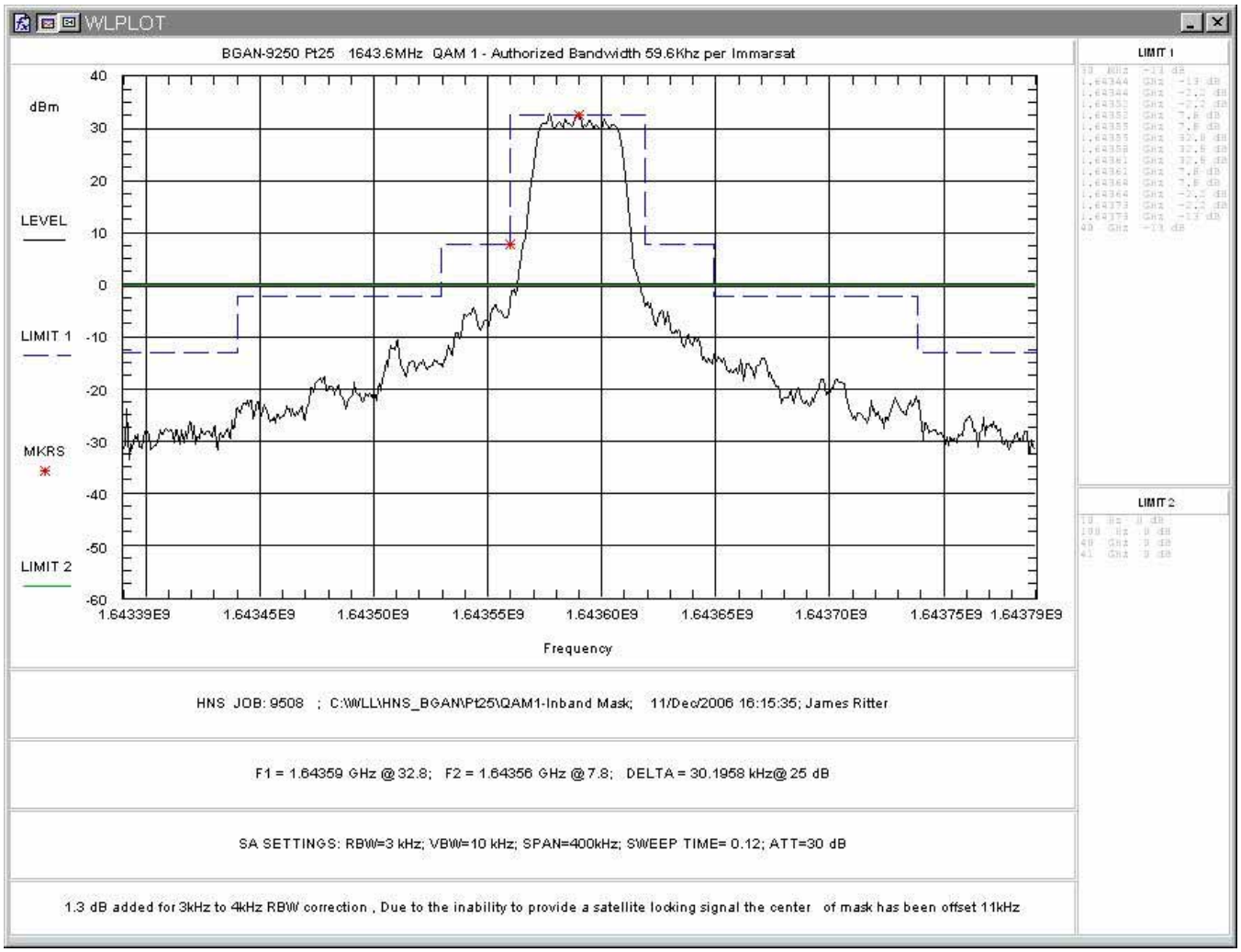

Figure 15: FCC Part 25 QAM 1 Emission Mask

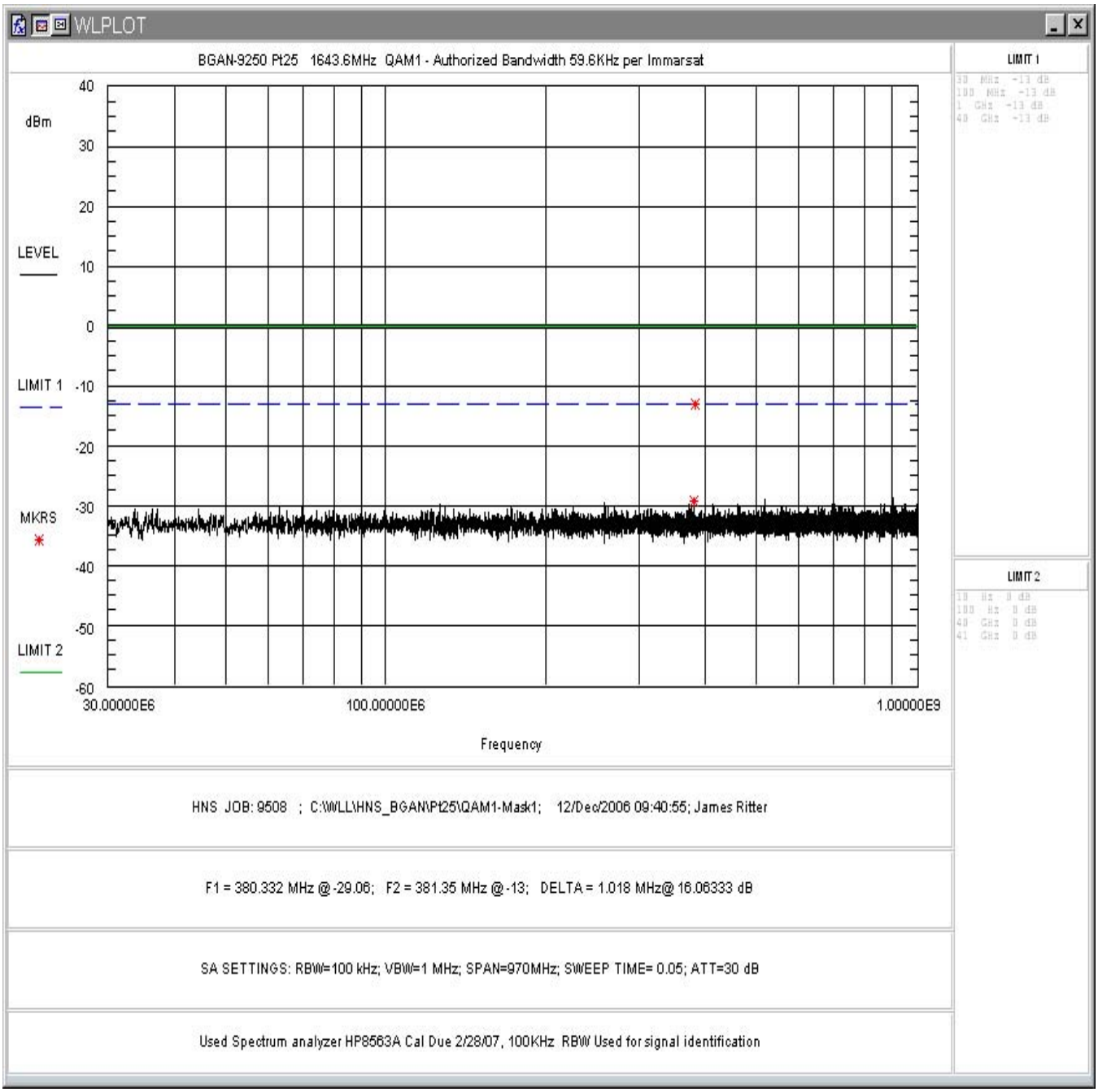

Figure 16: FCC Part 25 Conducted Spurious Emissions Data, QAM 1 30MHz - 1000MHz

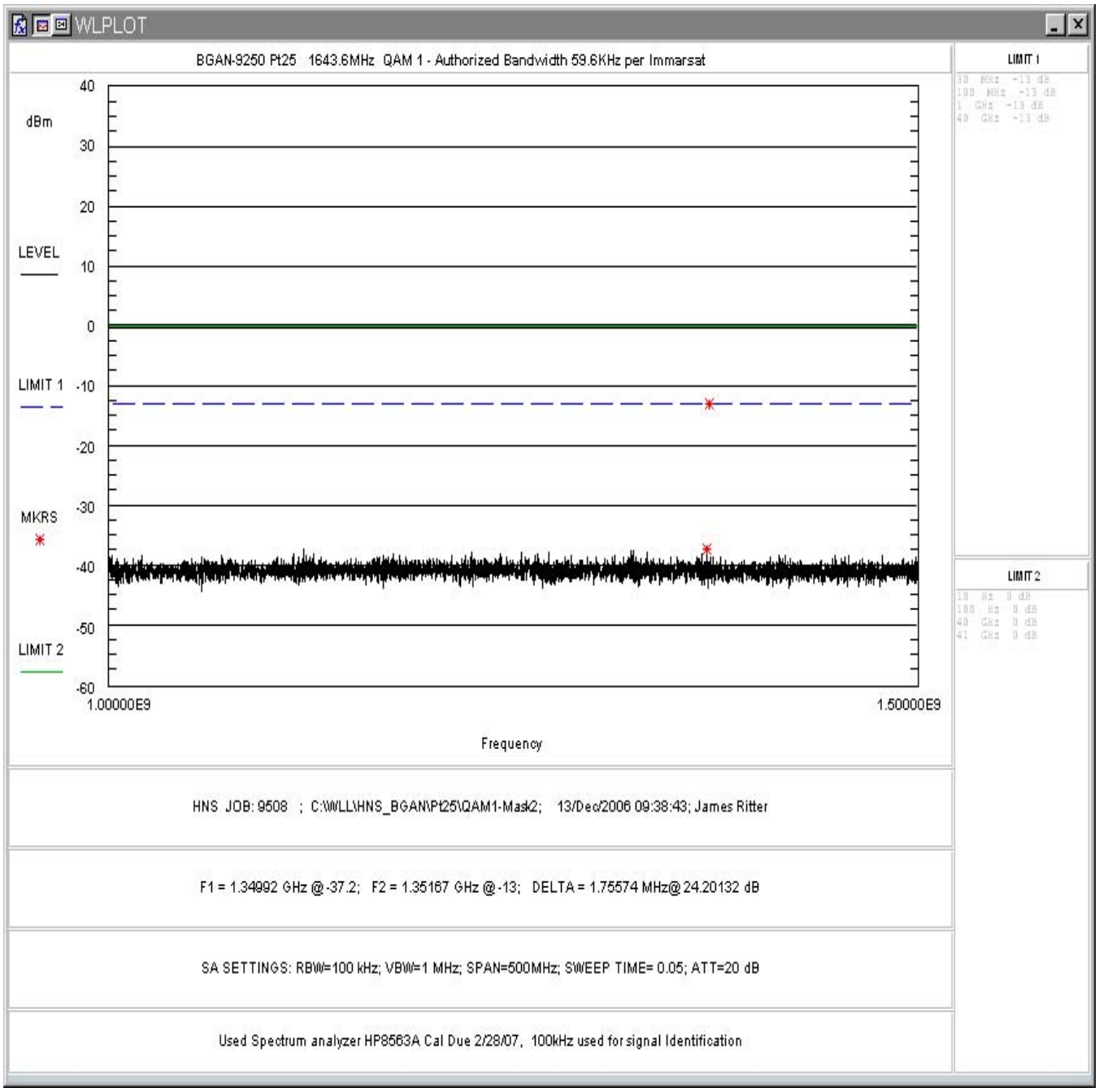

Figure 17: FCC Part 25 Conducted Spurious Emissions Data, QAM 1 1000 – 1500MHz

