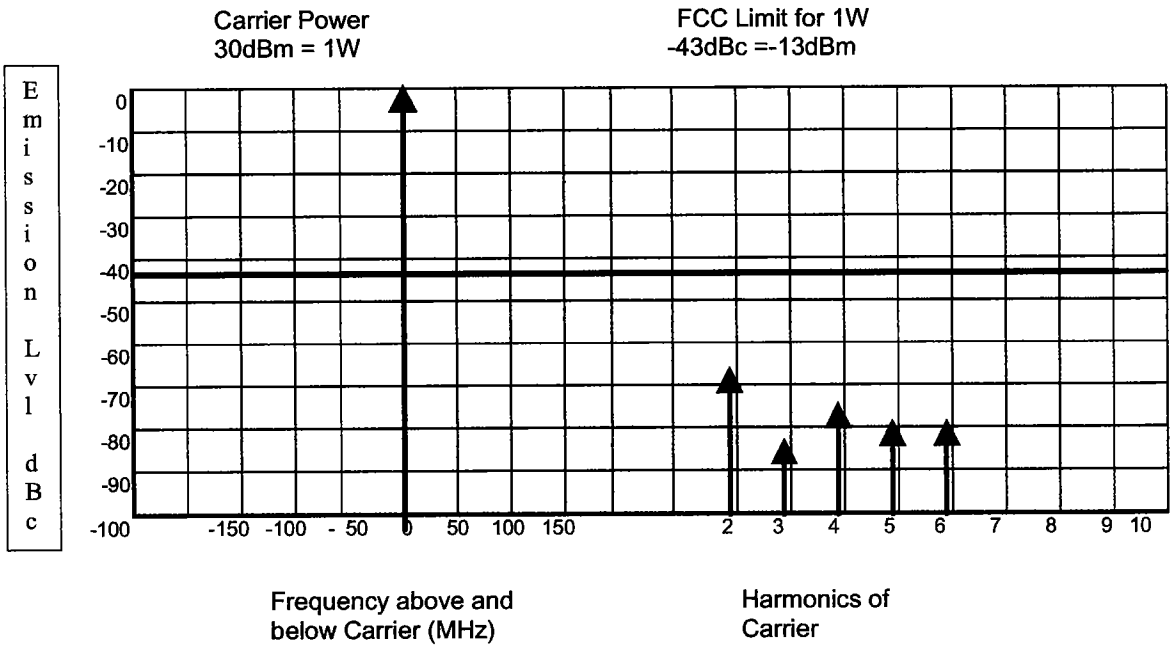
TRANSMITTED RADIATED SPURIOUS AND HARMONIC EMISSIONS PLOT



Notes:

Transmitter type: **IHDT6AC1**
Carrier Power: 1Watt to 1mW in 2 dB steps.
Carrier Frequency: 1850.2MHz to 1909.8MHz in 200kHz steps.

Each Emission shown reflects its level at the channel, polarization, and power level tested that produced the highest level for that Spurious or Harmonic Emission.

Emissions not reported are greater than 20dB below the FCC specs.

Frequency spectrum from 30MHz to 19.1GHz (10^{th} harmonic of the carrier) was searched with the Carrier Level set at Power Step 0
(1 Watt or +30 dBm, nominal).

Occupied Bandwidth Results

Similar to conducted emissions, occupied bandwidth measurements are only provided for selected frequencies in order to reduce the amount of submitted data. Data were taken at the extreme and mid frequencies of the USPCS frequency band. Table 8.2 below lists the measured 99% power and -26dBC occupied bandwidths. Spectrum analyzer plots are included on the following pages.

Frequency	99% Occupied BW	-26dBC Bandwidth
1850.2 MHz	248.3 kHz	315 kHz
1880.0 MHz	250.0 kHz	325 kHz
1909.8 MHz	248.3 kHz	313 kHz

Table 8.2: Occupied bandwidth results.

