6b.2.1 MOTOtalk ISM Band Carrier Separation between Hopsets – Pursuant 47 CRF, Part 15.247(a) (1)

The separation between frequencies is measured to be 501 kHz.

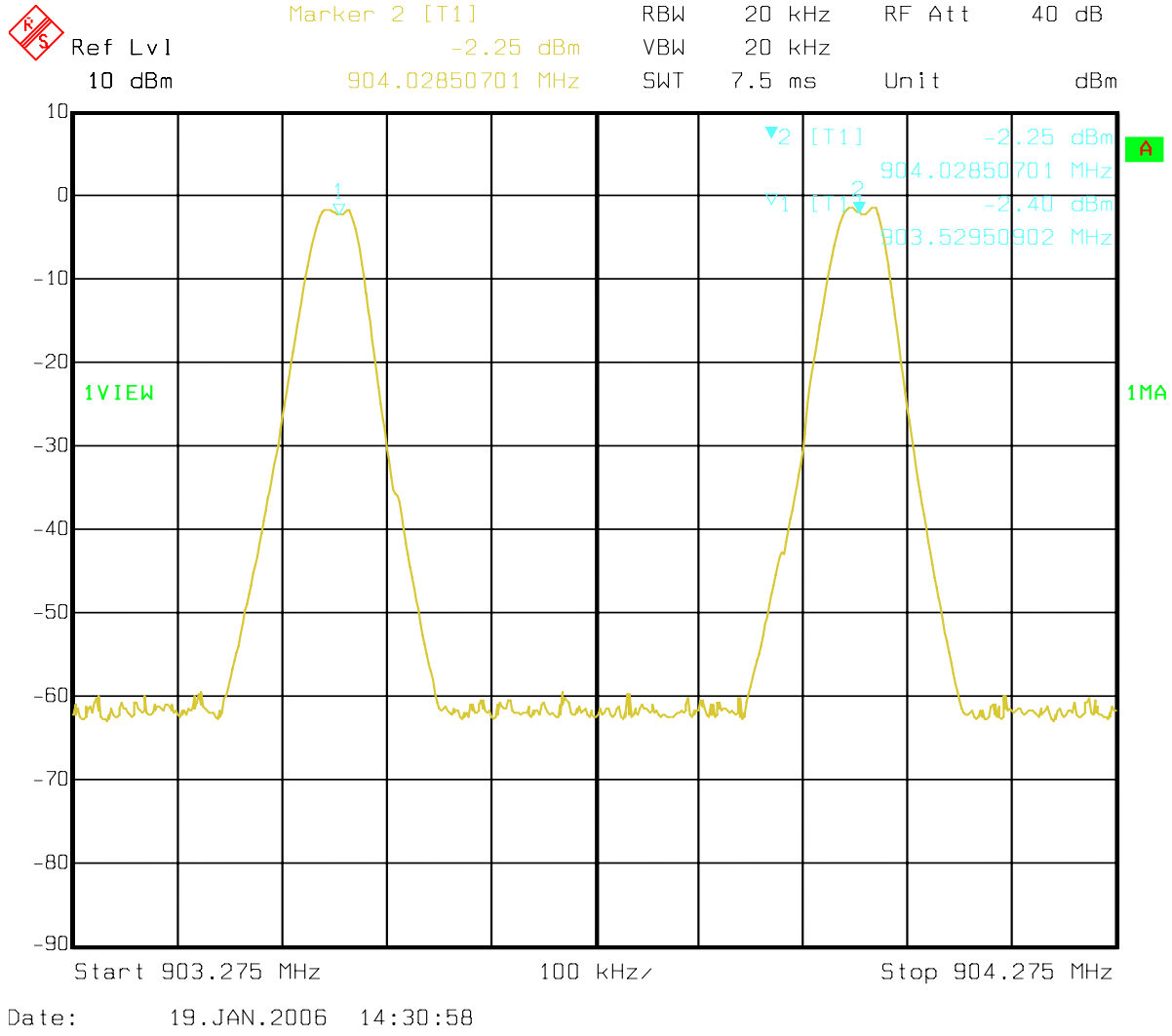

Figure 6b-2.1 Plot of MOTOtalk ISM Band adjacent channel separation within a hopset

6b.2.2 MOTOtalk ISM Band Hopping Bandwidth between Hopsets –Pursuant 47 CRF, Part 15.247 (a) (1)(i)

Figure 6b-2.2.1shows the plot of the 8FSK, traffic channel MOTOTalk ISM Band spectrum with its 20dB bandwidth of 27.26 kHz at 902.525 MHz.