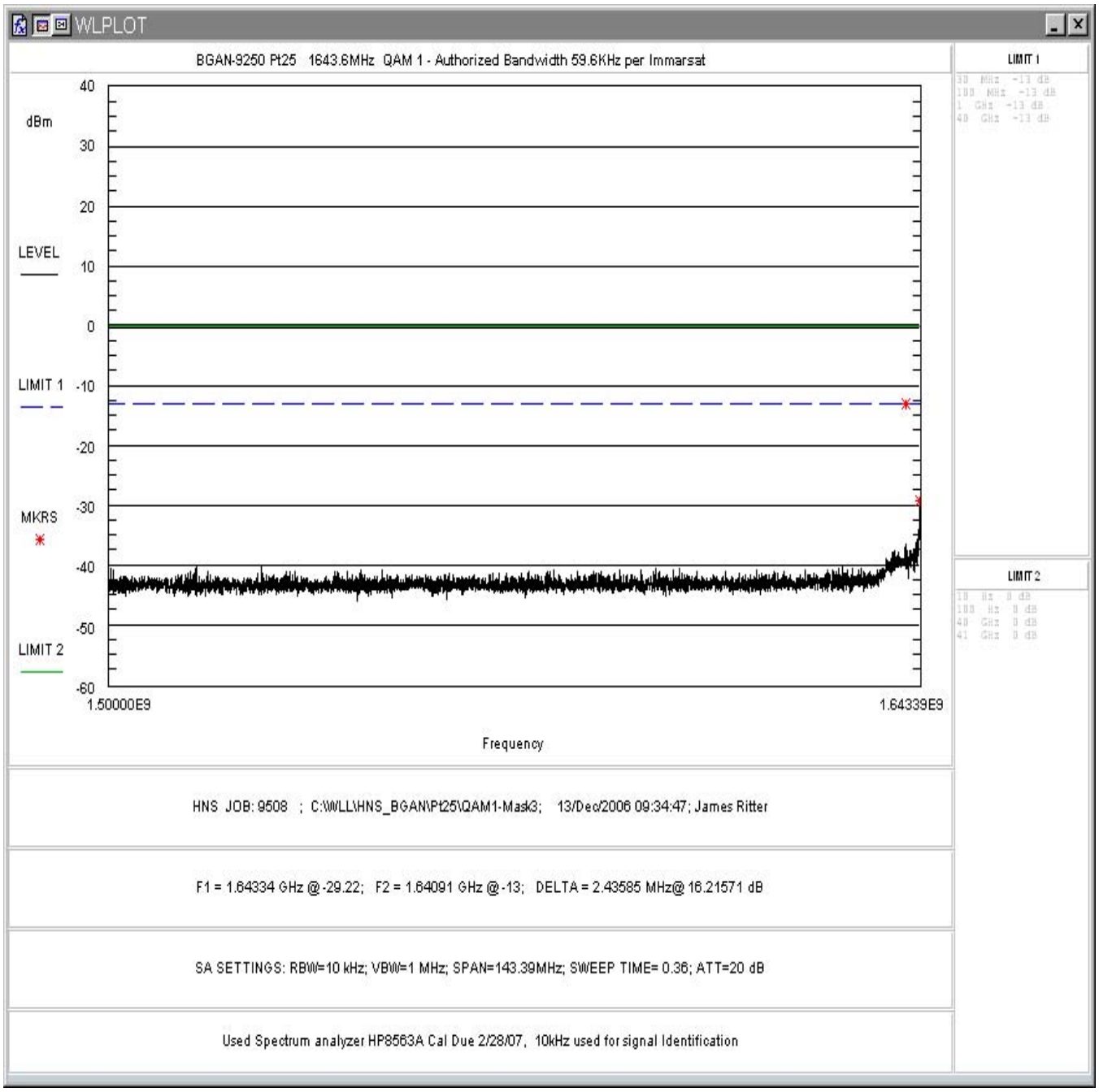

Figure 18: FCC Part 25 Conducted Spurious Emissions Data, QAM 1 1500 – 1643MHz

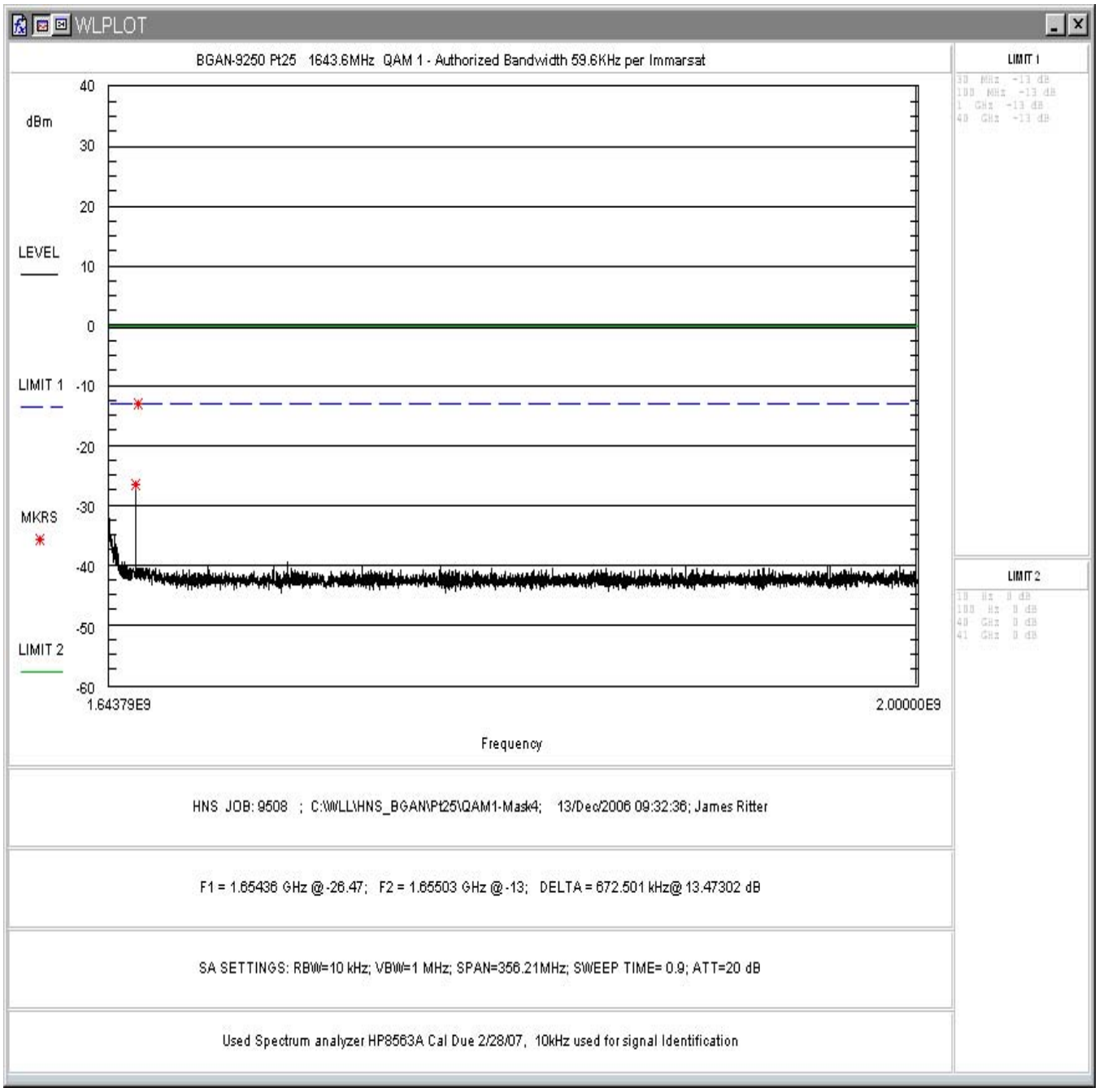

Figure 19: FCC Part 25 Conducted Spurious Emissions Data, QAM 1 1643MHz – 2GHz

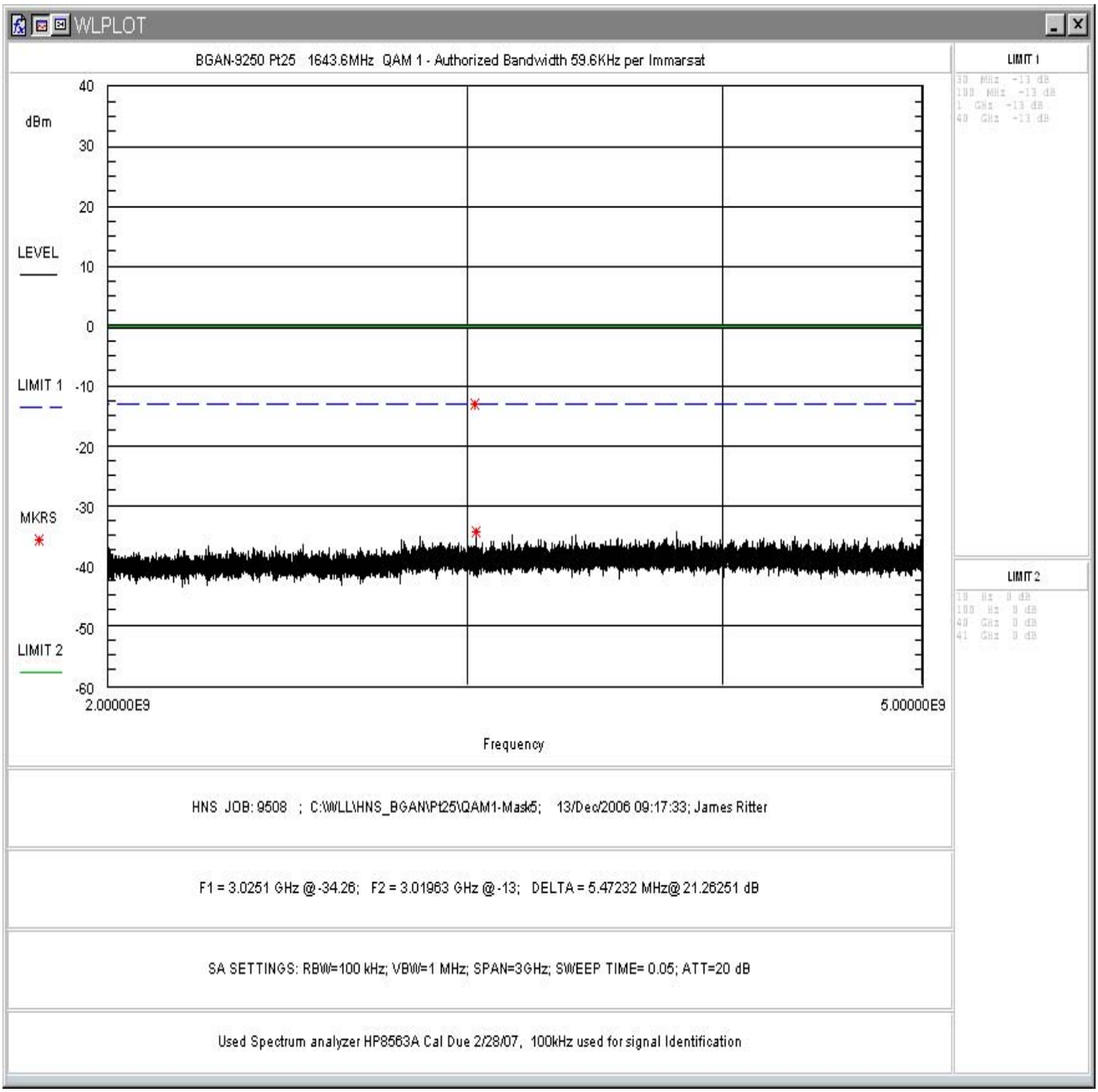

Figure 20: FCC Part 25 Conducted Spurious Emissions Data, QAM 1 2 – 5GHz

