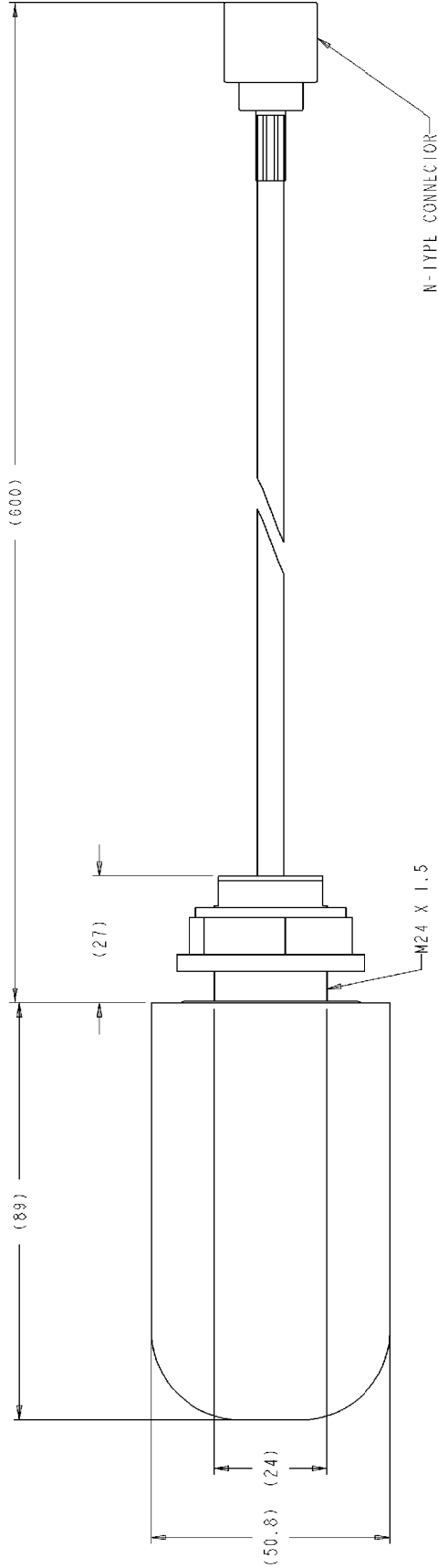




NOTE A: MALTEC ENGINEERING
447-0331

N T L	A	SOURCE
	IE1541A	WROUGHT MATL
W T R		
	IE2722B	DRAWING
	IE0507E	IDENT
	IE0435B	SUP COMPONENT
	IE0198R	BRAND MARKINGS
	IE0013Y	CONFIDENTIALITY
	IE0012A	INTERPRETATION
	IE0011	INSTR & TOL
	Caterpillar: Confidential Yellow	
	PROD. X OTHER	

UNLESS OTHERWISE SPECIFIED		VERSION	PRIMARY
DIMENSIONS ARE IN mm			X
DIMENSIONS W/O TOL ARE BASIC		TYPE	SECONDARY
	THIRD ANGLE	SHEET	OF
	PROJECTION	DWG CONTROL	CE III

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ANTENNA AS.
(FLEET FOR UNDERGROUND)
447-0331 | HO 01 C

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.

