Applicant: Motorola

Equipment type: ABZ89FC5765

BANDWIDTH CALCULATIONS

The subject transmitter uses FM carrier with 4 level and 2 level FSK at 6400, 3200 and 1600 bps. The Bandwidth calculation for each of the case for this permissive change are as follows.

Emission Designator: **8K00F1D (6400 bps 4 level FSK, Dev. ± 2400 Hz)**

Max. Freq. Dev. = 2400 Hz

Mod. Freq. = Bits per sec / FSK level
= 6400/4
= 1600 Hz

BW = 2 x (Max. Freq. Dev + Mod. Freq.)
= 2 x (2400 Hz + 1600 Hz)
= 8000 Hz

Exhibit 3B

OCCUPIED BANDWIDTH

Modulation Type: 6400 and 3200 bps random 4 level FSK data (symbol deviation: +/- 2400 Hz for outer, +/- 800 Hz for inner).

Modulation Designator: 8K00F1D and 6K40F1D.

Channelization: 12.5 kHz

SPECIFICATION REQUIREMENT:

As per the FCC Rules Part 90.210(G) and 22.

Comparison of Simulated Signal Verses Actual Signal

FM Data Signal Simulator

Each of the four symbols that can be transmitted is generated with equal probability and are sent randomly. Therefore the data transmitted appears as random noise.

CALIBRATION STEPS:

The zero dB reference point for the Mask was set by integrating the total power in the 12.5 kHz bandwidth using the following steps

a. The Resolution Bandwidth of the Spectrum Analyzer was set to 100 kHz

b. The Sweep rate was set to 10 Sec

c. Measure the peak of the waveform.

d. Set the Reference value of the Spectrum Analyzer to the peak value measured in step c above.