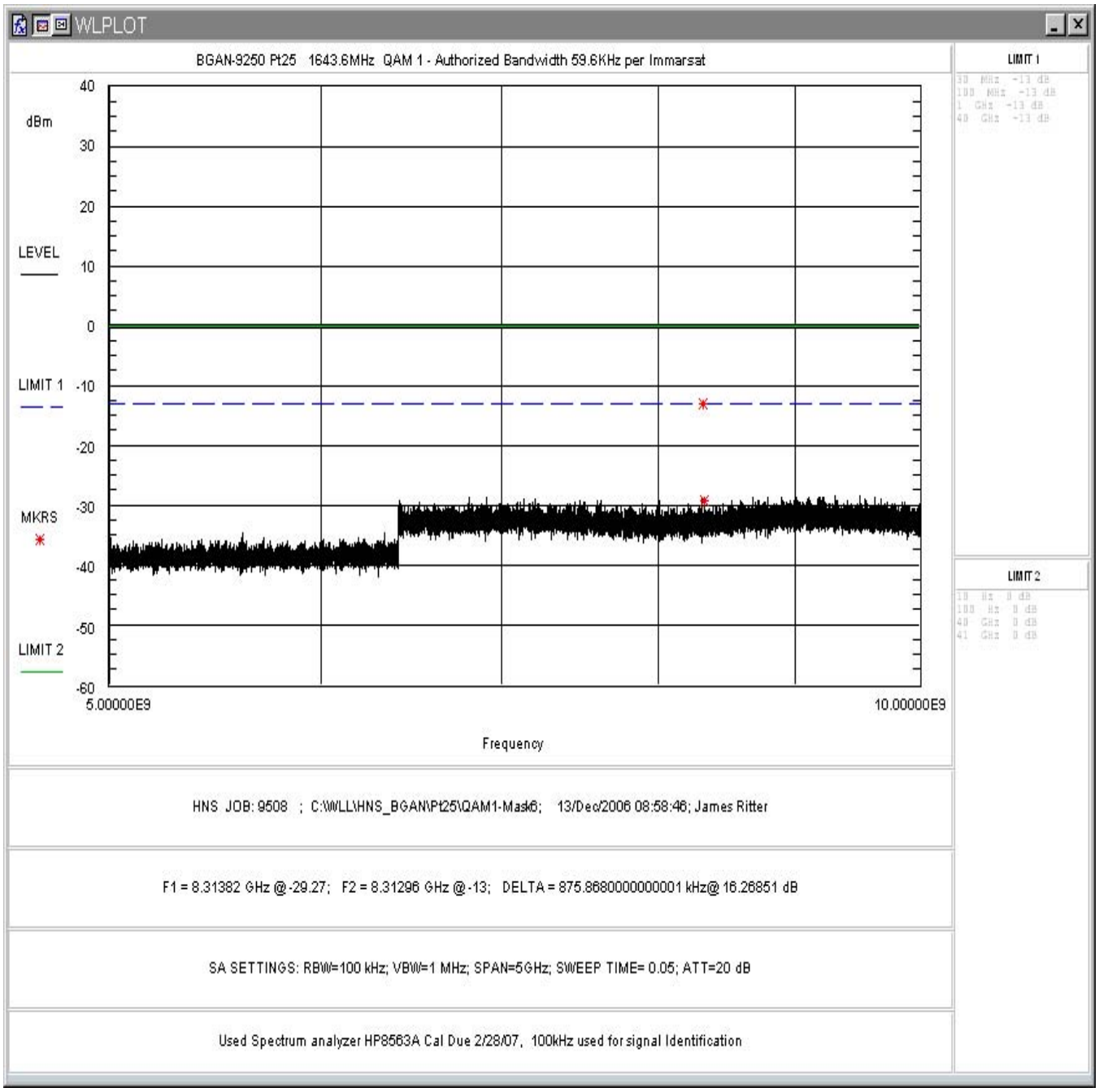

Figure 21: FCC Part 25 Conducted Spurious Emissions Data, QAM 1 5 – 10GHz

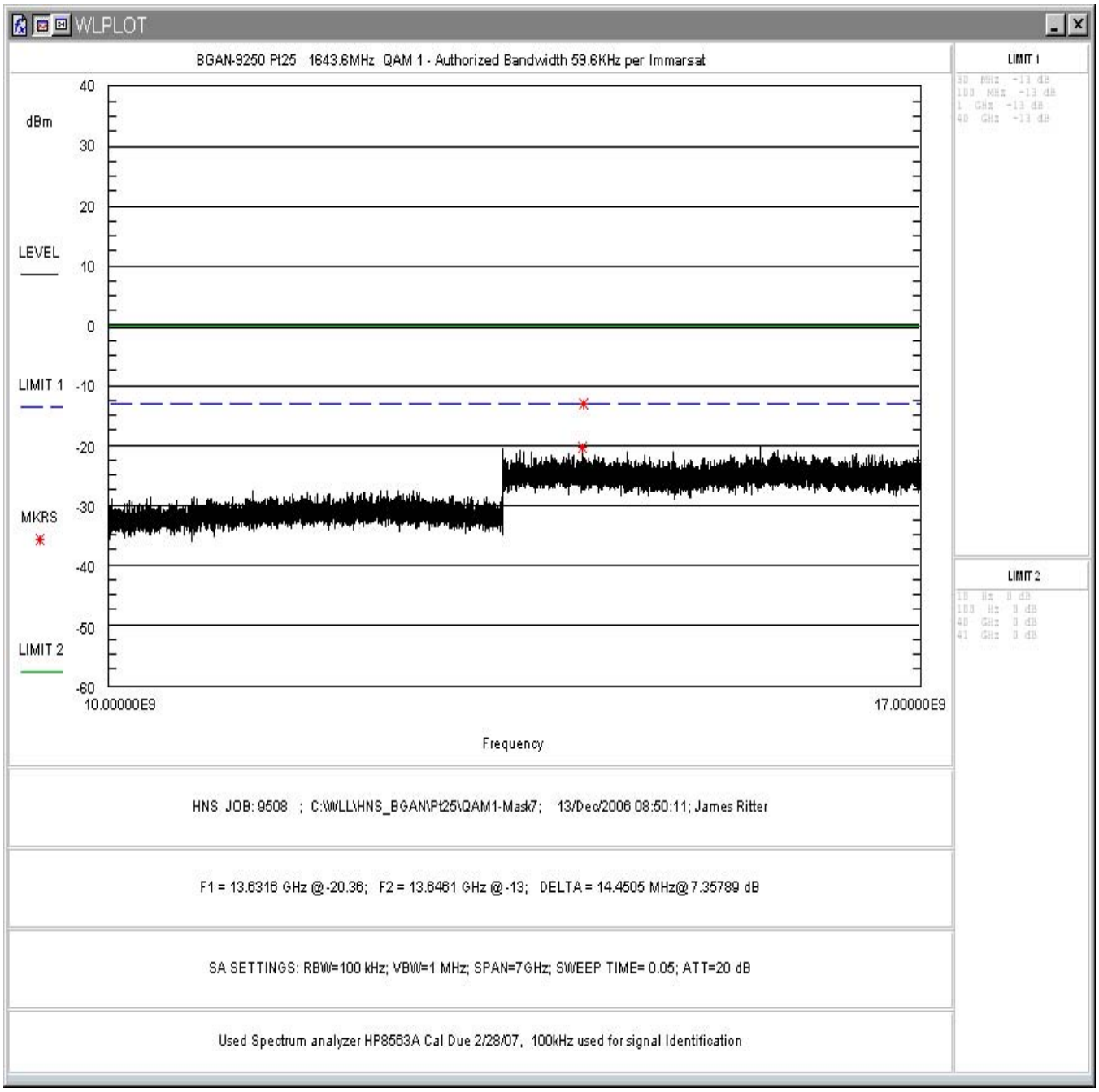

Figure 22: FCC Part 25 Conducted Spurious Emissions Data, QAM 1 10 – 17GHz

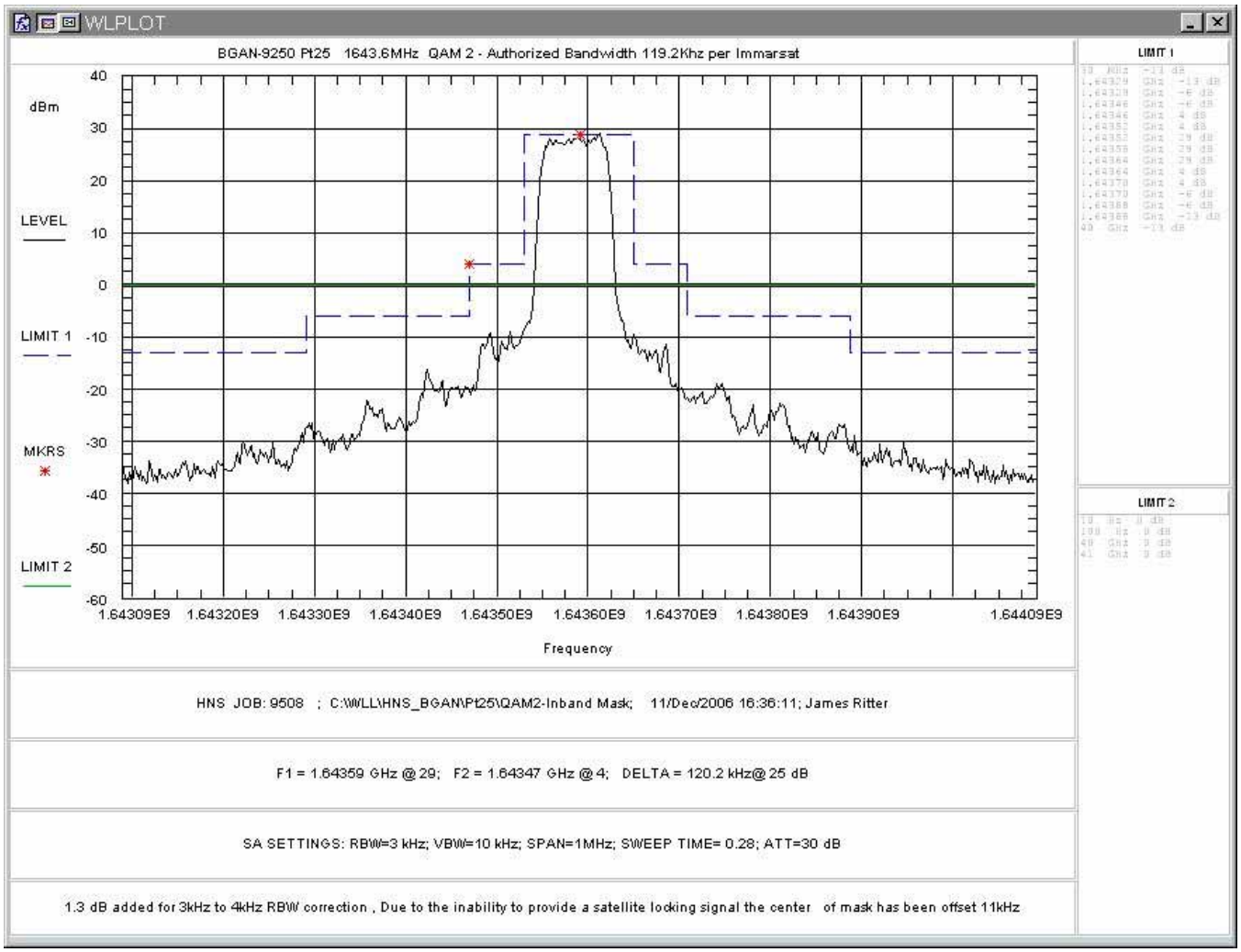

Figure 23: FCC Part 25 QAM 2 Emission Mask