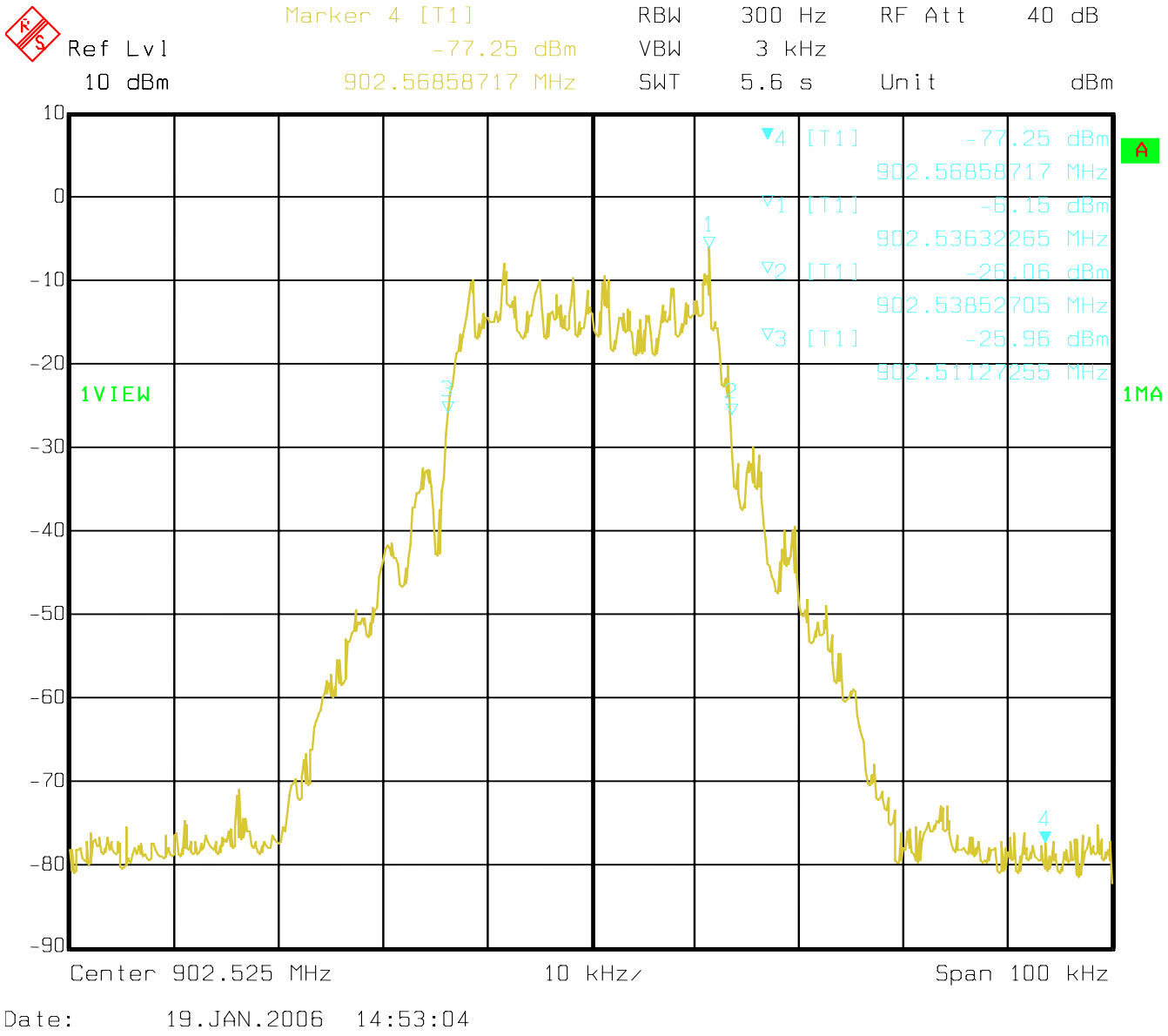

Figure 6b-2.2.1 MOTOtalk 8-FSK traffic channel Occupied bandwidth at 902.525 MHz

Figure 6b-2.2.2 shows the adjacent hopset channel separation between hopset1 @ 902.525 MHz and hopset2 @ 902.575 MHz as 50 kHz.