** Reference Plot   Exhibits 10T to 10W

Applicant: Motorola Inc.   Equipment Type: ABZ89FC5765
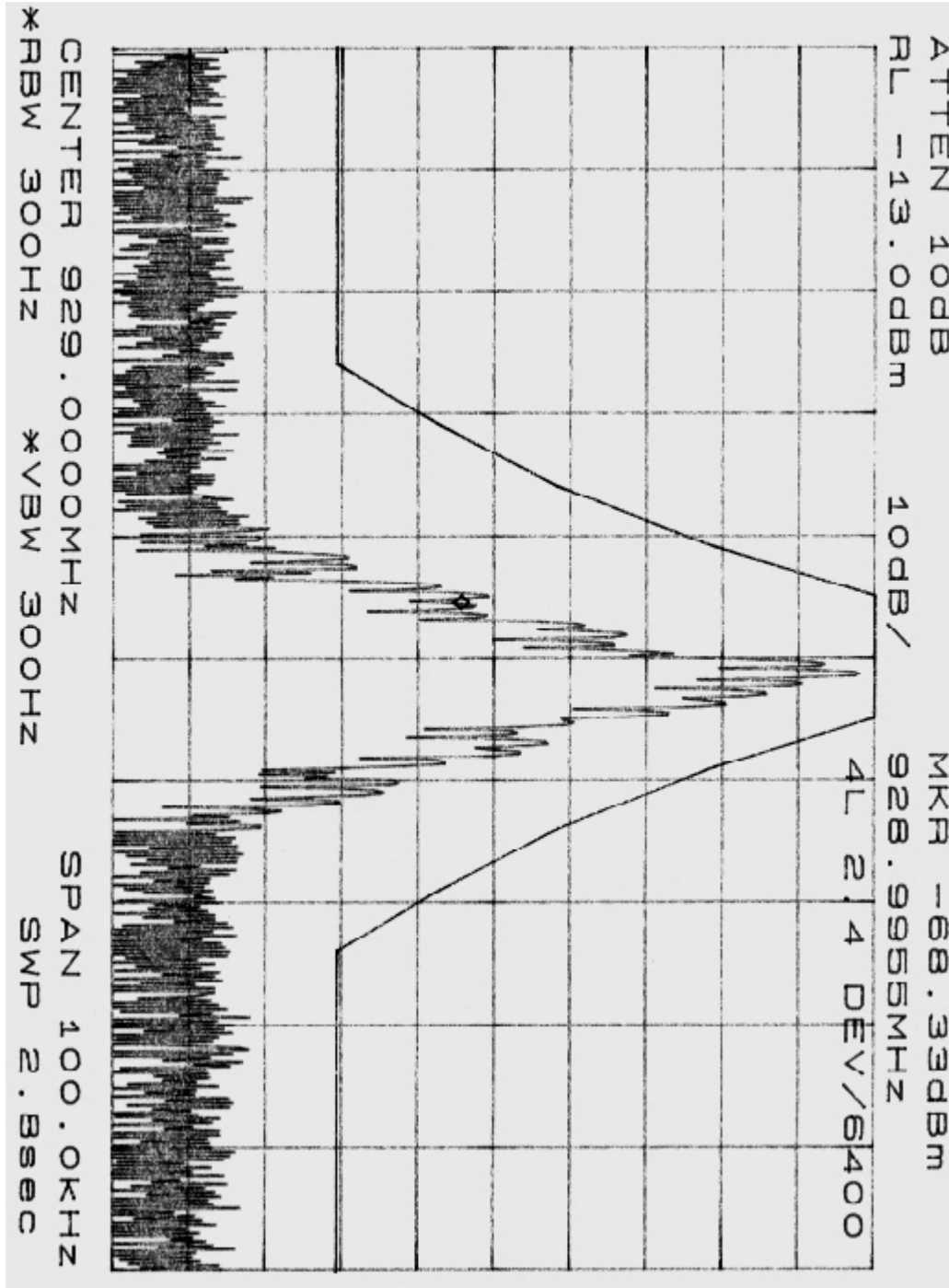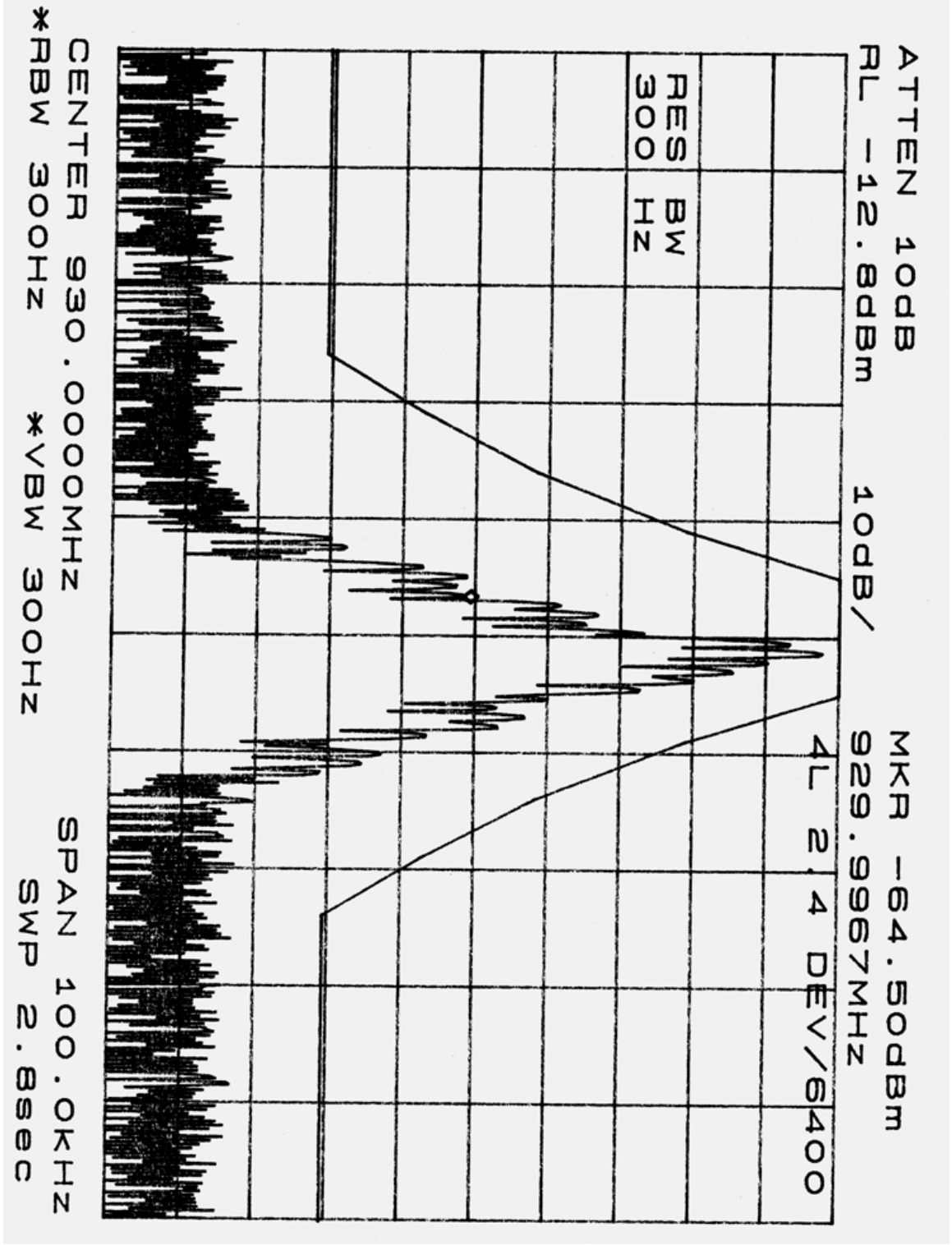

