

MODULATING SIGNAL DESCRIPTION

For the TopoSAR L Airborne Radar System

The TopoSAR L airborne radar system transmits pulses of duration 5 to 10 microseconds at a pulse repetition frequency of about 17 kHz. The modulation on all pulses is identical, but the polarization alternates between horizontal and vertical. The transmitted signal occupies a bandwidth of 135 MHz. The modulating signal is linear-FM; during each pulse, the instantaneous frequency sweeps linearly from 1.2575 to 1.3925 GHz. There is no significant amplitude modulation, other than a slight tapering of the rising and falling edges of the pulses.