

1857D Compact Embedded GPS Antenna

The Compact 1857D Embedded GPS antenna is ideal for GPS enabled ruggedized PDAs, laptops and portable GPS Handhelds. The 1857D antenna features a custom tuned frequency ceramic patch element, ESD circuit protection, a two stage low noise amplifier and a SAW filter, enabling the 1857D to provide great out-of-band signal rejection performance, consistent and clear signal while minimizing loss-of-lock in a very small form factor.

Features

- Very compact form factor
- 15 KV ESD circuit protection
- 2.7 to 5 Volt operation
- Ideal for embedded applications



Low Noise Amplifier Specifications

Nominal Impedance: 50 Ohm
VSWR: 1.5:1 max (at connector)
Nominal Gain: @ 3.3VDC: 28 dB @ 5VDC: 30 dB
Noise Figure: 1.5 dB (typical)
Voltage: 2.7 - 5 VDC
Out-of-band Rejection: +/- 15 MHz: 5 dB +/- 20 MHz: 10 dB +/- 30 MHz: 32 dB +/- 40 MHz: 40 dB

RF/Electrical Specifications

Center Frequency	Gain	Polarization	Current Draw
1575.42MHz ±10 MHz	1 dBic	Right Hand Circular	9 mA @ 3.3V 15 mA @ 5V

Mechanical Specifications

Antenna Dimensions	Weight	Shock	Vibration
.71" x .71" x .28" (18 x 18 x 7 mm)	.28 oz (8 g)	Vertical axis 50G, Other axes 30G	3 axis, sweep = 15 min 10 - 200 Hz log sweep: 3G
Cable		Connector	
6" (15 cm) RG174		Right angle MCX	

Environmental Specifications

Temperature Range	Humidity
-40°C to +85°C operating	95% max (non condensing)

Out-of-band Filter Rejection Chart