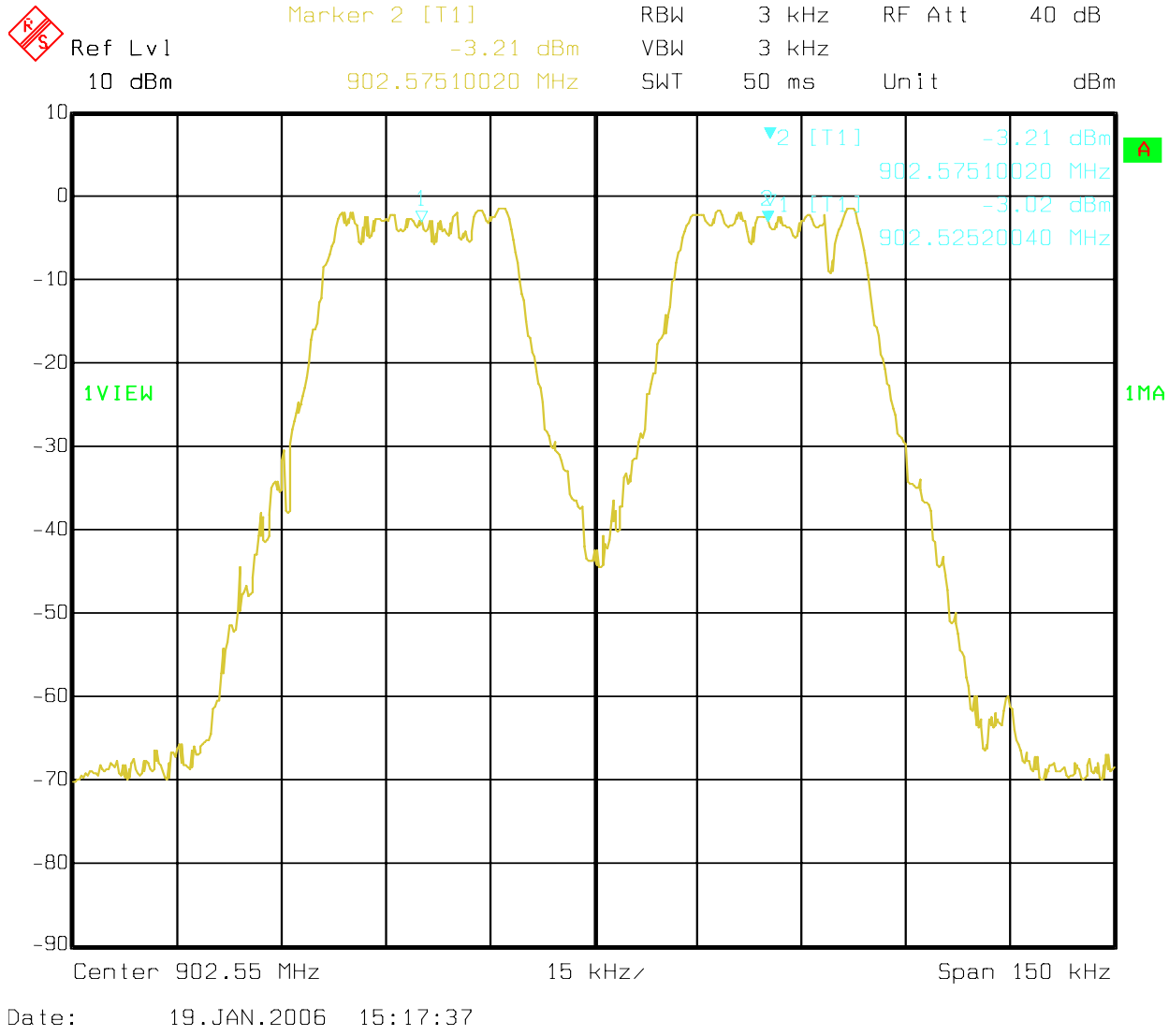

Figure 6b-2.2.2 MOTOtalk Adjacent hop set separation between hopset1 @ 902.525 MHz and hopset2 @ 902.575 MHz

Figure 6b-2.2.3 shows that, in any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator is at least 20dB (measured value here is 64.8dB) below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.

