

# BROADSPEC UWB ANTENNA

Time Domain's BroadSpec™ is a planar elliptical dipole antenna designed to be used with the PulsON 400 (P400) ultra wideband module. It has a standard male SMA connector that allows it to be connected to one of the P400 module's two antenna ports.

## Performance Specification

Radiated Waveform: 500ps monocycle; 1 ns waveform

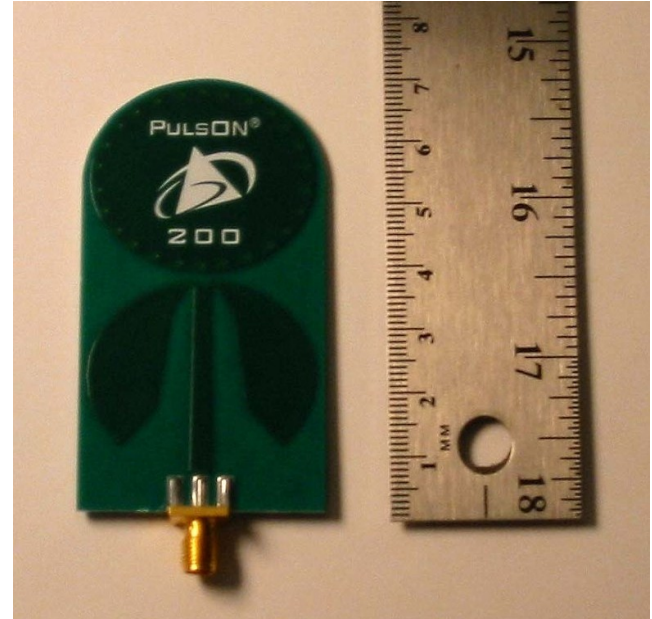
Pattern: Omni in azimuth to +/- 1.5dB

Polarization: VSWR ~ 1.75:1; S11 ~ -12 dB

Gain: Nominally ~3dBi

Phase Response: Linear

Efficiency: Nominally ~90%



## Antenna Beam Patterns

Figure 1 below shows the antenna azimuth beam pattern, and Figure 2 illustrates the elevation beam pattern. For the azimuth beam pattern, 0 and 180 degrees represent the flat face of the antenna ("boresight"), and 90 and 270 degrees represent the edge of the antenna. Note that when two radios at the same elevation are rotated so the flat sides of the antennas face one another, radio performance will be approximately 6 dB higher than when the antennas are edge-on.

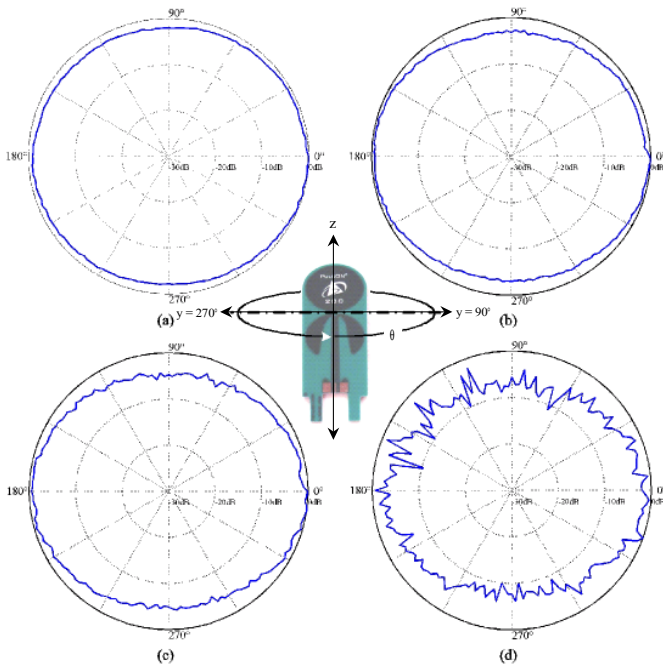


Fig. 1 Azimuth Beam Pattern for a) 3 GHz, b) 4 GHz, c) 5 GHz, and d) 6 GHz

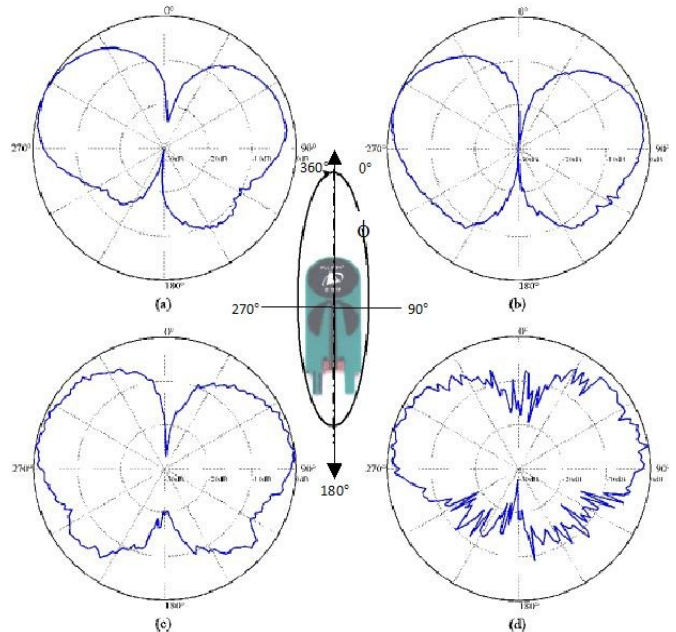


Fig. 2 Elevation Beam Pattern for a) 3 GHz, b) 4 GHz, c) 5 GHz, and d) 6 GHz

**FOR MORE INFORMATION**  
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