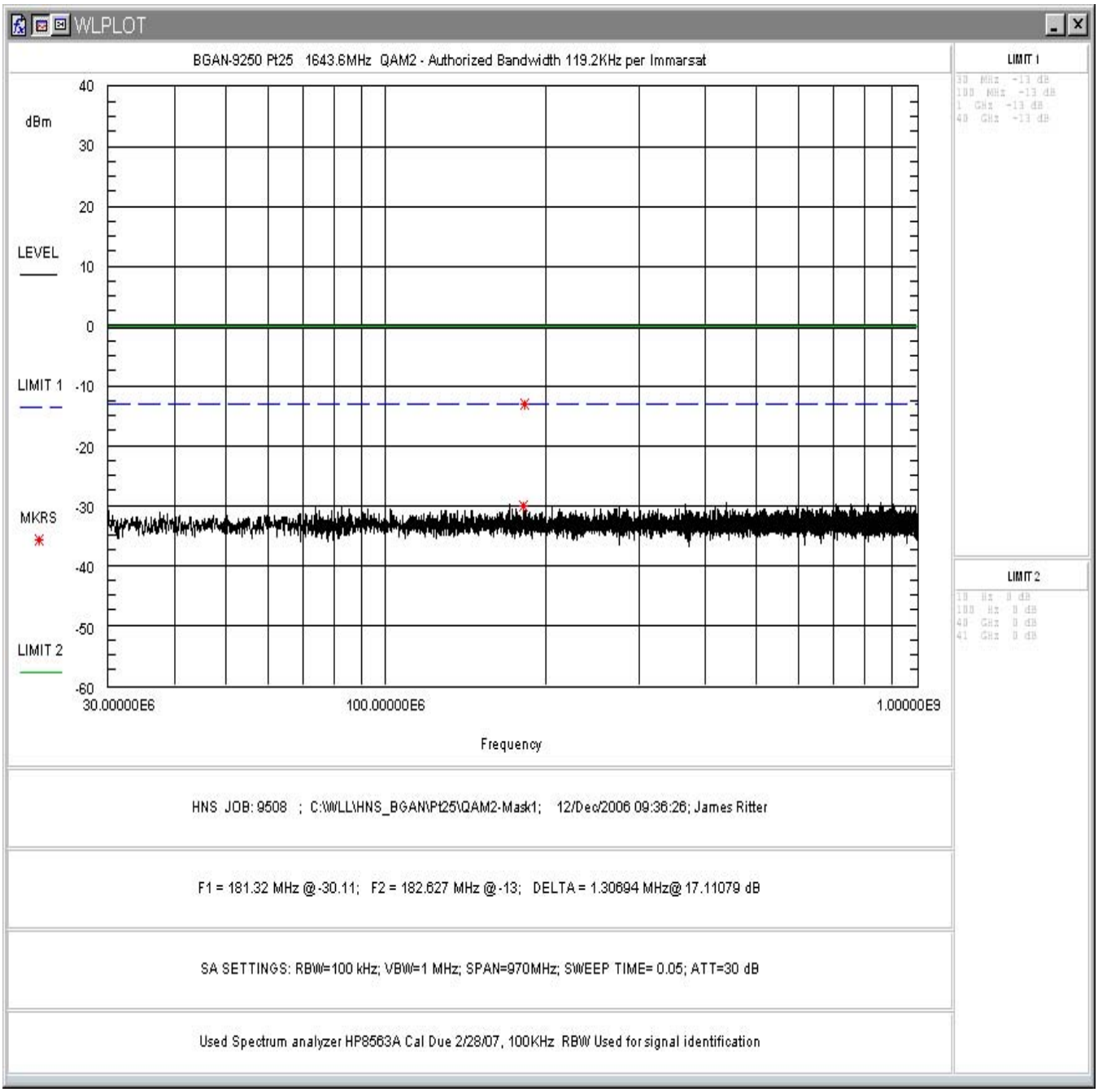

Figure 24: FCC Part 25 Conducted Spurious Emissions Data, QAM 2 30MHz - 1000MHz

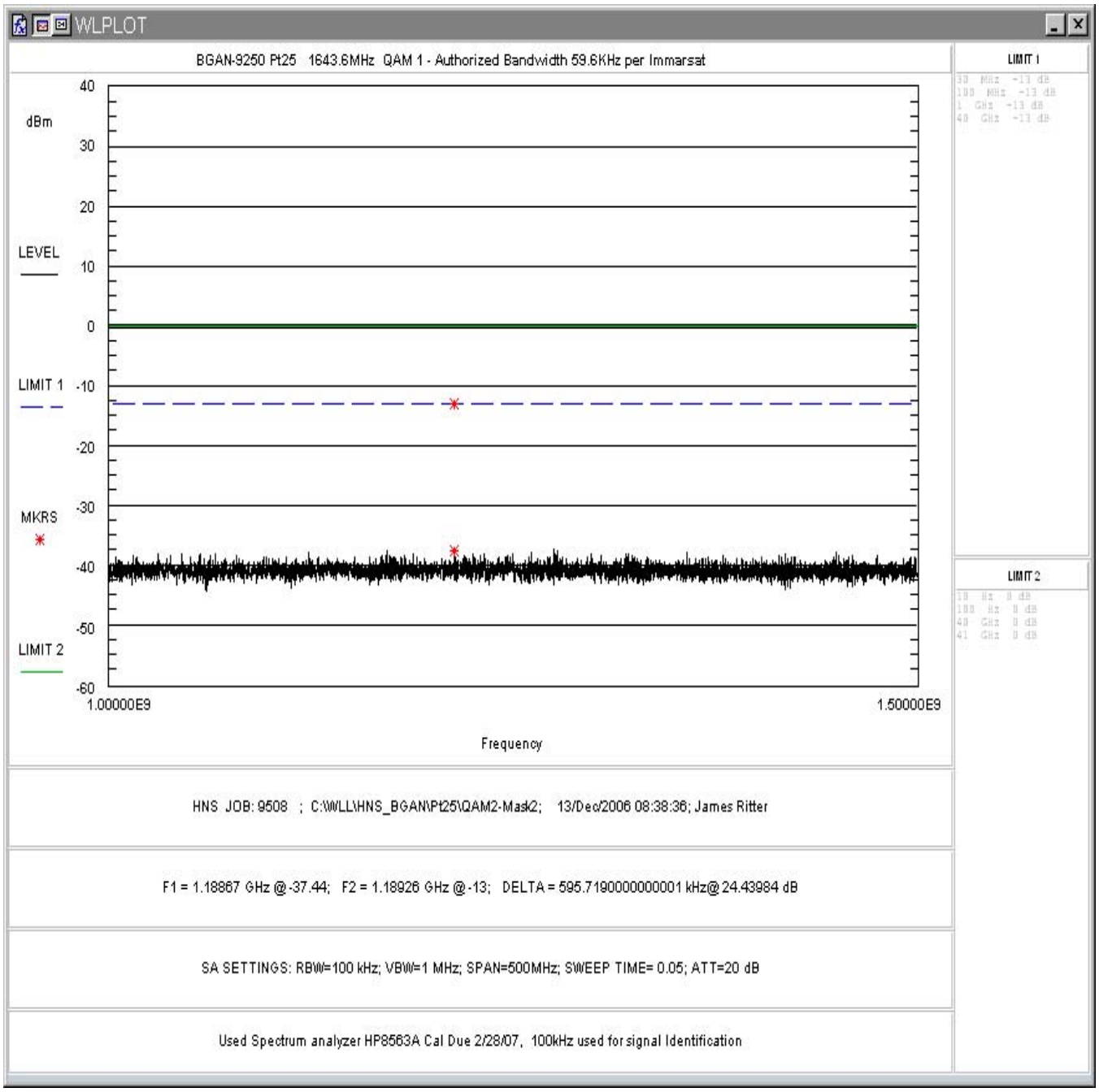

Figure 25: FCC Part 25 Conducted Spurious Emissions Data, QAM 2 1000 – 1500MHz

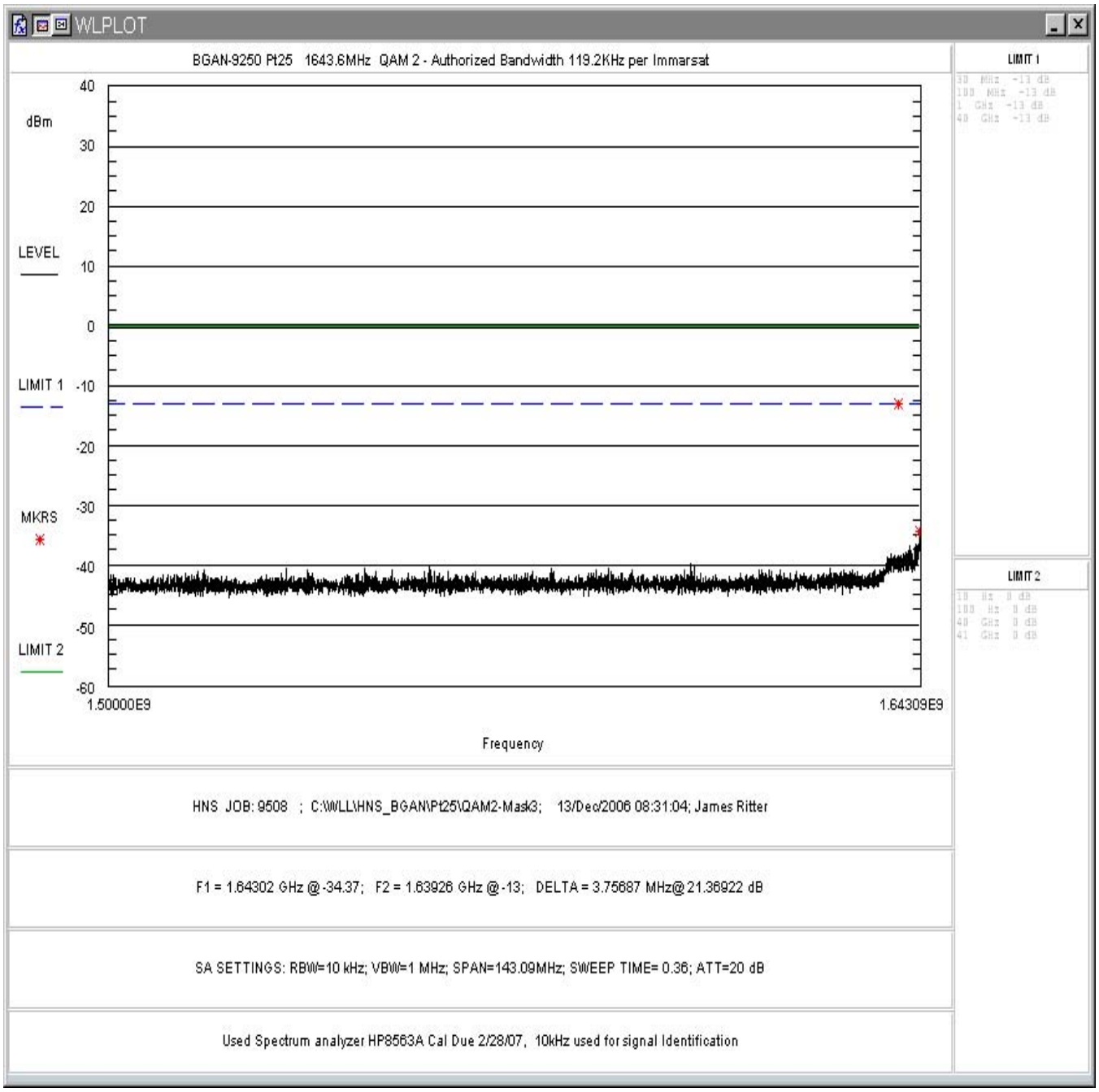

Figure 26: FCC Part 25 Conducted Spurious Emissions Data, QAM 2 1500 – 1643MHz