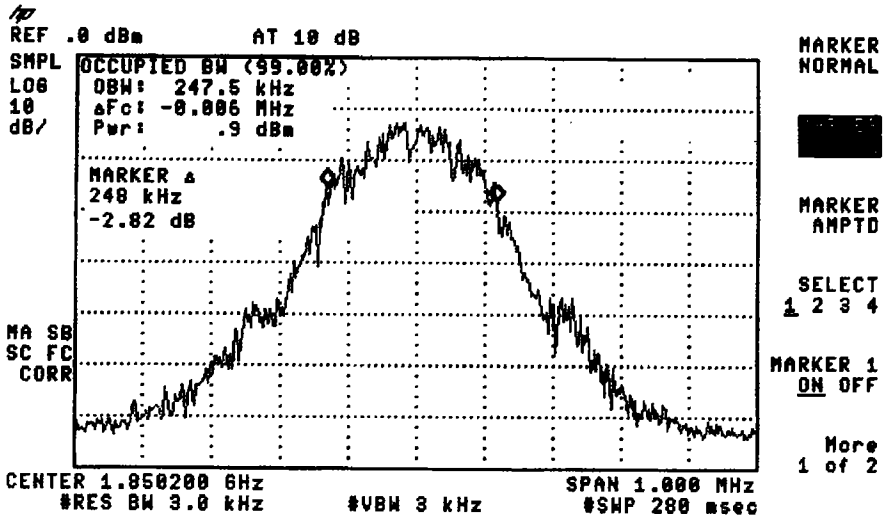


Fig.8.1: Channel 512, 99% Power Bandwidth

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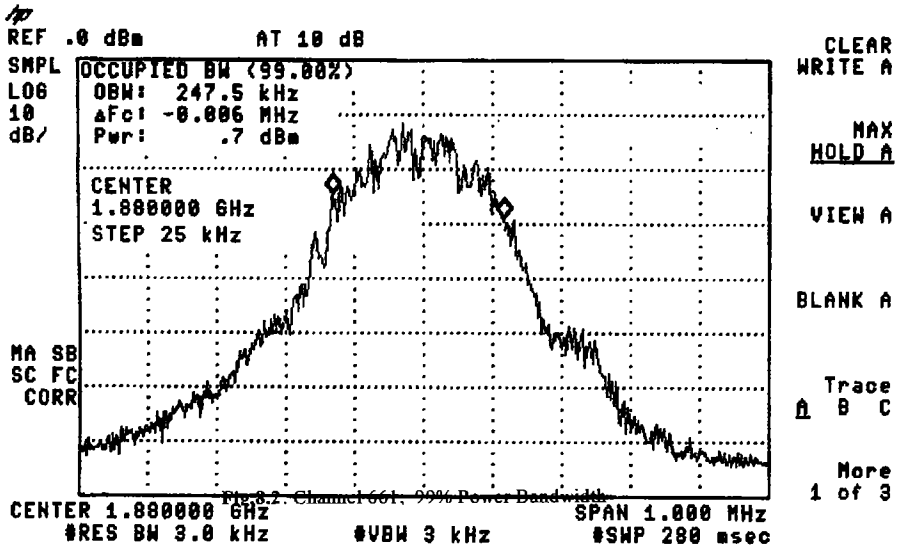