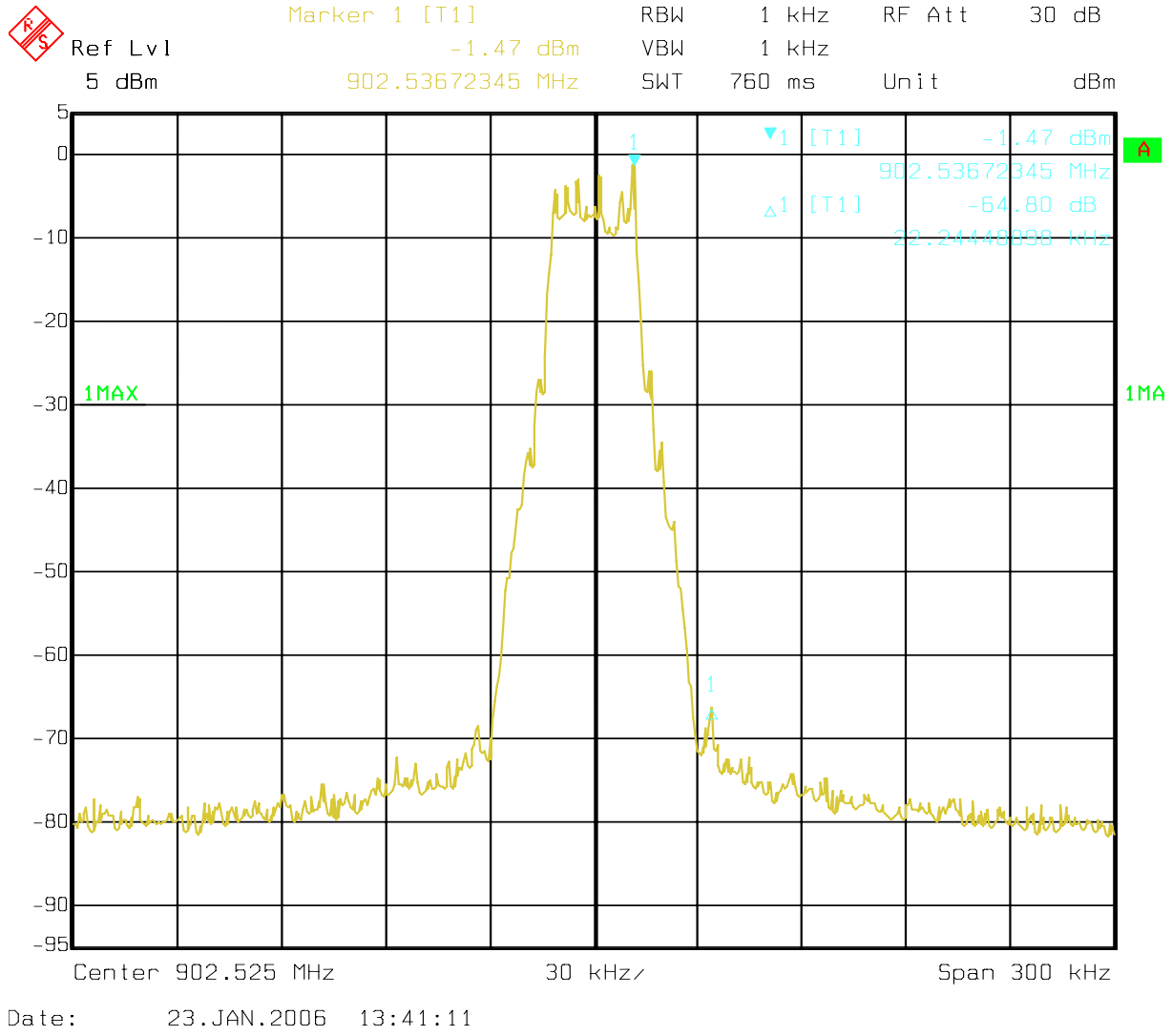

Figure 6b-2.2.3 MOTOtalk Band Edge Emissions measurement at 902.525 MHz

Figure 6b-2.2.4 shows the plot of the 8FSK, traffic channel MOTOTalk ISM Band spectrum with its 20dB bandwidth of 27.05 kHz at 927.475 MHz.

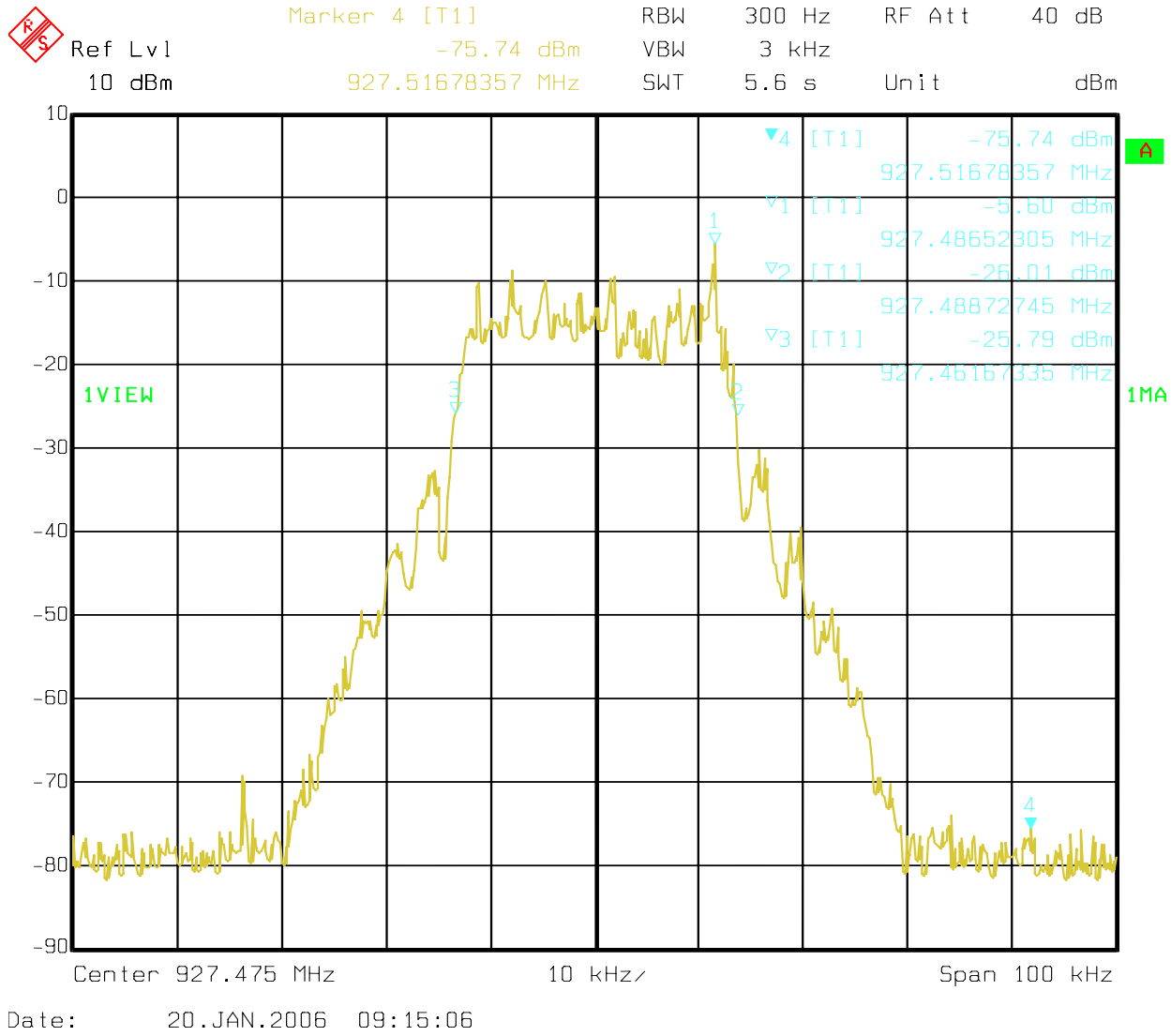

Figure 6b-2.2.4 MOTOtalk 8-FSK traffic channel Occupied bandwidth at 927.475 MHz

Figure 6b-2.2.5 shows the adjacent hopset channel separation between hopset9 @ 927.475 MHz and hopset10 @ 927.525 MHz as 50 kHz.