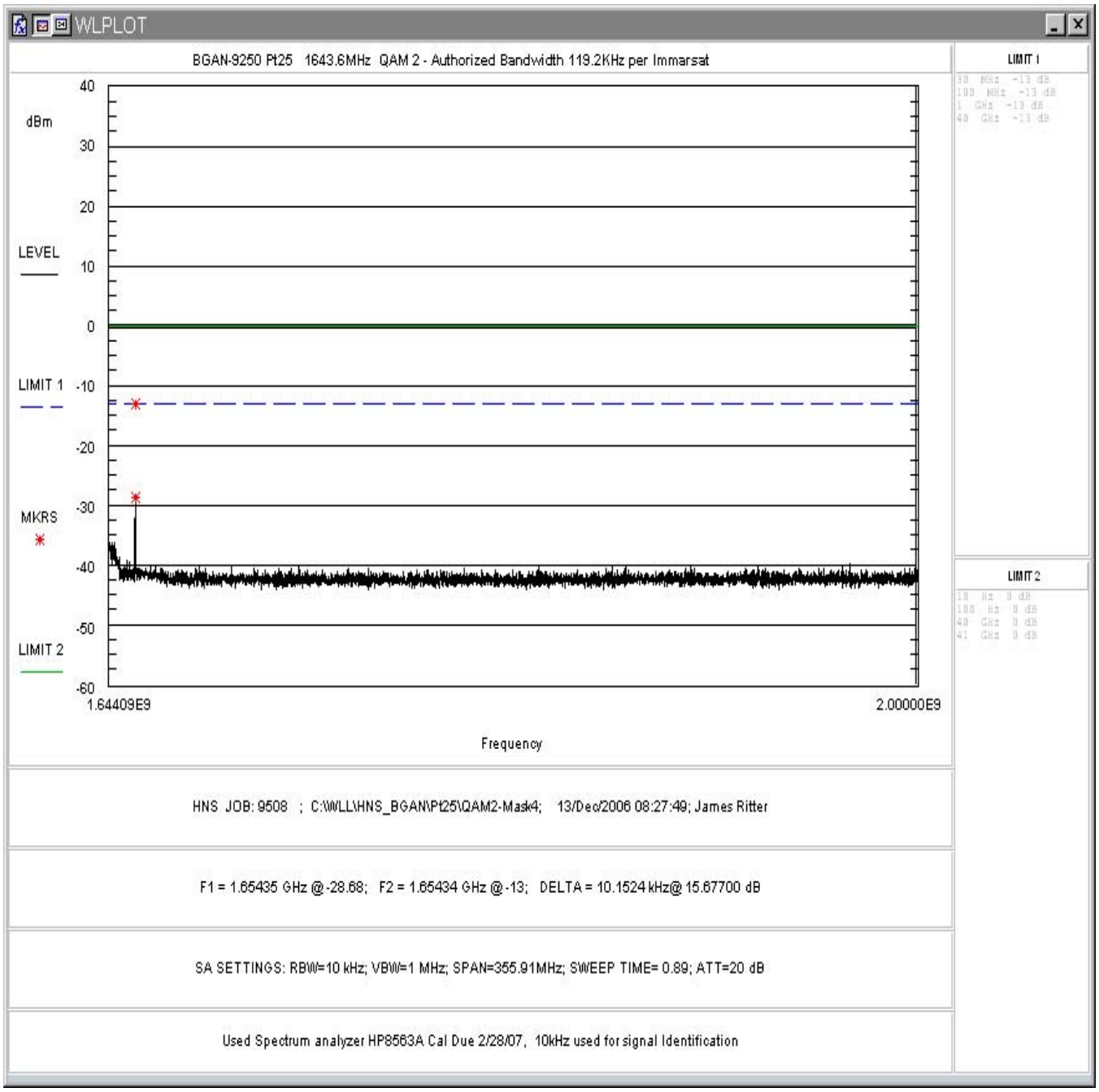

Figure 27: FCC Part 25 Conducted Spurious Emissions Data, QAM 2 1643MHz – 2GHz

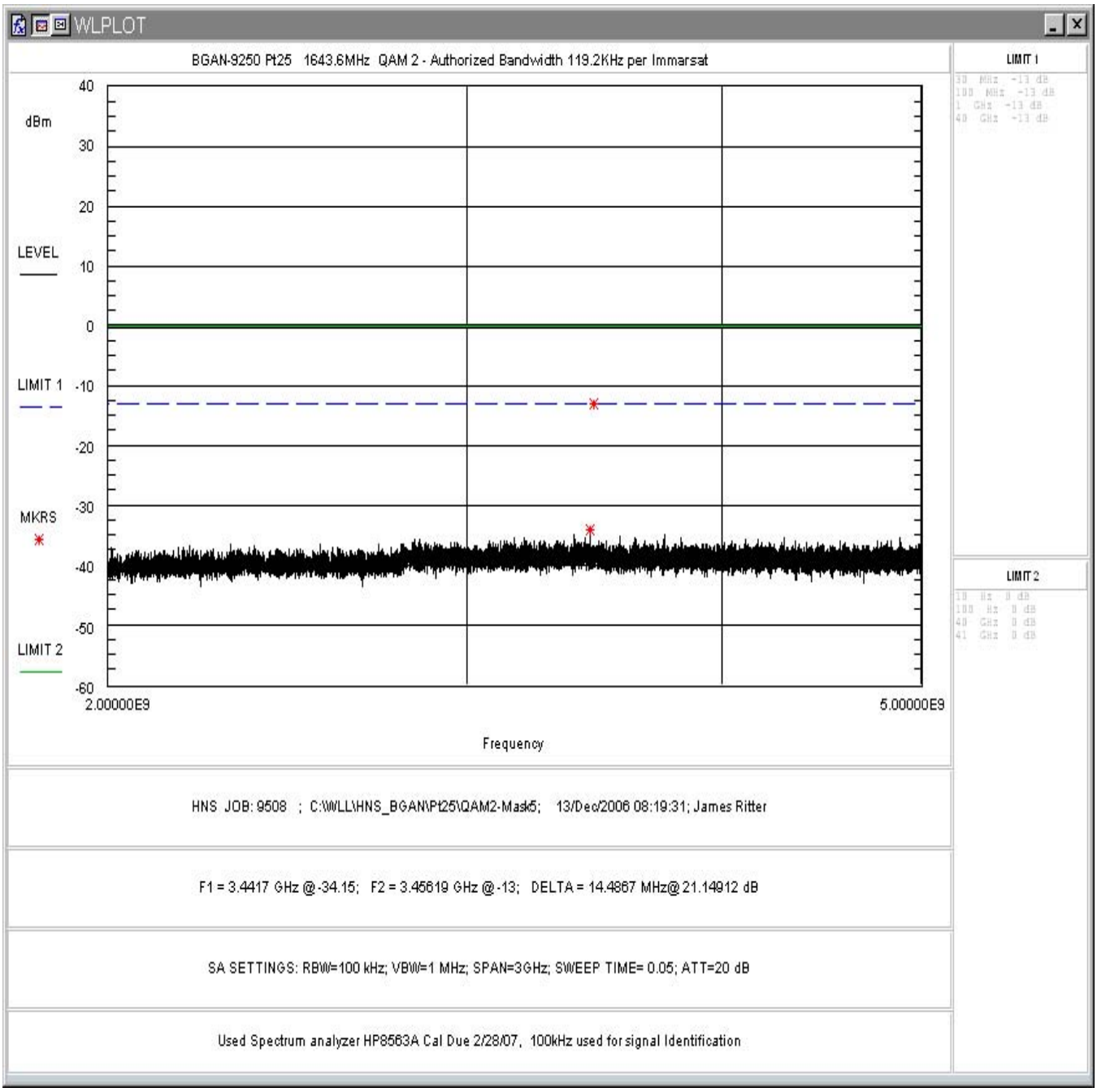

Figure 28: FCC Part 25 Conducted Spurious Emissions Data, QAM 2 2 – 5GHz

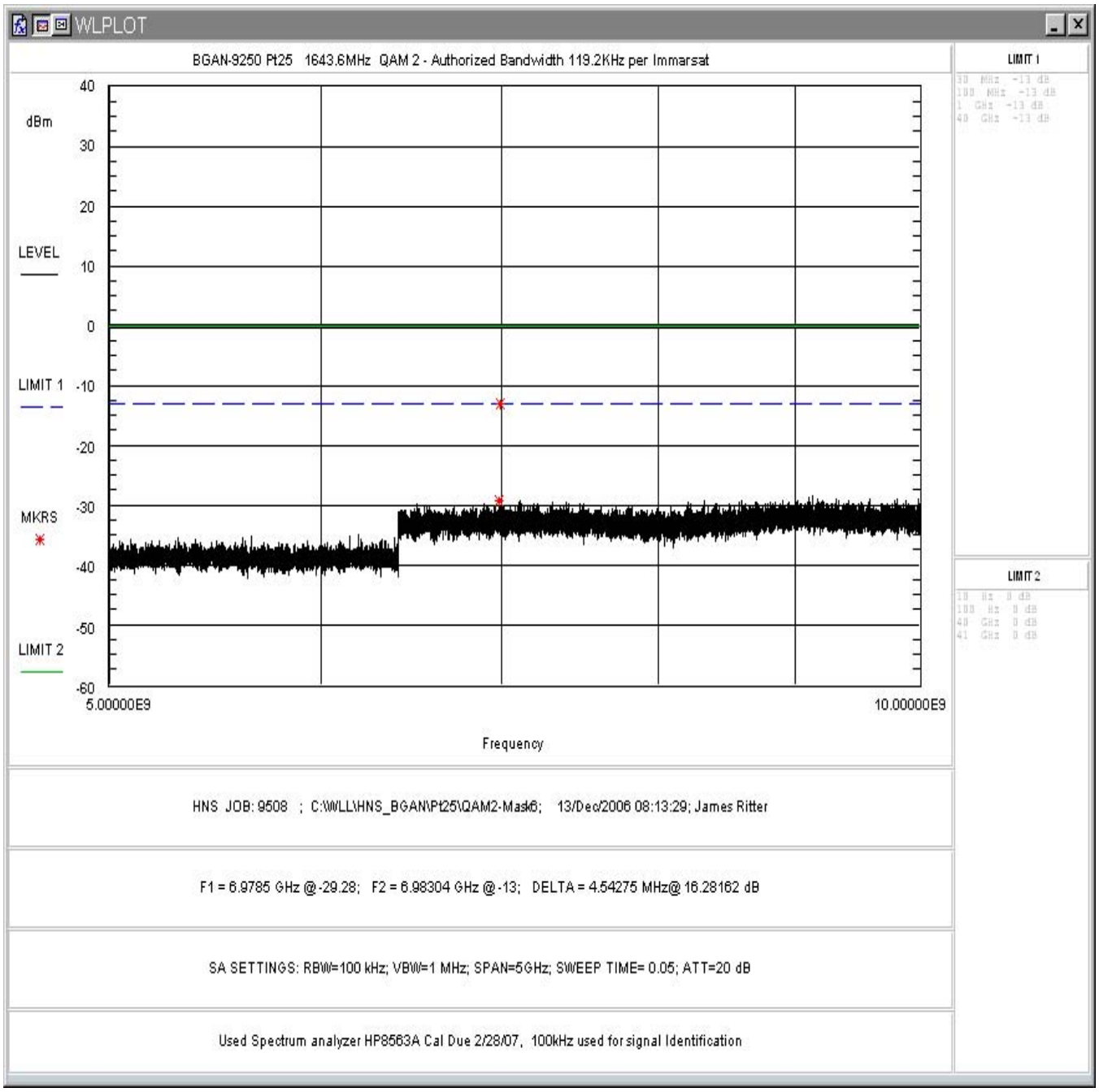

Figure 29: FCC Part 25 Conducted Spurious Emissions Data, QAM 2 5 – 10GHz