Fig.8.2: Channel 661, 99% Power Bandwidth

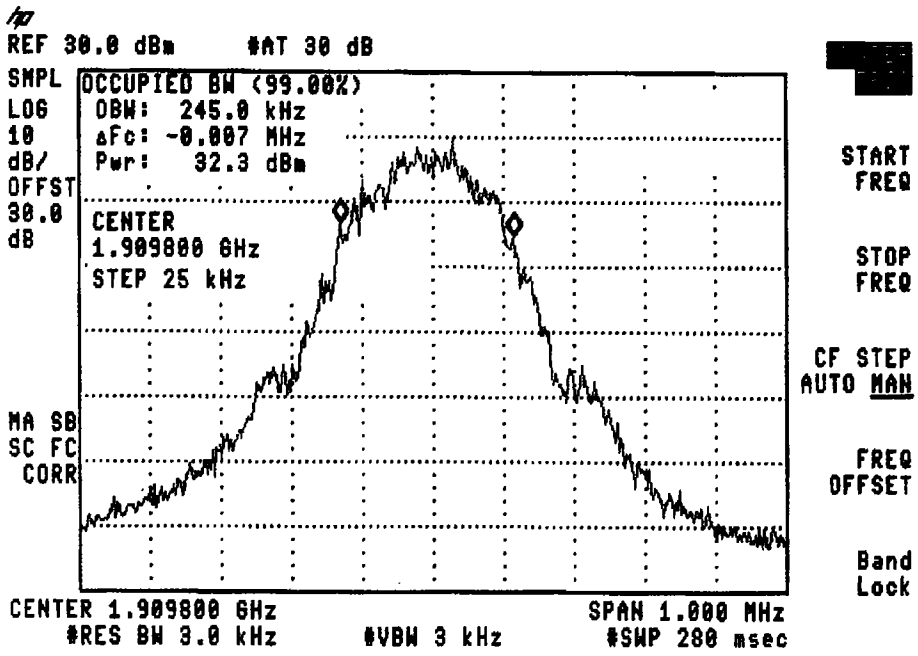

Fig.8.3: Channel 810, 99% Power Bandwidth

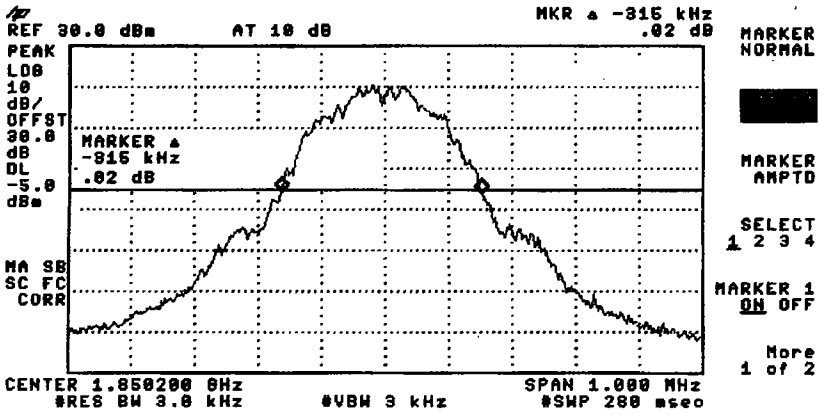

Fig.8.4: Channel 512, -26dBC Bandwidth

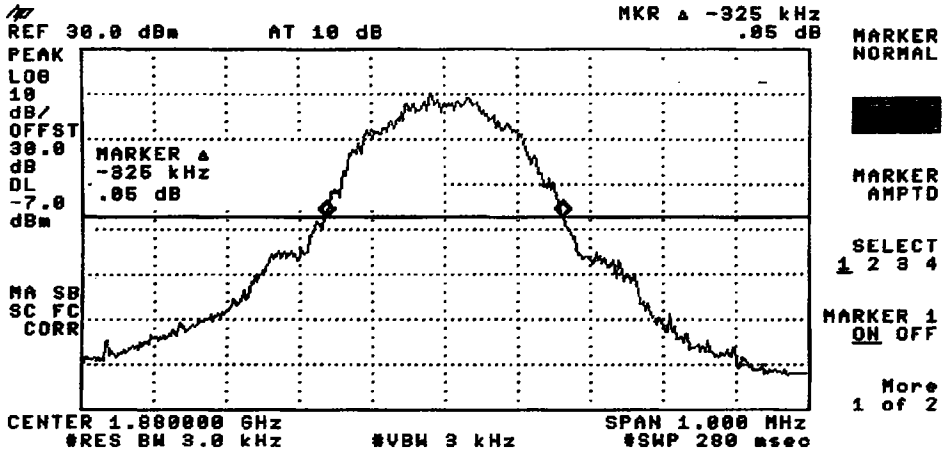

Fig.8.5: Channel 661, -26dBC Bandwidth

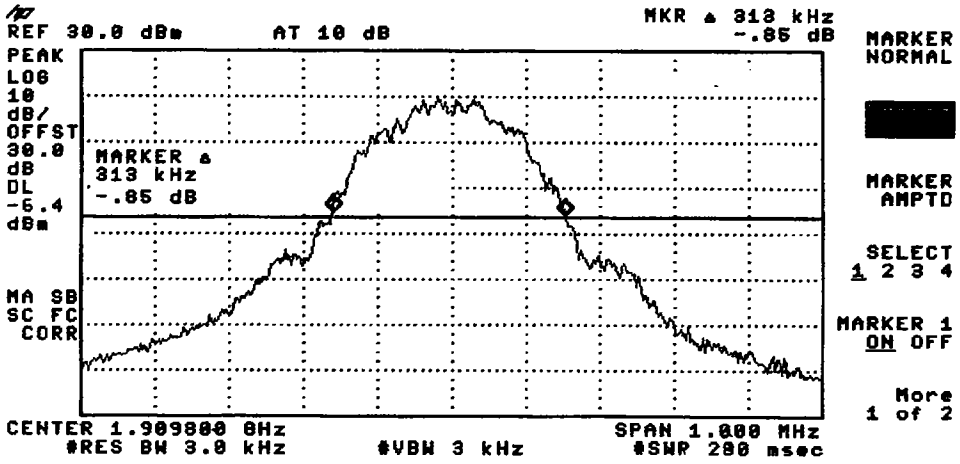

Fig.8.6: Channel 810, -26dBC Bandwidth

Conducted Spurious Emissions

Exhibit Summary:

EXHIBIT 6E contains measurement data pertaining to conducted spurious emissions. As indicated on the chart, some spur levels were reported using a “Brickwall Filter” technique. This measurement method is intended to overcome limitations caused by non-ideal filter roll-off within the measurement equipment (spectrum analyzer). For each spur level reported using this technique, the associated level measured using the FCC method per Part 24.238 is reported in the included table. In addition, at spurs located 1 MHz away from the band edge, the level recorded using the 1% occupied bandwidth or greater requirement is also listed.

Contents:

Measurement Procedure:

The following steps outline the procedure used to measure the conducted emissions from the mobile station.

1. Determine frequency range for measurements: From CFR 2.1057 the spectrum should be
   investigated from the lowest radio frequency generated in the equipment up to at least the 10th harmonic of the carrier frequency. For the mobile station equipment tested, this equates to a frequency range of 13 MHz to 19.1 GHz, data taken from 10 MHz to 20 GHz.
2. Determine mobile station transmit frequencies: Table 9.1 below outlines the band edge