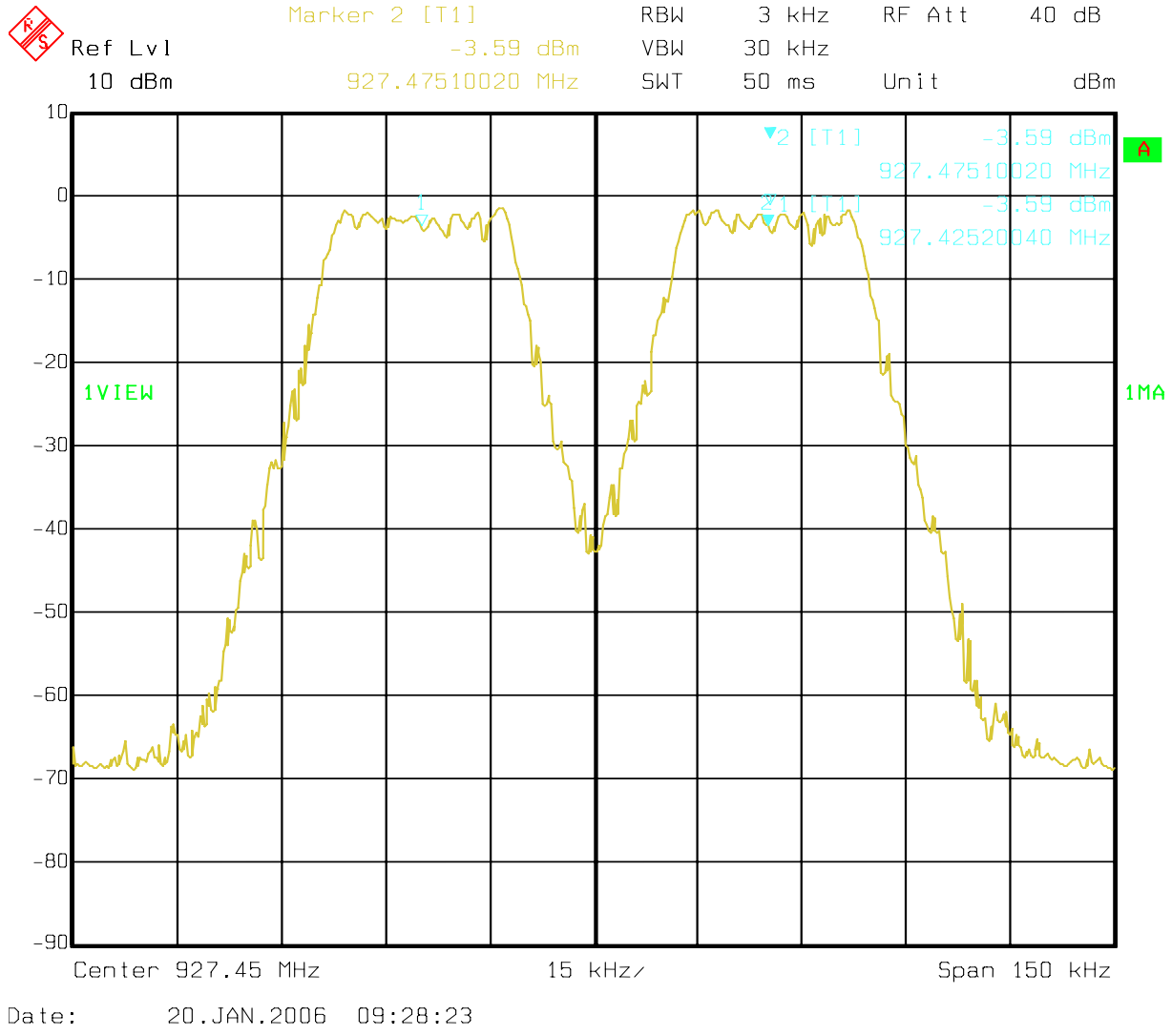

Figure 6b-2.2.5 MOTOtalk Adjacent hopset separation between hopset9 @ 927.475 MHz and hopset10 @ 927.525 MHz

Figure 6b-2.2.6 shows that, in any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator is at least 20dB (measured value here is 64.97dB) below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power.