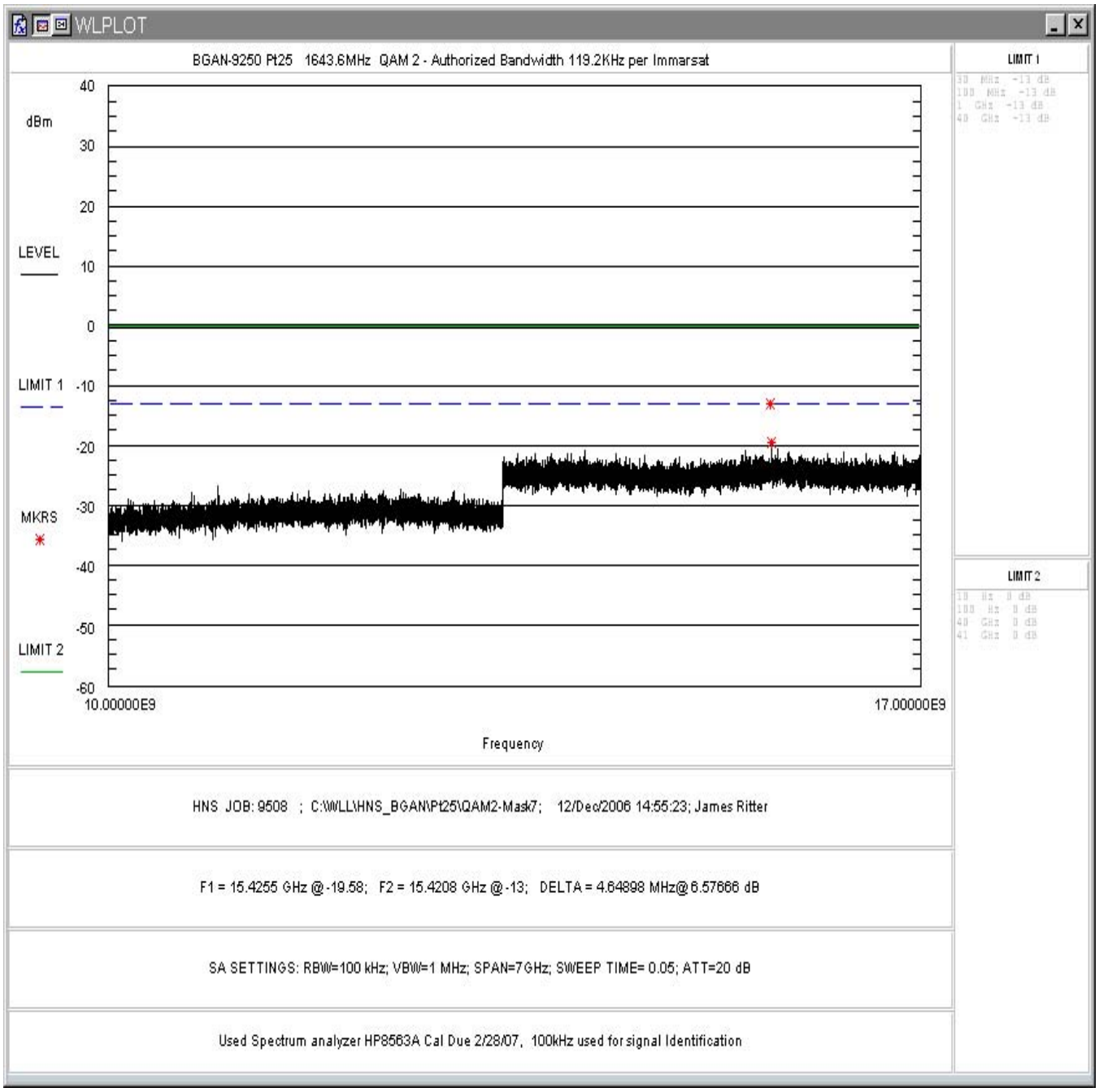

Figure 30: FCC Part 25 Conducted Spurious Emissions Data, QAM 2 10 – 17GHz

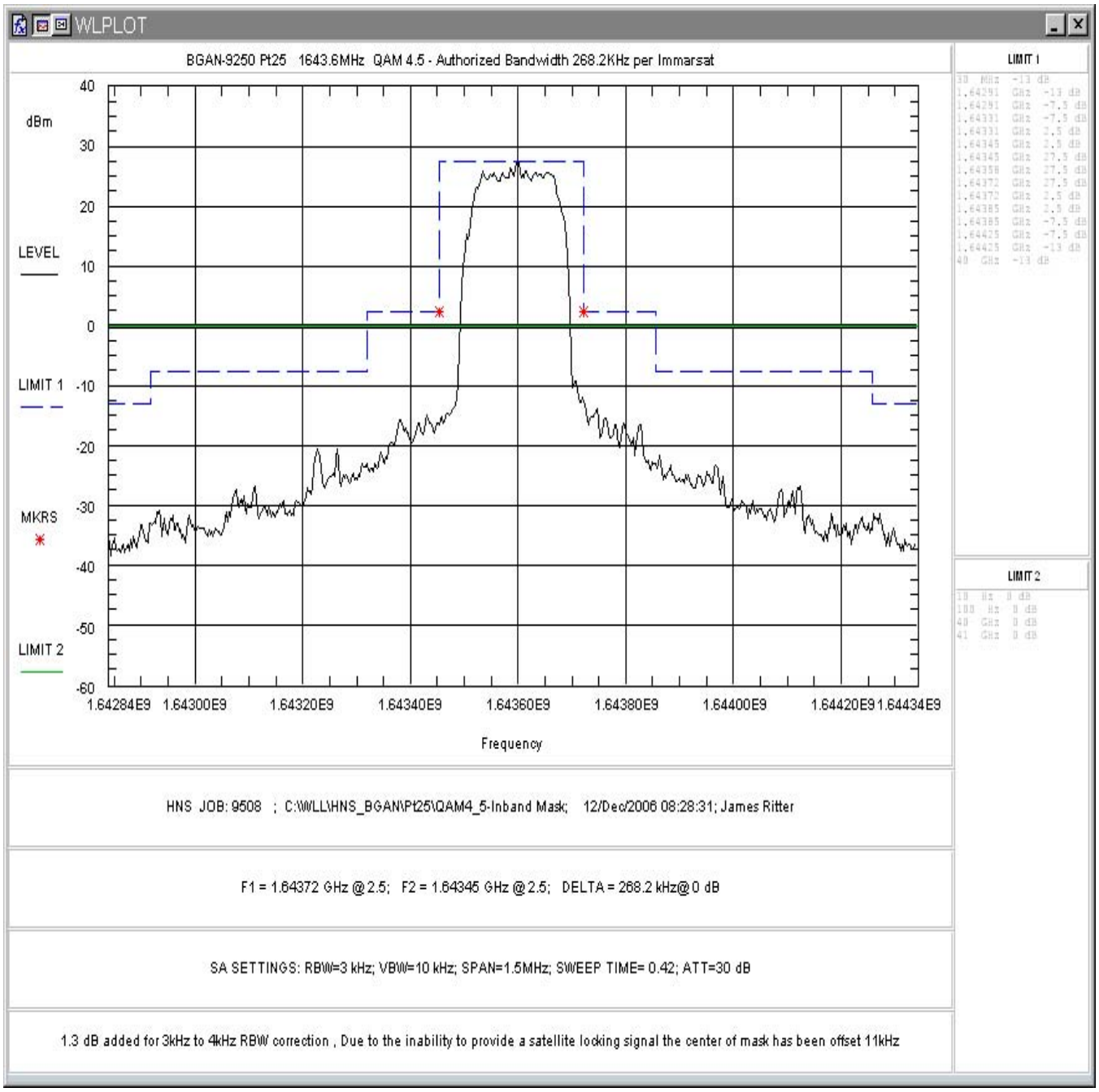

Figure 31: FCC Part 25 QAM 4.5 Emission Mask

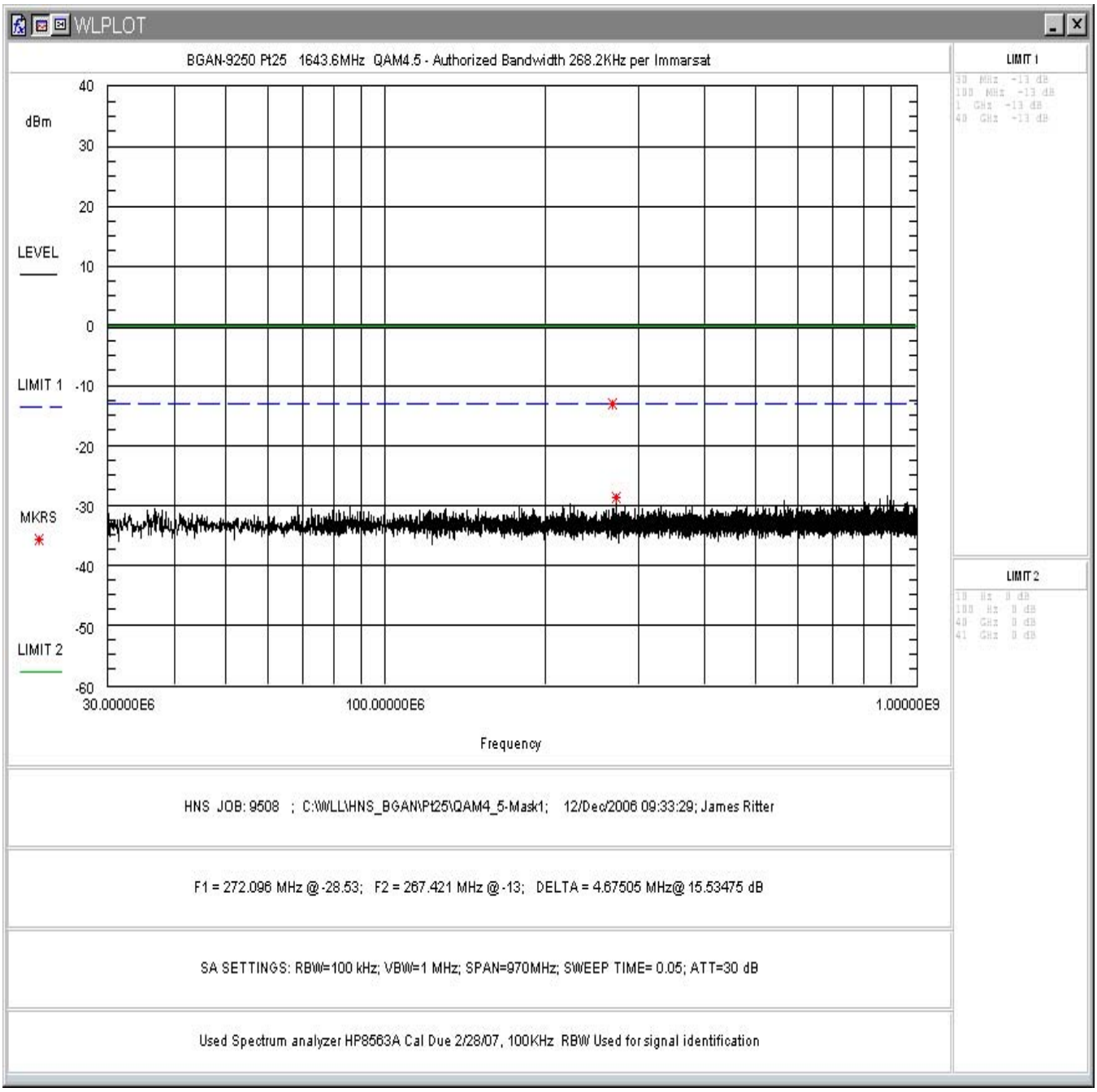

Figure 32: FCC Part 25 Conducted Spurious Emissions Data, QAM 4.5 30MHz - 1000MHz