   frequencies pertinent to conducted emissions testing.

USPCS Channel	Transmitter Frequency
512	1850.2 MHz
810	1909.8 MHz

Table 9.1: Transmit frequencies for conducted emissions testing.

The carrier frequencies for each of the 200 kHz wide channels of the USPCS transmit band (1850 to 1910 MHz) begins with the first channel 0.2 MHz higher than the lower band edge, at 1850.2 MHz for channel number 512, and ends with the last channel 0.2 MHz lower than the upper band edge, at 1909.8 MHz for channel number 810.

3. Measure attenuator and cable losses:

a) Connect a TX bandpass filter and nominal 20 dB attenuator together, and place cables at input of the filter and output of the attenuator.
b) Using a signal generator and power meter, calculate the loss through the filter, attenuator and cables at
   each of the frequencies listed in Table 9.1. Use these measurements to properly set the spectrum analyzer amplitude offset.
c) Repeat the measurements on the cables and filter only, without the attenuator. This provides the
   spectrum analyzer offset for the minimum power case.

4. Connect test set-up:

   a) If measuring at max. mobile station output power (Power Step 0, +30 dBm nominal, for the band edge frequencies of interest), connect the filter, attenuator and cable network measured in 3. above from the output of the mobile station to the input of the spectrum analyzer.

b) If measuring at min. output power (Power Step 15, 0 dBm nominal) connect the filter and cable network (no attenuator) measured in 3. above from the output of the mobile station to the input of the spectrum analyzer.