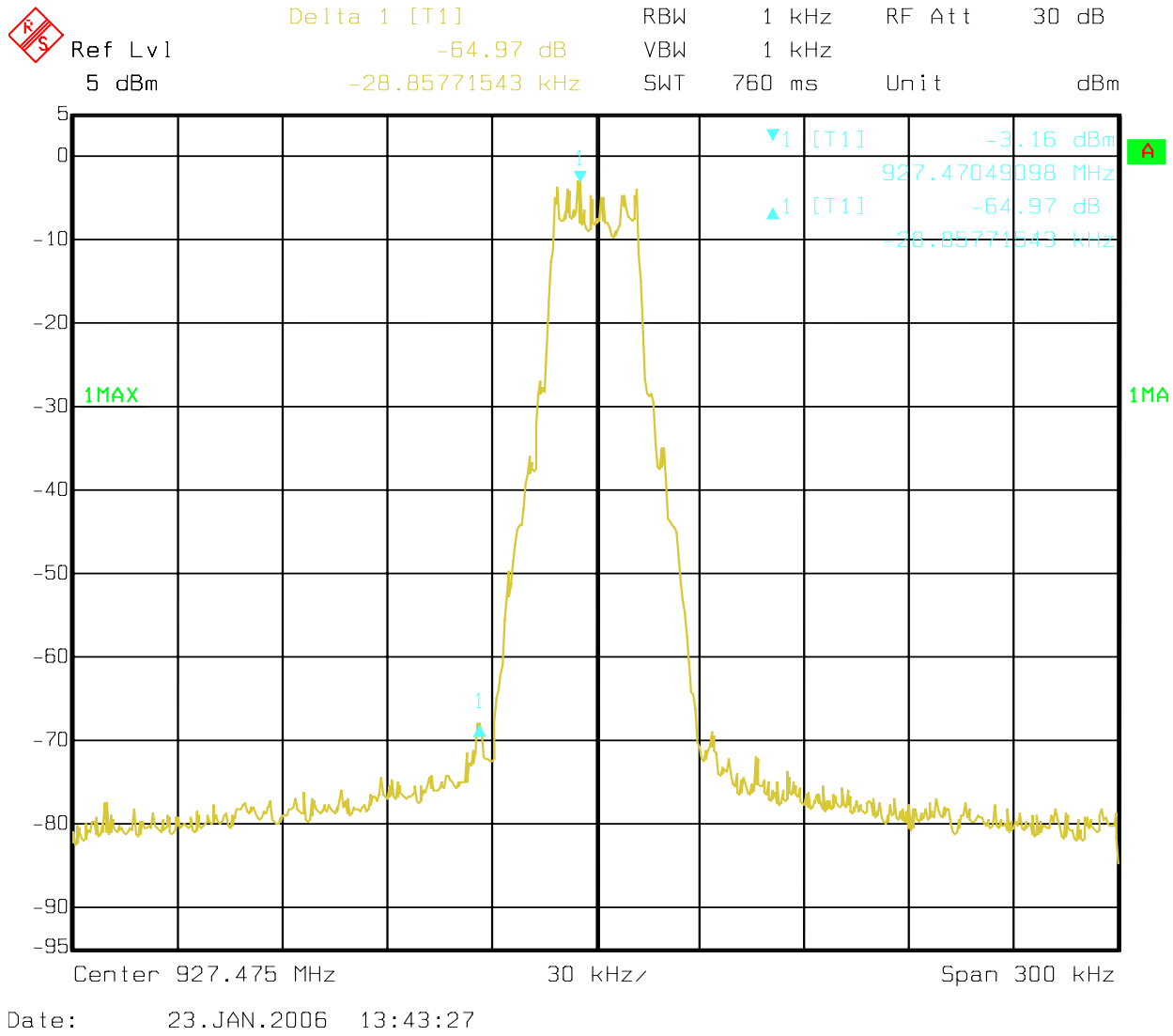

Figure 6b-2.2.6 Mototalk Band Edge Emissions measurement at 927.475 MHz

6b.2.3 MOTOtalk ISM Band Receiver Bandwidth – Pursuant 47 CRF, Part 15.247(a) (1)

The receiver bandwidth is limited by a 2-pole analog filter and digital processing that includes a 5th order sin filter, IIR high-pass programmable bandwidth filter, and a 15th order programmable selectivity filter. The composite 3dB bandwidth is 28 kHz.

6b.2.4 MOTOtalk ISM Band Number of Hopping Frequencies – Pursuant 47 CRF, 15.247(a)(1)(i)

The MOTOTalk ISM Band transmitter uses 50 frequencies within each selected hopset.

Hopset	1st Frequency (MHz)	Progression (MHz)	Last (50th) Frequency (MHz)
1	902.525	903.025, 903.525, 904.025...	927.025
2	902.575	903.075, 903.575, 904.075...	927.075
3	902.625	903.125, 903.625, 904.125...	927.125
4	902.675	903.175, 903.675, 904.175...	927.175
5	902.725	903.225, 903.725, 904.225...	927.225
6	902.775	903.275, 903.775, 904.275...	927.275
7	902.825	903.325, 903.825, 904.325...	927.325
8	902.875	903.375, 903.875, 904.375...	927.375
9	902.925	903.425, 903.925, 904.425...	927.425
10	902.975	903.475, 903.975, 904.475...	927.475

Table 6b-2.4 MOTOtalk ISM Band Transmitter Frequency Hopsets

6b.2.5 MOTOtalk ISM Band Average Time of Occupancy – Pursuant 47 CFR, Part 15.247(a) (1)(i)

Worst case scenario (continuous transmission) is as follows:
85.65 ms bursts at 90 ms intervals (hop intervals)
20 seconds per window / 0.09 seconds per hop = 222.22 hops per window
222.22 hops / 50 carriers = 4.444 bursts per carrier window
4.444 bursts * 0.08565 seconds per burst = 0.38 seconds (less than the 0.4 second requirement)

The calculations show the average time of occupancy of 0.4 seconds or less. Verification of burst is shown in the Figure below.