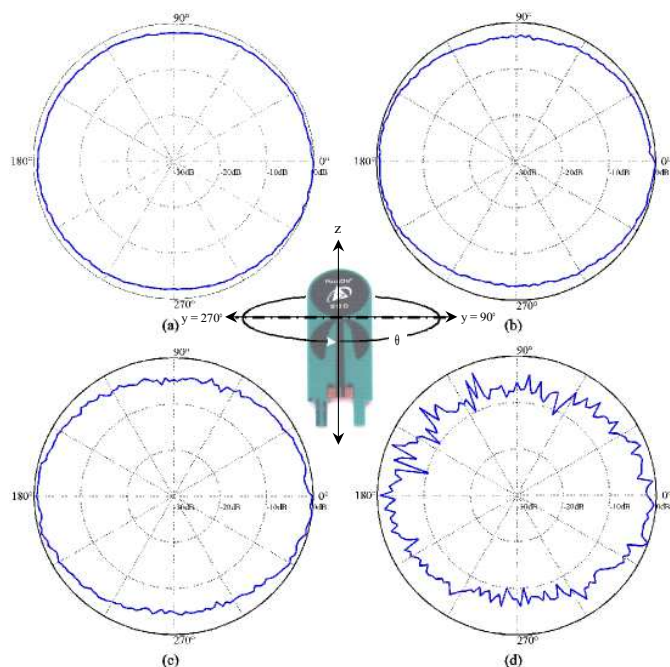


Fig. 1 Azimuth Beam Pattern for a) 3 GHz, b) 4 GHz, c) 5 GHz, and d) 6 GHz

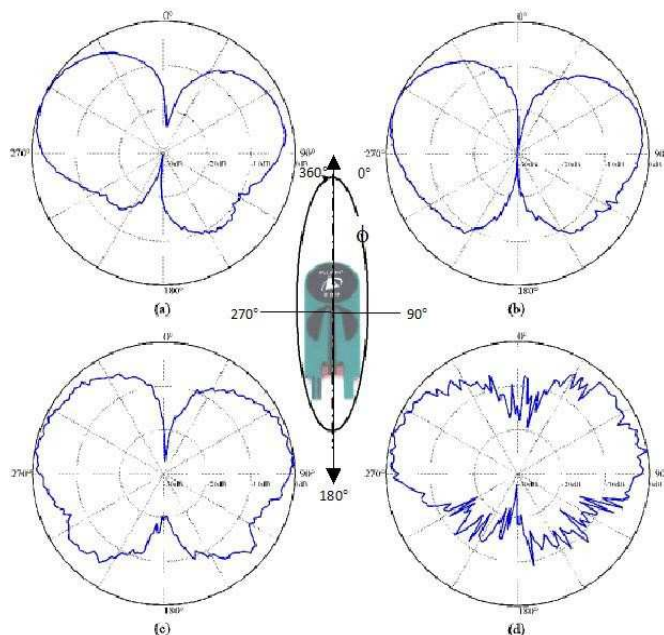
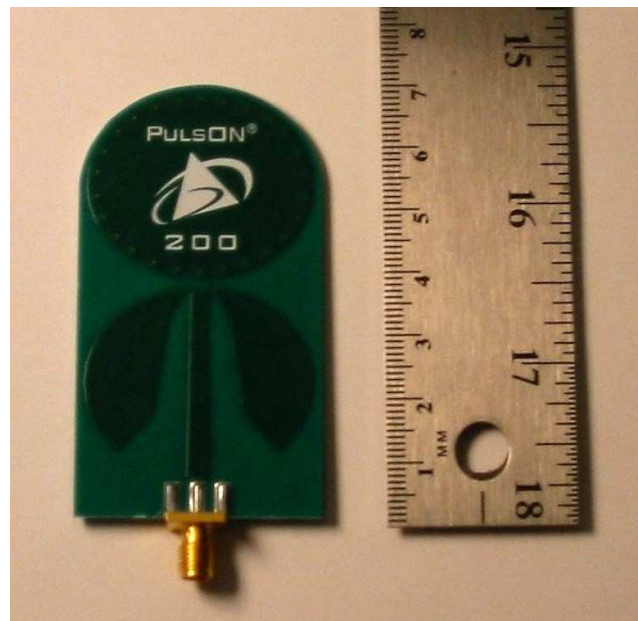


Fig. 2 Elevation Beam Pattern for a) 3 GHz, b) 4 GHz, c) 5 GHz, and d) 6 GHz

FOR MORE INFORMATION
TIME DOMAIN®

Cummings Research Park 1.256.922.9229 phone
4955 Corporate Drive 1.256.922.0387 fax
Suite 101
Huntsville, Alabama 35805 www.timedomain.com