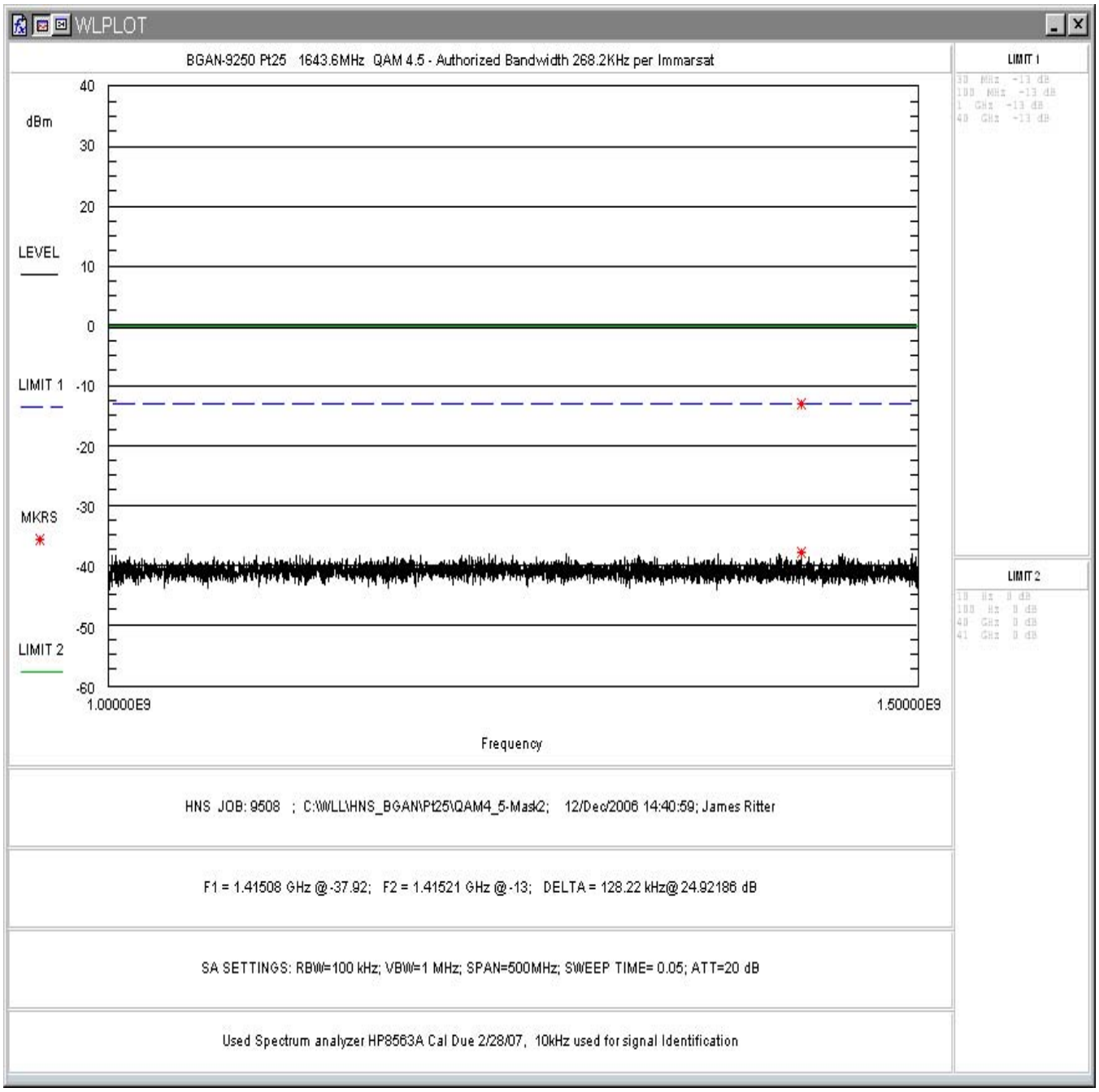

Figure 33: FCC Part 25 Conducted Spurious Emissions Data, QAM 4.5 1000 – 1500MHz

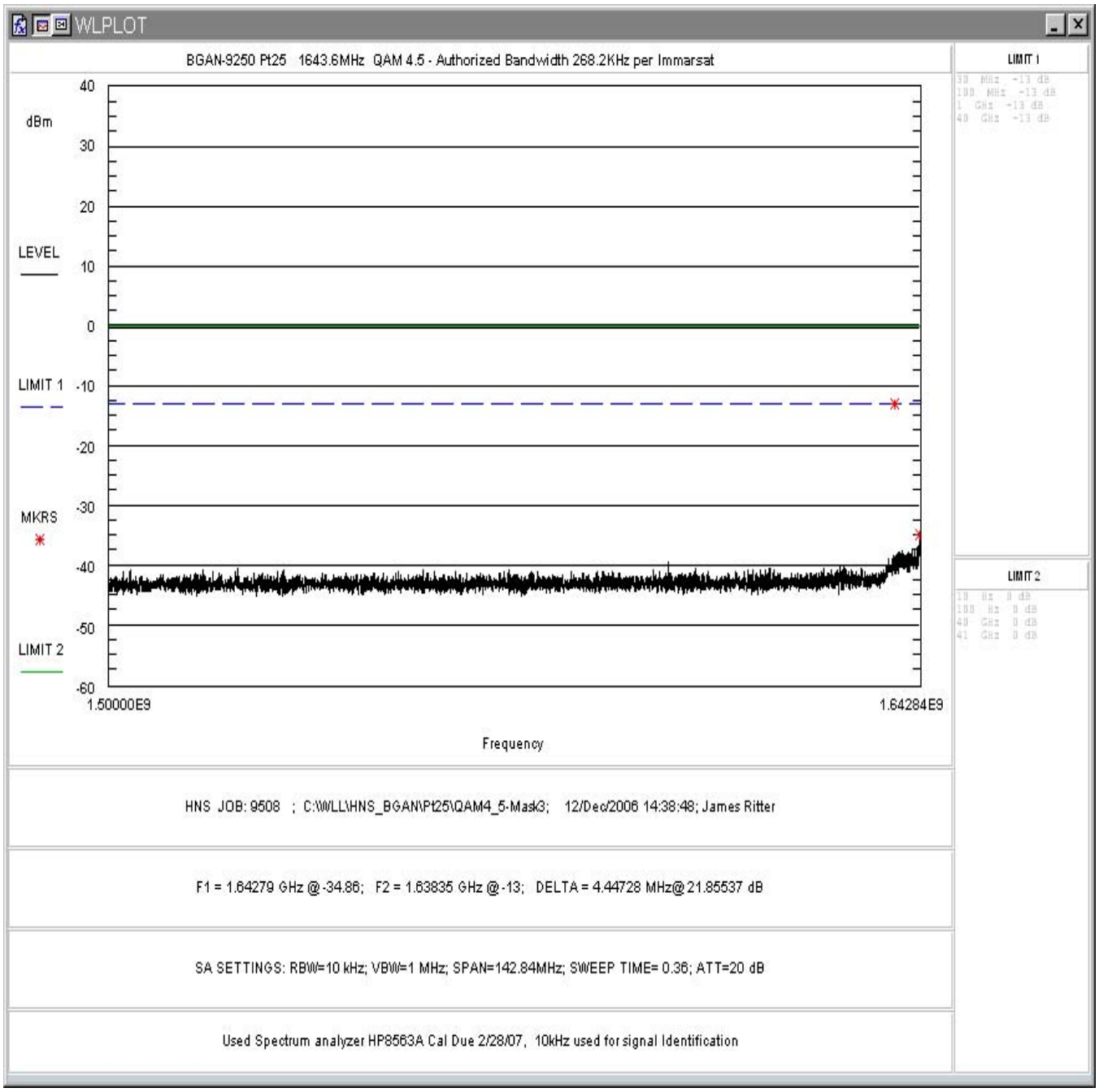

Figure 34: FCC Part 25 Conducted Spurious Emissions Data, QAM 4.5 1500 – 1643MHz

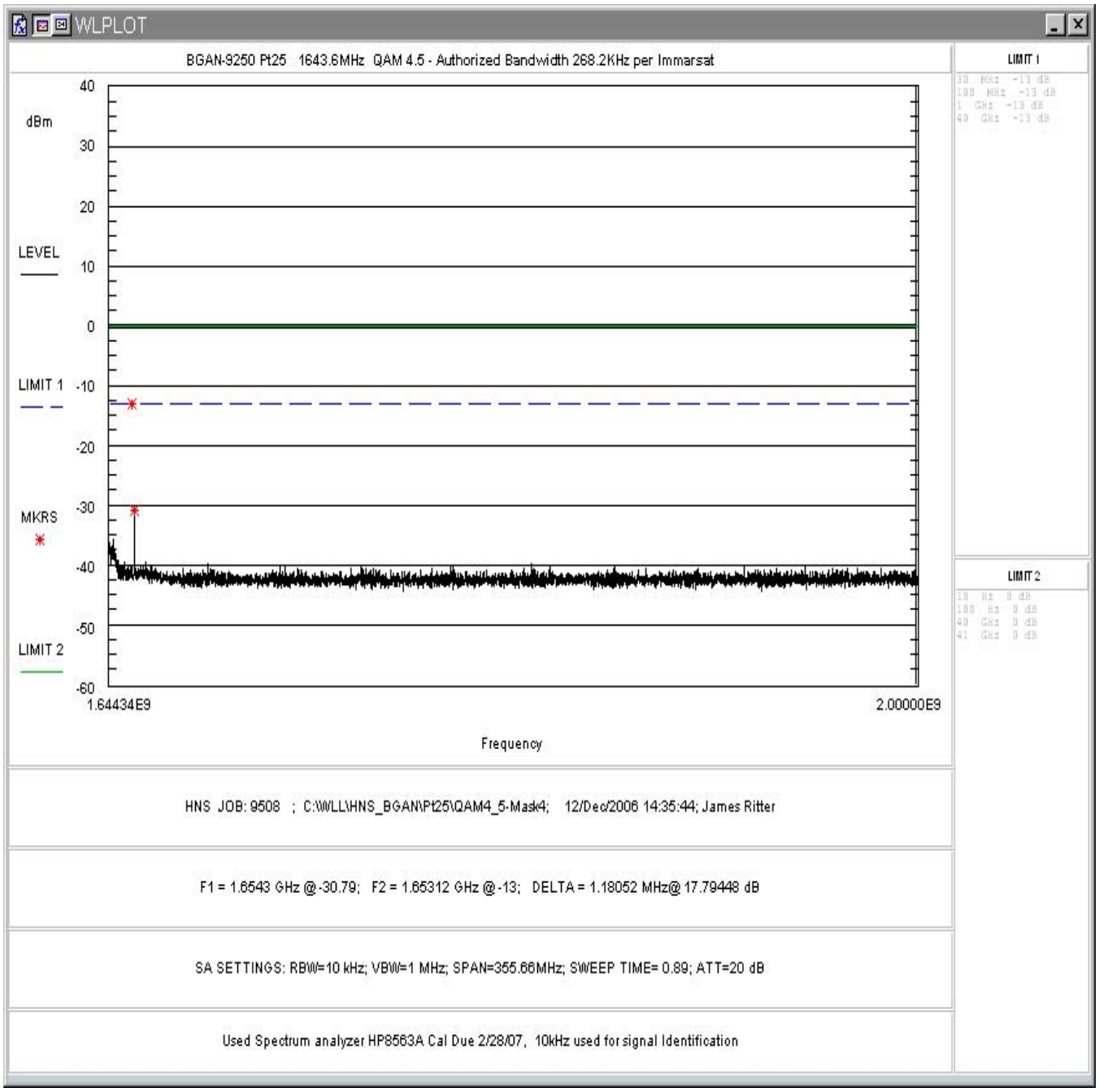

Figure 35: FCC Part 25 Conducted Spurious Emissions Data, QAM 4.5 1643MHz – 2GHz

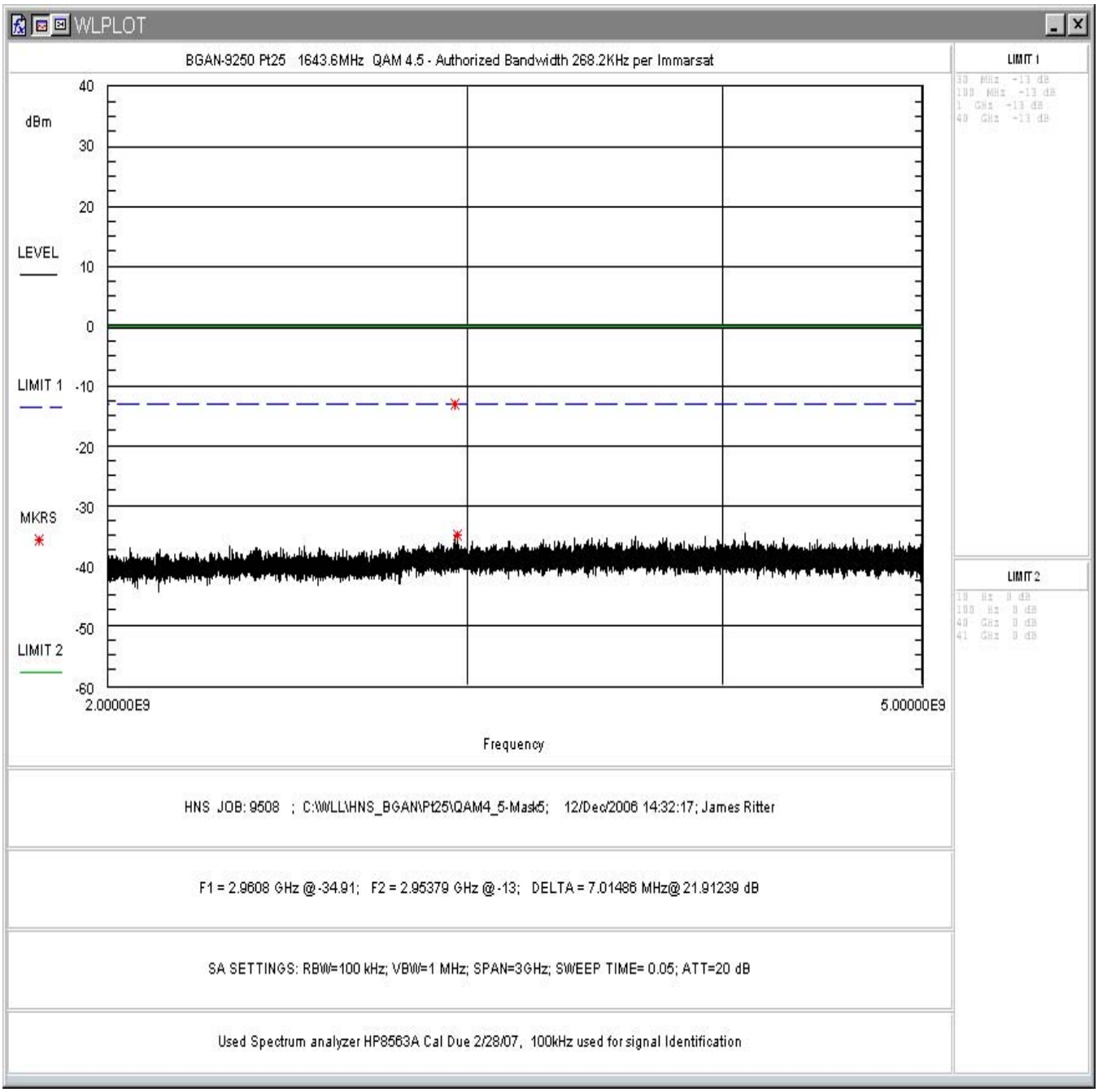

Figure 36: FCC Part 25 Conducted Spurious Emissions Data, QAM 4.5 2 – 5GHz