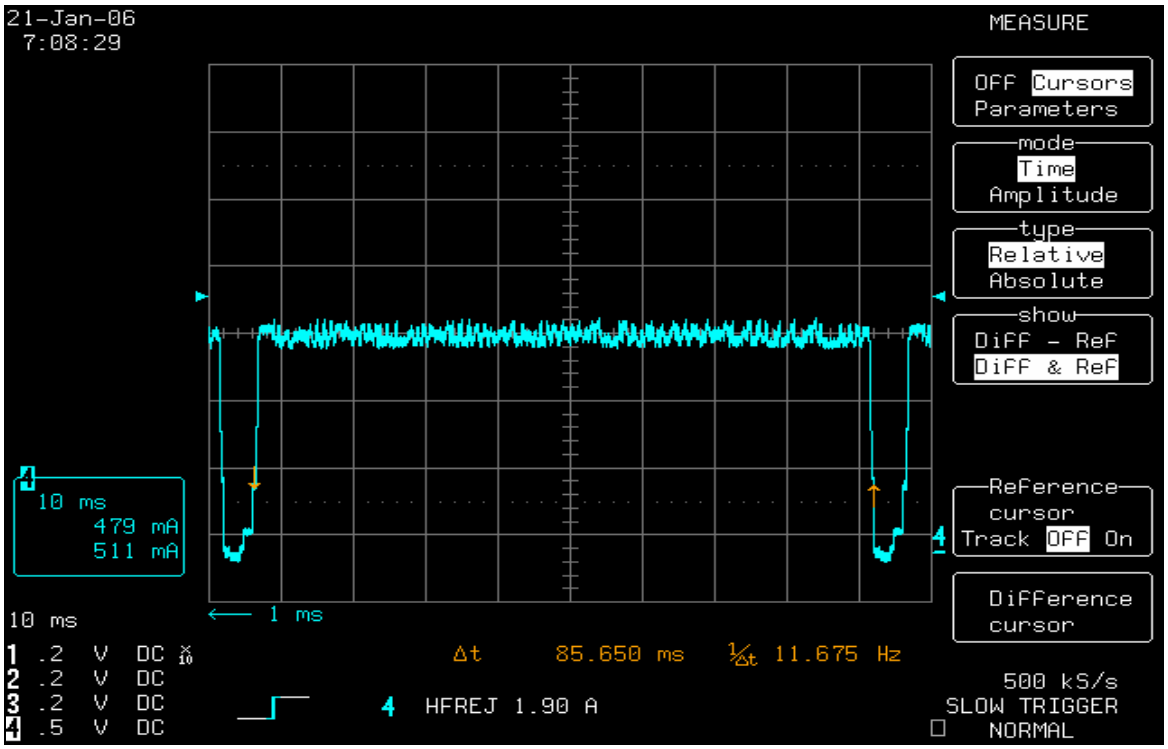

Figure 6b-2.5 MOTOtalk ISM Band Average Measured Time of Occupancy

6b.2.6 MOTOtalk ISM Band Equal Distribution of Hopping Frequencies for Continuous Transmission – Pursuant 47 CFR, Part 15.247(a)(1)(i) & 15.247(g)