Exhibit 10 T
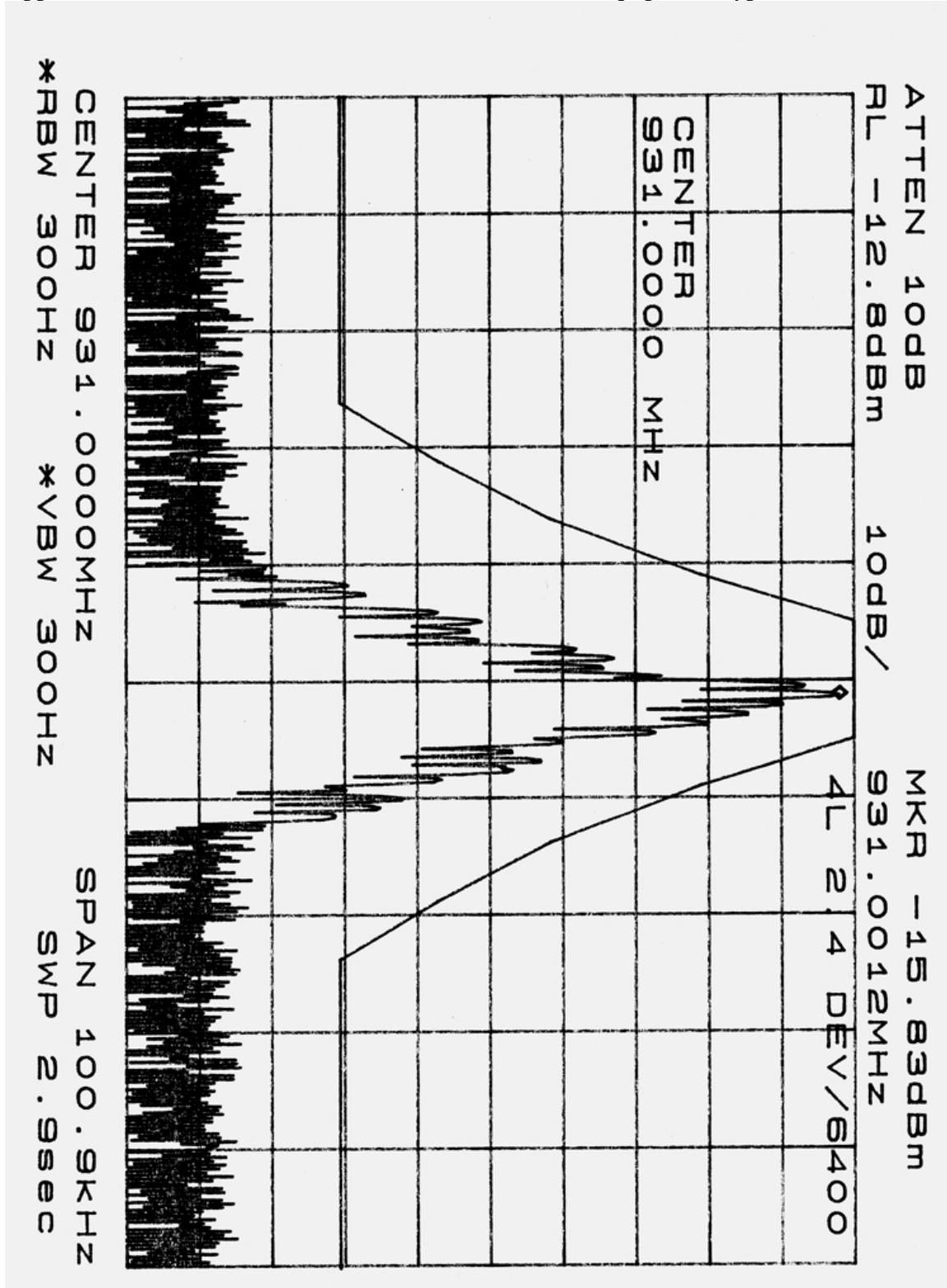
Exhibit 10 U

Exhibit 10 V