5. Power up Mobile Station:

a) Tune to desired frequency.
b) Set desired output power.
c) Modulate carrier with the mobile station's internal pseudo random data sequence.

6. Set appropriate spectrum analyzer offset level to account for input attenuator using values measured in 3. above.

7. Measure spectrum:

a) In the 1st 1 MHz band outside the band edge nearest the channel of interest use a 3 kHz res. BW.
b) In the 2nd and 3rd 1 MHz bands outside the band edge nearest the channel of interest use the brickwall technique with 3 kHz res. BW and integrate the power in the two 1 MHz bands. The 3 MHz cut-off was determined from the spectrum analyzer filter plot shown on page 12. At 3 MHz from the carrier, the filter attenuation is sufficient enough to guarantee against non-compliance readings.
c) From 3 MHz outside the band edge nearest the channel of interest to the End use 1 MHz res. BW.

8. Repeat 5. through 7. for each carrier frequency listed in Table 9.1.

9. Repeat procedure for both min. and max. power settings.

Measurement Limit:

Sec. 24.238 Emission Limits.

(a) On any frequency outside frequency band of the USPCS spectrum, the power of any emission shall be attenuated below the transmitter power (P, in Watts) by at least 43+10Log(P) dB. For all power levels +30 dBm to 0 dBm, this becomes a constant specification limit of -13 dBm.

Measurement Results:

Conducted Emissions Measurements were made only at the extreme upper and lower carrier frequencies of the USPCS band. It was decided that measurements at these block edge frequencies would be sufficient to demonstrate compliance with emissions limits. The equipment must still, however, meet emissions requirements at all frequencies over which the equipment is designed to operate and it is the manufacturer's responsibility to verify this.

Measurement results are listed below in Tables 9.2 and 9.3 and Figures 9.1 through 9.4. In each of the following charts the emission level reported is the level of the spurious emission of largest magnitude found within the specified frequency window whether the mobile station was transmitting at either high or low power.

Carrier: 1850.2 MHz (Channel 512)

Frequency	Emissions Level	Method Used
10 MHz - 1846 MHz	-36 dBm @ 1846 MHz	FCC
1846 MHz - 1847 MHz	-15.73 dBm @ 1847 MHz See Figure 9.1	FCC
1847 MHz - 1848 MHz	-29.5 dBm @ 1847.9 MHz	Brickwall Filter
1848 MHz - 1849 MHz	-25.4 dBm @ 1848.8 MHz	Brickwall Filter
1849 MHz - 1850 MHz	-14.82 dBm @ 1849.9 MHz See Figure 9.2	FCC
1910 MHz - 20 GHz	-31 dBm @ 3700MHz	FCC

Table 9.2: Conducted emissions results for 1850.2 MHz carrier.

Carrier: 1909.8 MHz (Channel 810)

Frequency	Emissions Level	Method Used
10 MHz - 1850MHz	-35 dBm @ 151MHz	FCC
1910 MHz - 1911 MHz	-17.66 dBm @ 1910 MHz See Figure 9.3	FCC
1911 MHz - 1912 MHz	-27.8 dBm @ 1911.7 MHz	Brickwall Filter
1912 MHz - 1913 MHz	-29 dBm @ 1912.8 MHz	Brickwall Filter
1913 MHz - 1914 MHz	-13.29 dBm @ 1913 MHz See Figure 9.4	FCC
1914 MHz - 20 GHz	-30.5 dBm @3819.7MHz	FCC

Table 9.3: Conducted emissions results for 1909.8 MHz carrier.