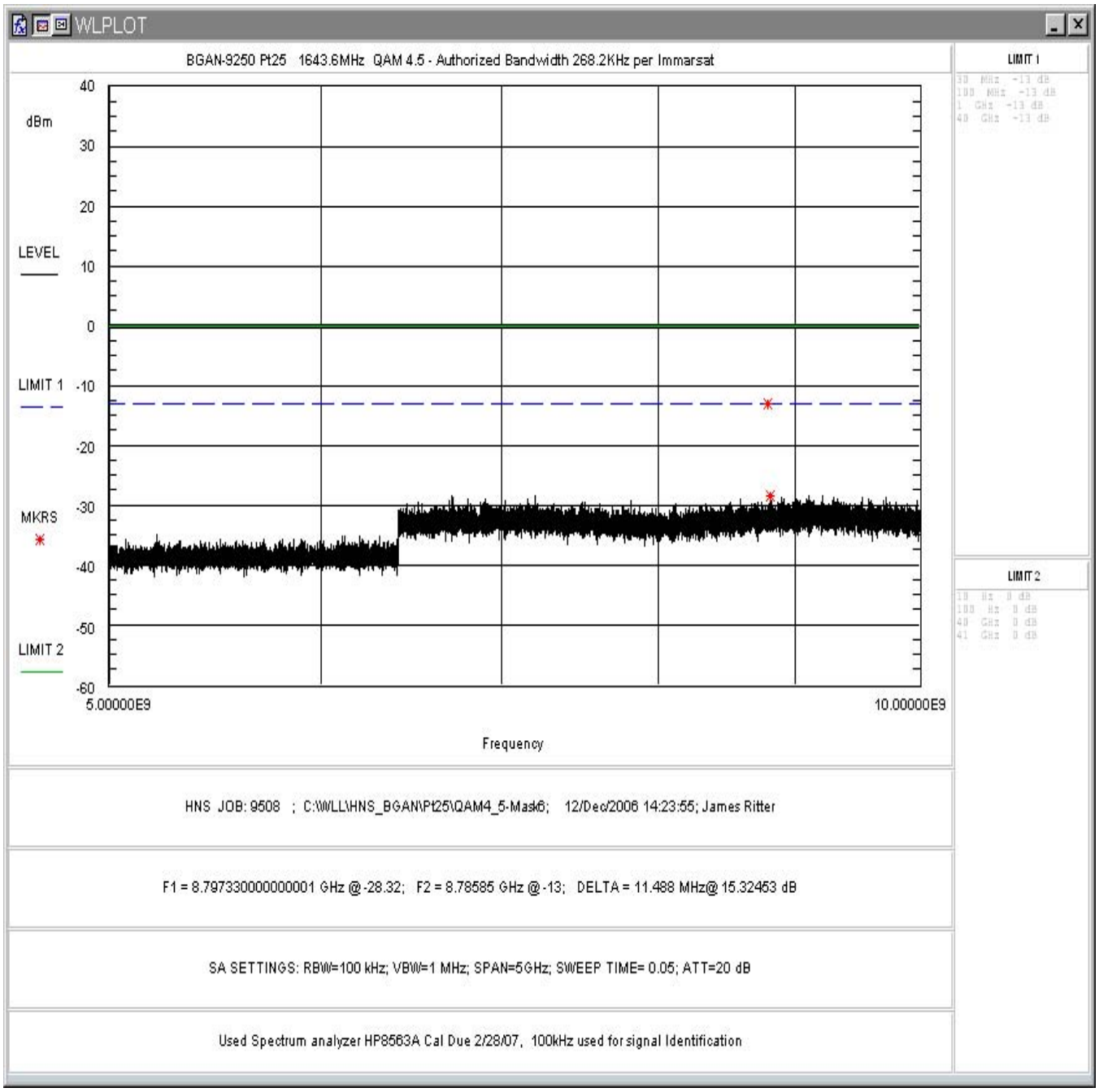

Figure 37: FCC Part 25 Conducted Spurious Emissions Data, QAM 4.5 5 – 10GHz

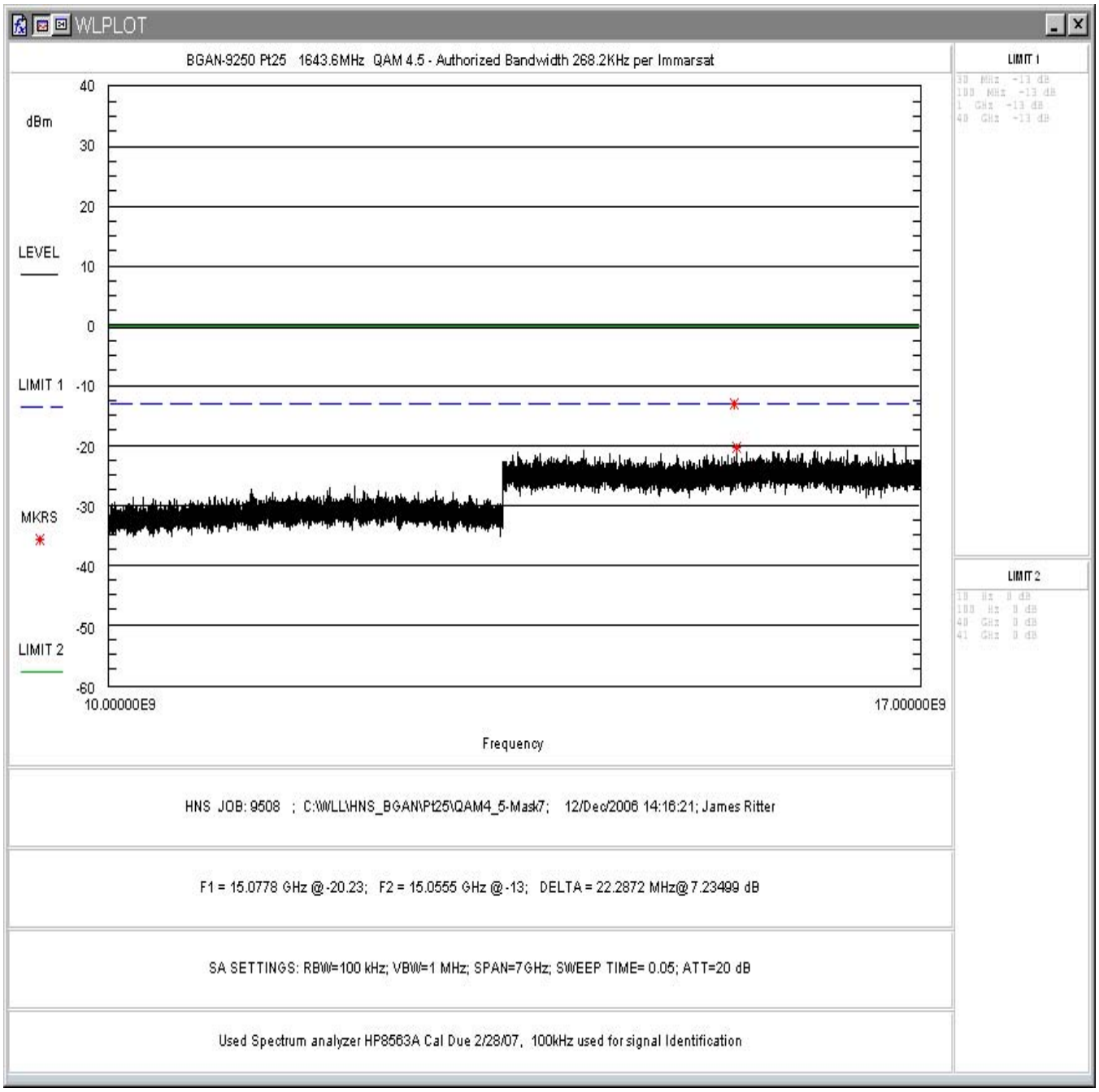

Figure 38: FCC Part 25 Conducted Spurious Emissions Data, QAM 4.5 10 – 17GHz

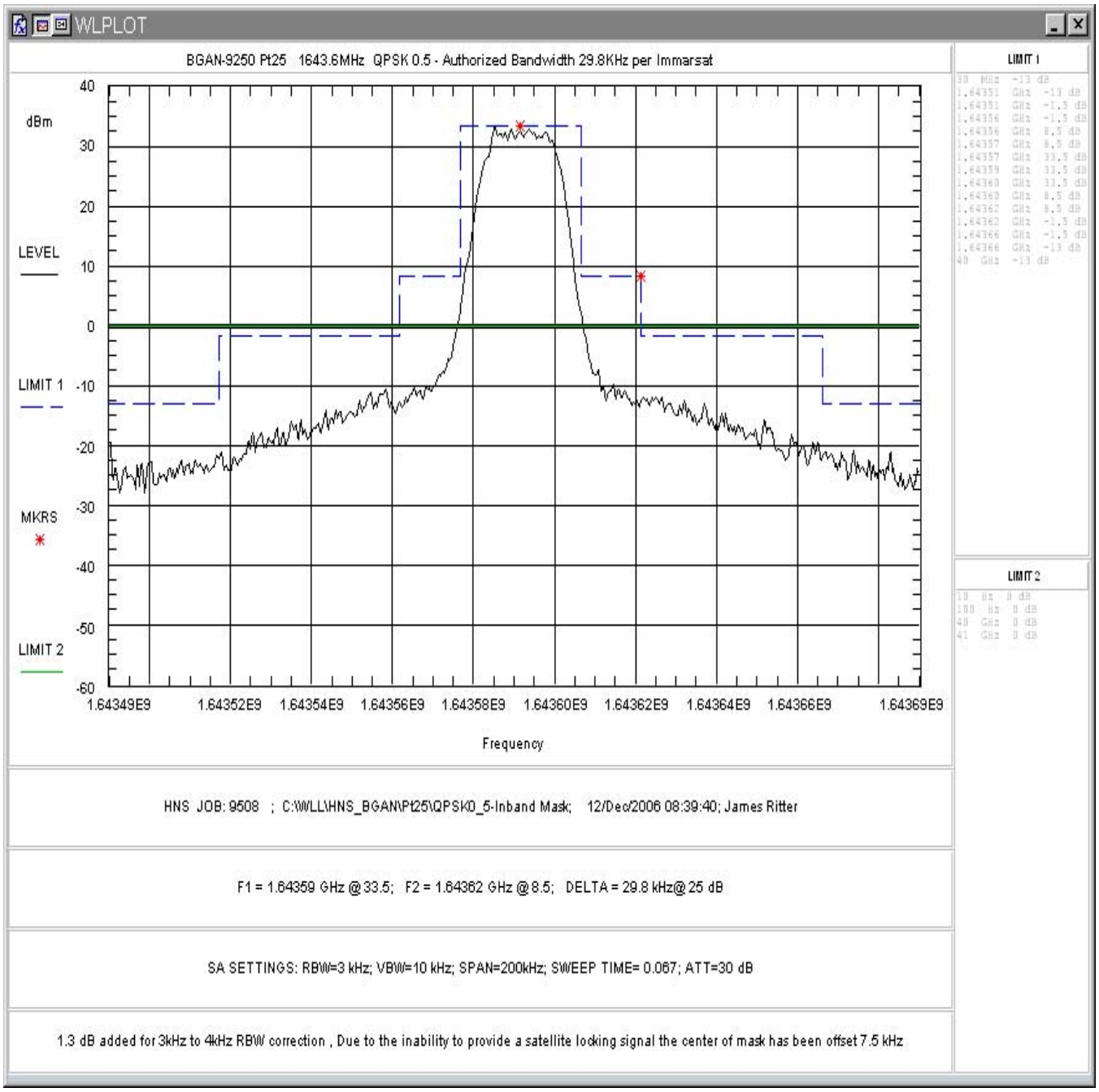

Figure 39: FCC Part 25 QPSK 0.5 Emission Mask

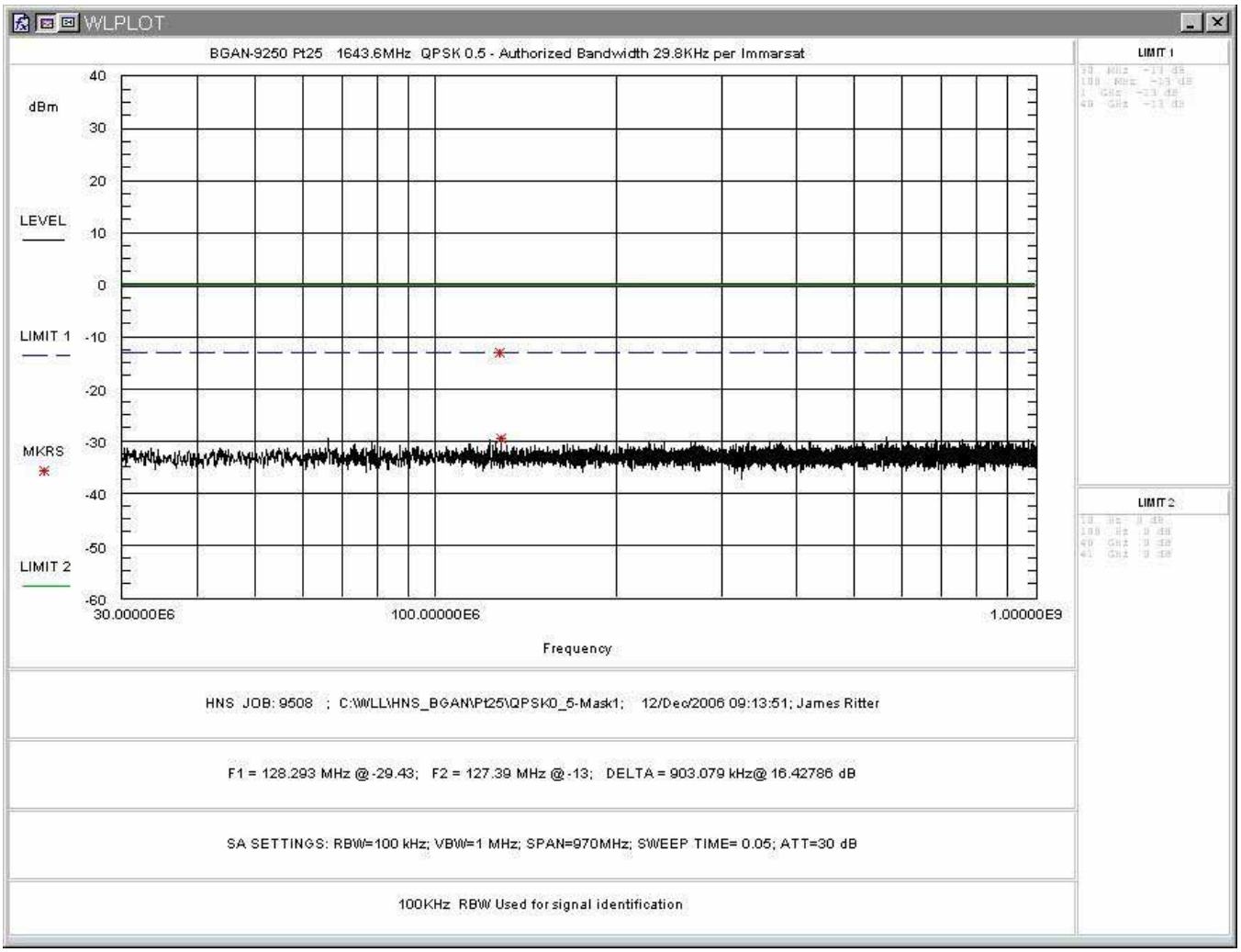

Figure 40: FCC Part 25 Conducted Spurious Emissions Data, QPSK 0.5 30MHz - 1000MHz