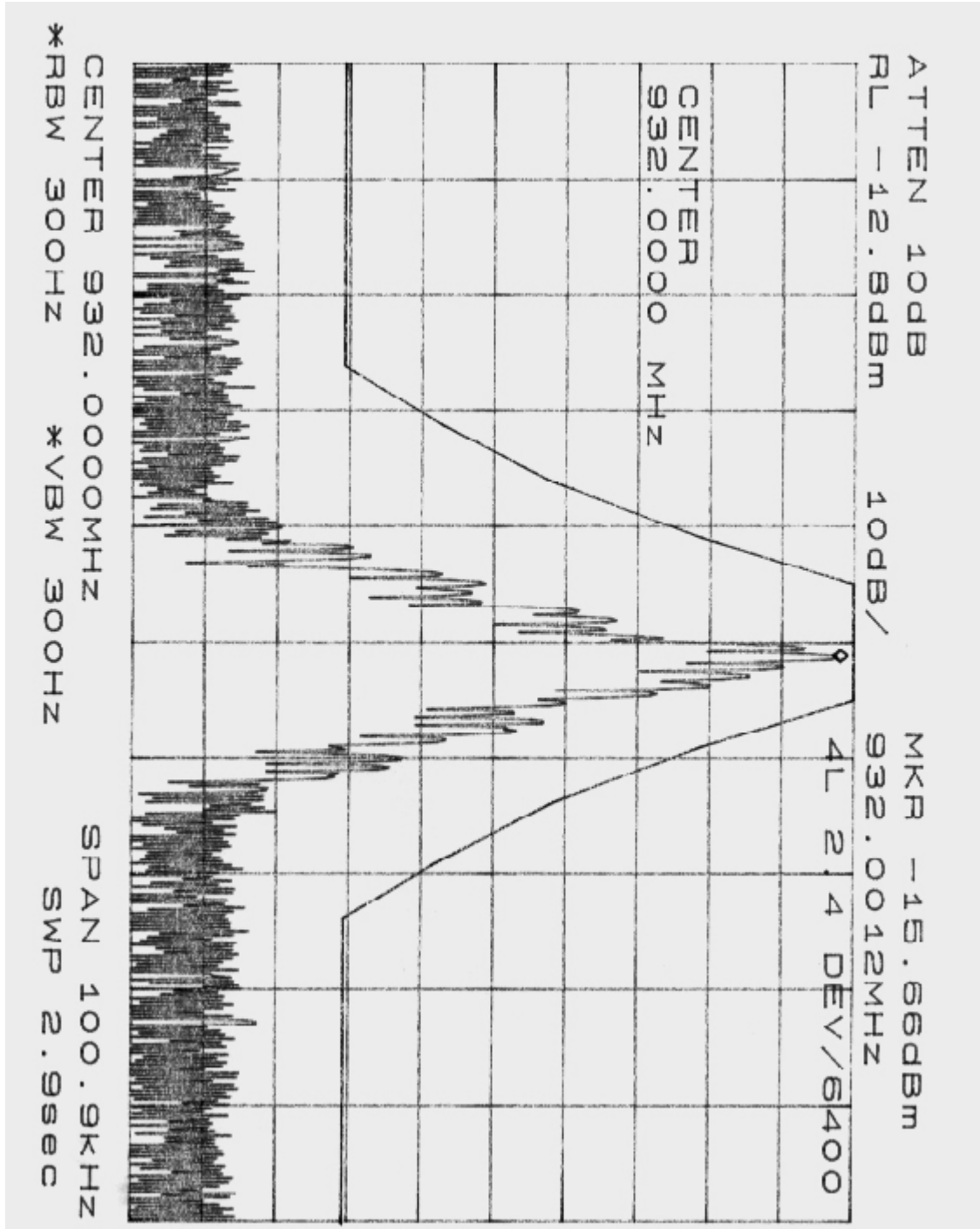Applicant: Motorola Inc.   Equipment Type: ABZ89FC5765

Exhibit 10 W