

MITRE FCC Licensing Details Exhibit

REFERENCE NUMBER: 91168

The following experiment consists of transmitting a BPSK signal at Ku-Band from the following address:

The MITRE Corporation

7525 Colshire Dr

Mclean, VA 22102

North 38 55 24 West 77 12 21

Transmission Specifics

The transmit waveform is a BPSK signal (Pictured in Exhibit A) whose transmit bandwidth is approximately 5 MHz centered at 14.1295 GHz. The power at the transmitter is 4W or 36 dBm, the EIRP or the transmitter will be 79.61kW utilizing the dish seen below in Exhibit B.

Exhibit A: Spectral Shape

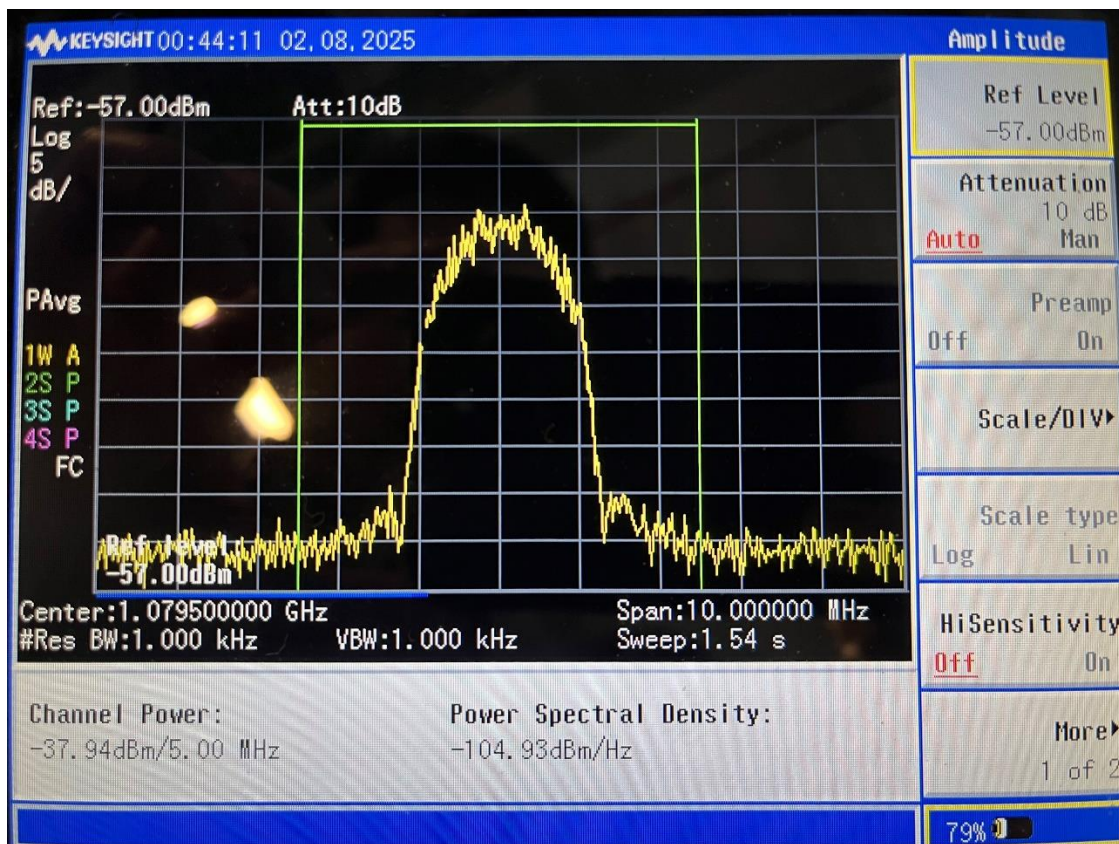


Figure 1. Shape of BPSK transmit waveform in spectral domain

- Transmit waveform is a BPSK signal with 5 MHz bandwidth centered at 14.1295 GHz

Exhibit B: CPI Sat Prodelin 1132



Figure 2. CPI Prodelin 1132 Dish placed atop MITRE at N 38 55 24, W 77 12 21

The above dish has a transmit gain of 43.0 dBi and an antenna beamwidth of 1.2 degrees.

Explanation/ Purpose of Operation

- We will be establishing a communication link to a commercial geostationary satellite at Ku-band. The link will be for the purposes of low-rate data transfer and signal phase and frequency measurement and validation. We are validating system hardware implementation and collecting phase measurement data. We are utilizing leased bandwidth and will be coordinating with SES Americom for alignment, cross-pole, and adjacent satellite interference.