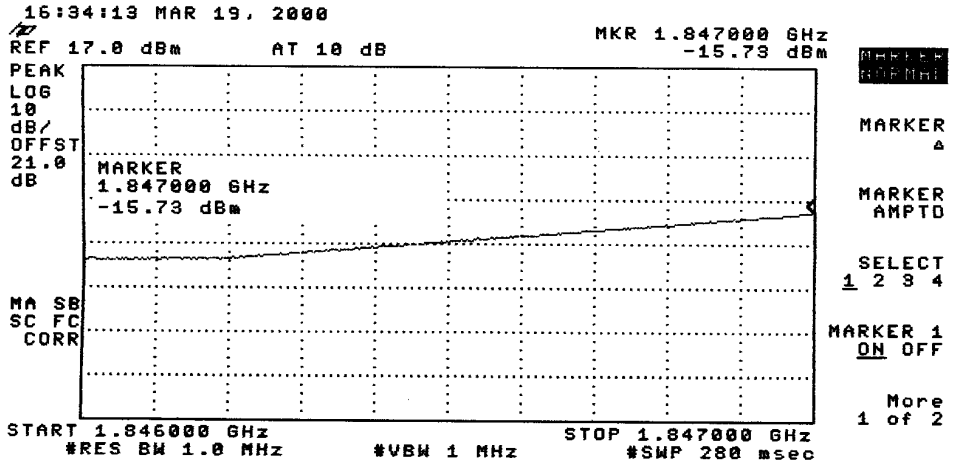

Fig.9.1: Carrier 1850.2MHz, Spectrum 1846 to 1847MHz

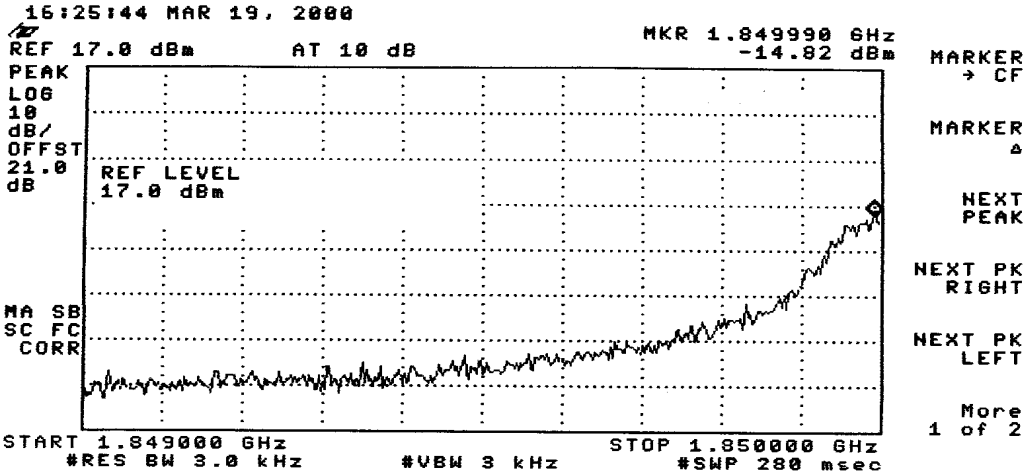

Fig.9.2: Carrier 1850.2MHz, Spectrum 1849 to 1850 MHz

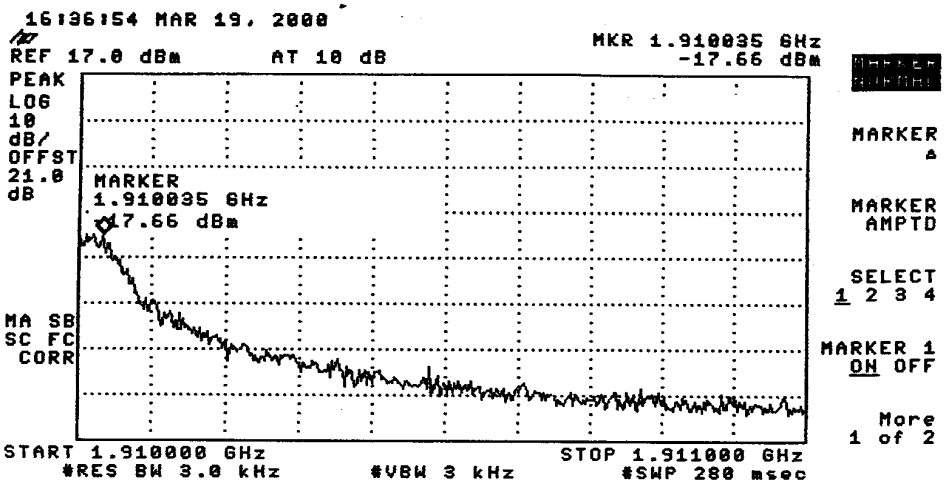