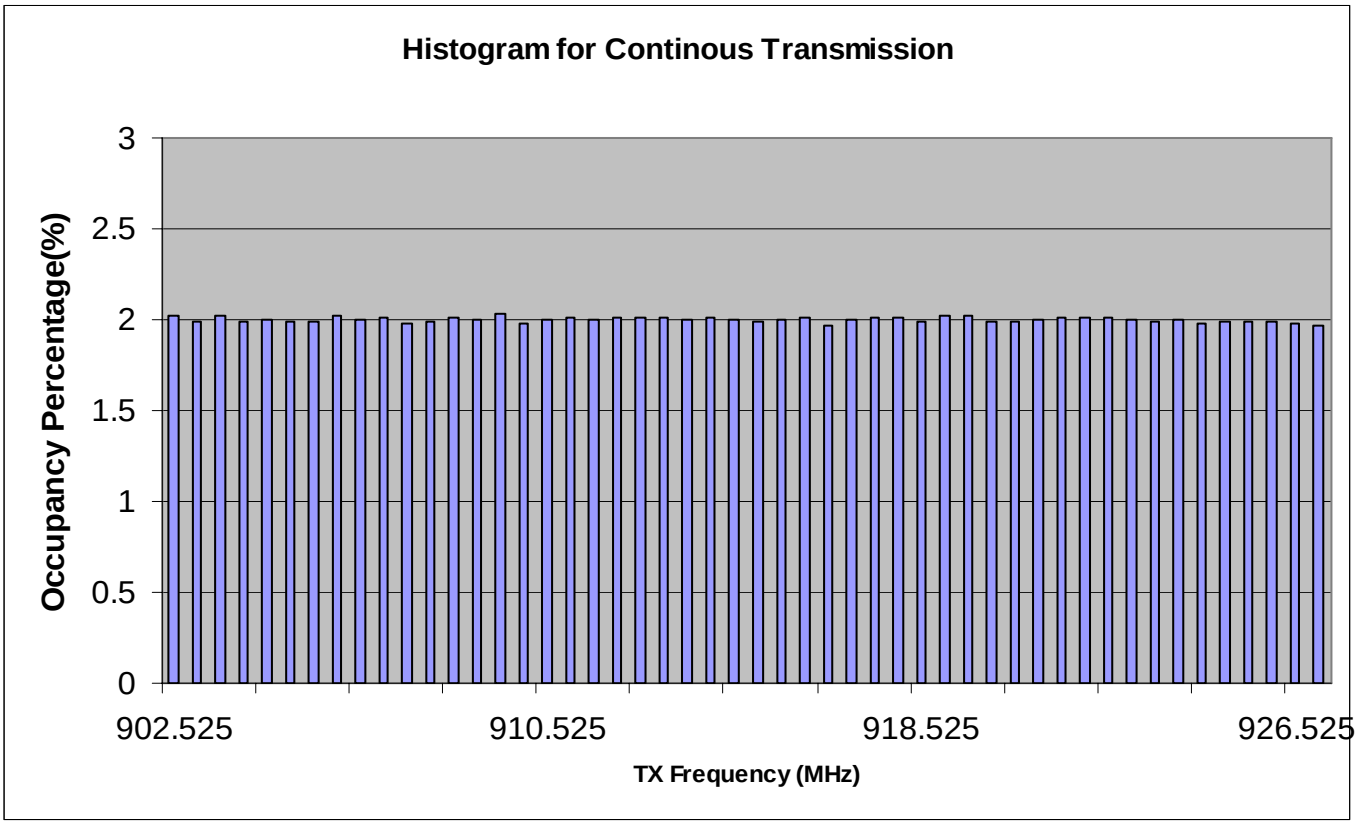

Figure 6b-2.6 Histogram for MOTOtalk ISM Band Continuous Transmission

6b.2.7 MOTOtalk ISM Band Equal Distribution of Hopping Frequencies for Discontinuous Transmission- Pursuant 47 CFR, Part 15.247(a)(1)(i) & 15.247(g)

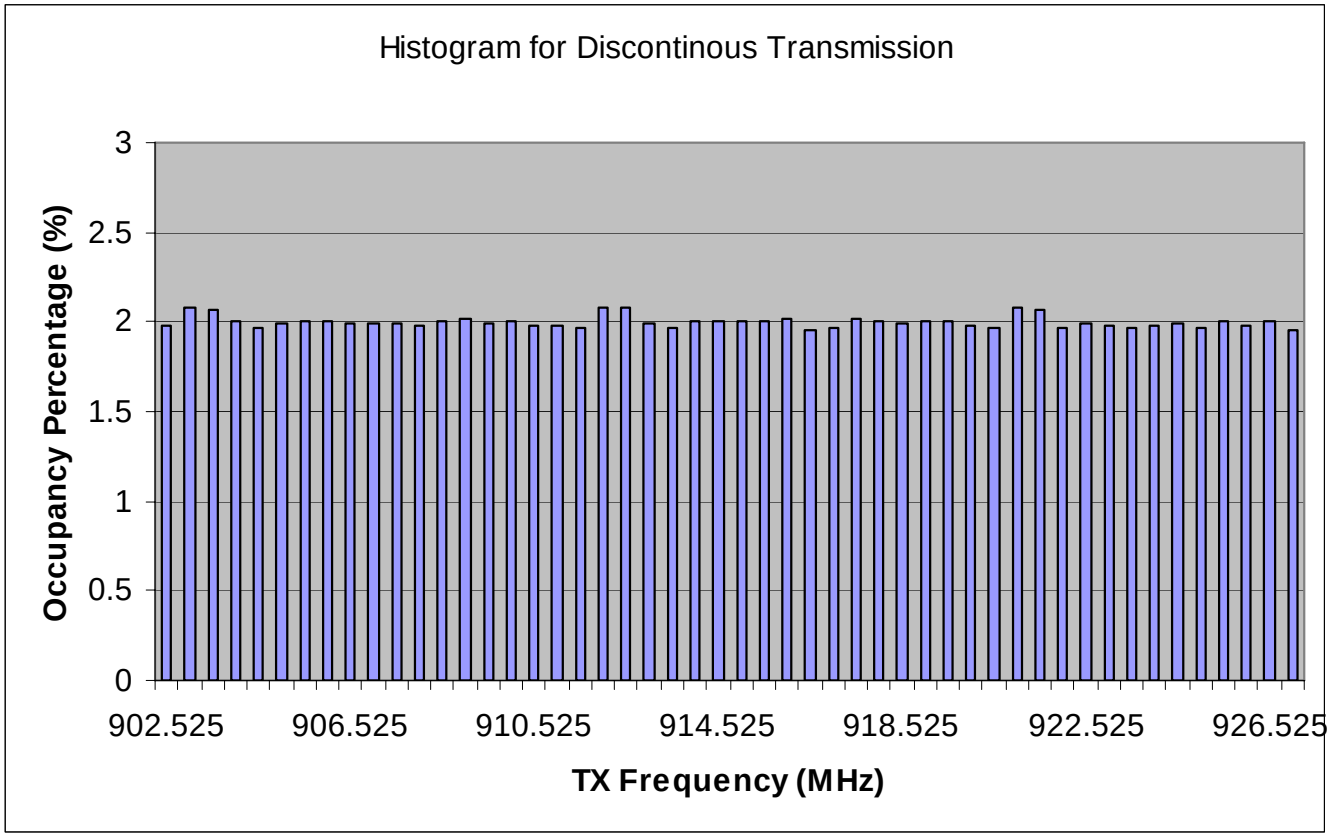

Figure 6b-2.7 Histogram for MOTOtalk ISM Band Discontinuous Transmission