

FCC Modification 0129-EX-ML-2012

The Prototype Radar Demonstration System (PRDS)

Purpose of Operation: Modification

Effective radiated power from the antenna (if pulsed emission, specify peak power):

The effective radiated power from the antenna, including antenna transmit gain and front-end losses, is 149.4MW (peak).

Frequency Tolerance:

Less than 0.001 %

List each type of emission separately for each frequency (basically list the emission designators)

21M8Q3N - 15μsec FM-Pulsed with a 10 MHz FM chirp, in the 9.3 – 10 GHz band

27M0Q3N - 1μsec FM-Pulsed with a 10 MHz FM chirp, in the 9.3 – 10 GHz band

424KP0N - 15μsec Unmodulated Pulsed, in the 9.3 – 10GHz band

6M36P0N - 1μsec Unmodulated Pulsed, in the 9.3 – 10 GHz band

21M9Q1N - 0.1μsec/sub-pulse (1.3μsec total pulse width) Phase Coded Pulsed with Barker code sequence, in the 9.3 – 10GHz band

The transmit waveform pulse sequence is programmable. Three waveform types can be commanded: FM-Pulsed, Non-FM Pulsed (Unmodulated) and Phase Coded Pulsed. The FM-pulses are modulated with a programmable 10 MHz chirp and programmable pulsewidth from 1μsec to 15μsec. The Non-FM Pulses also have a programmable pulsewidth from 1μs to 15μs. The Phase Coded Pulses use a Barker code with a pulsewidth of 0.1μsec per sub-pulse. All waveform types operate in the 9.3 to 10GHz band.

The max duty factor is 10%, and the max pulse repetition frequency is 70kHz for all waveform types.

During development, a partial subset of the antenna array may be used. However, the keep out zones for testing the partial subset of the antenna array will be the same as used for the full antenna array.