Fig.9.3: Carrier 1909.8, Spectrum 1910 MHz to 1911 MHz

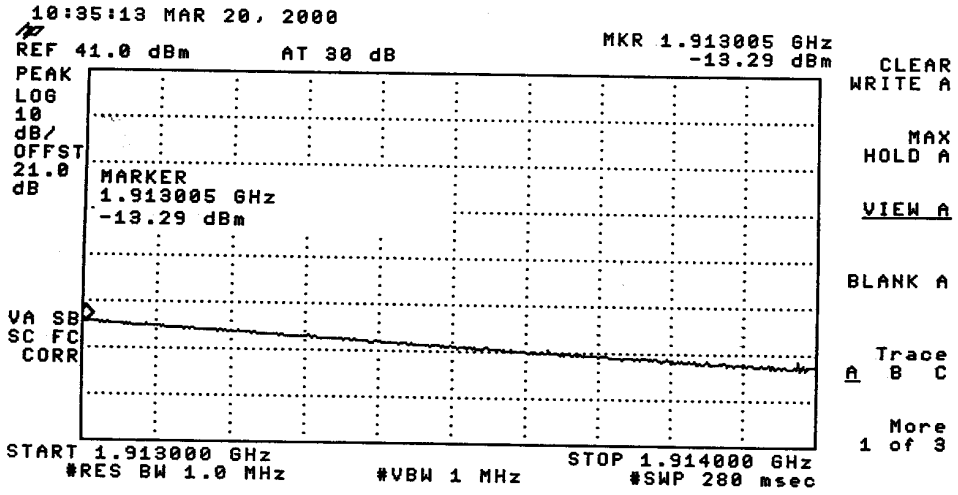

Fig.9.4: Carrier 1909.8, Spectrum 1913 MHz to 1914 MHz

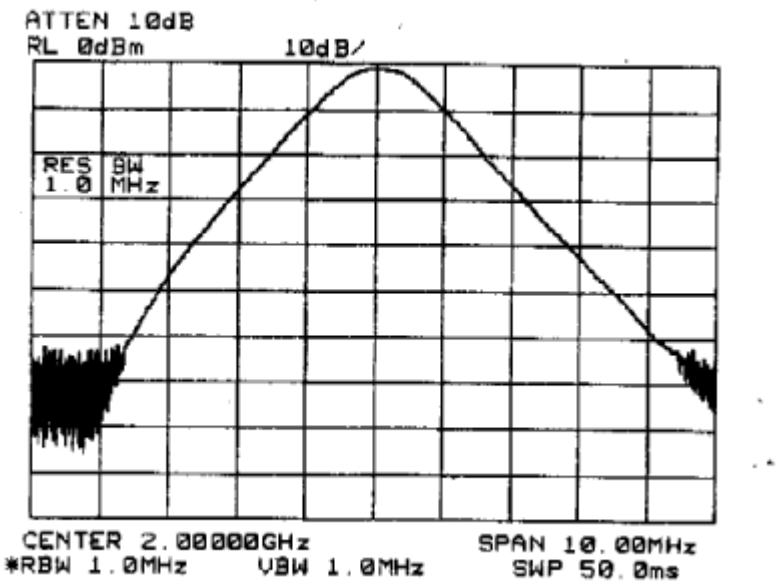

Fig.9.5: Spectrum Analyzer 1 MHZ Resolution Bandwidth Filter Response