Necessary Bandwidth Calculation:
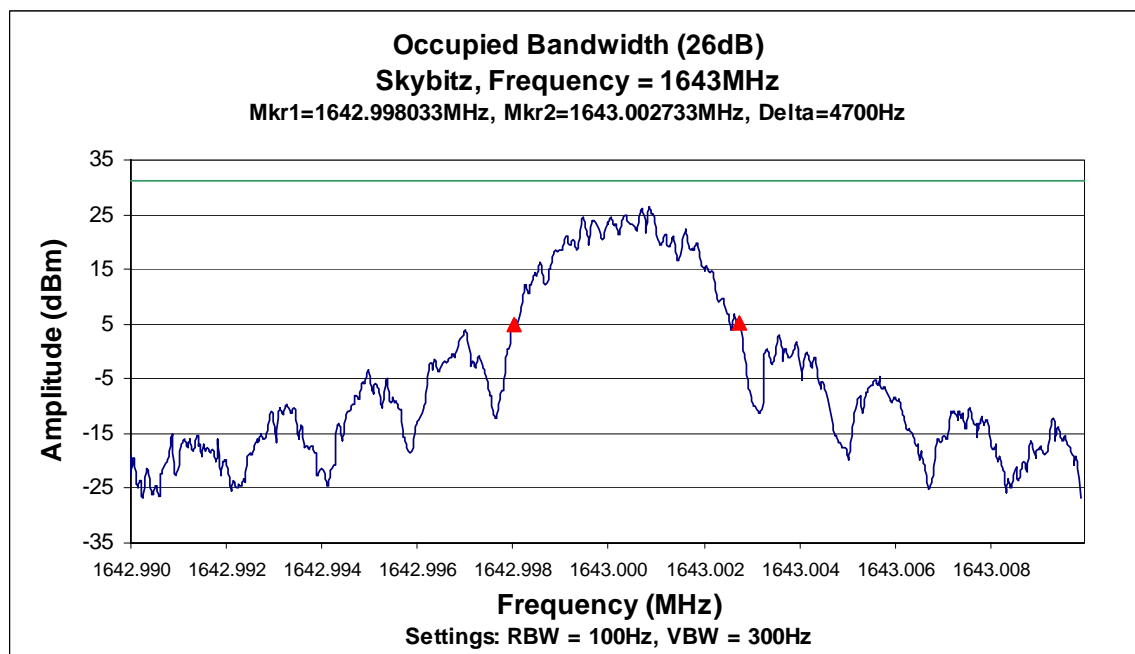
The necessary bandwidth calculation for the Skybitz signal is based on the following:

Bn = R * (1.18) for a 2-ary MSK signal.

The bit rate is 3.6 kBps which puts the theoretical Necessary Bandwidth at:

Bn = 3.6 * 1.18 = 4.248kHz.

The occupied bandwidth measured at 26dB down from the peak transmit power is 4700Hz as shown.

Occupied Bandwidth (26dB)
Skybitz, Frequency = 1643MHz
Mkr1=1642.998033MHz, Mkr2=1643.002733MHz, Delta=4700Hz
Settings: RBW = 100Hz, VBW = 300Hz

The data signal transmitted is MSK. The emission designator requested is then:

FCC: 4K70G1D
IC: 4K70G1DCT (C for two state MSK and T for Time Division Multiplex)