



Product Description

Parsec's PTA-700-LTE- Cellular Antenna is an omnidirectional, penta-band antenna based on a revolutionary structure that provides broadband, high efficiency cellular service coverage for M2M module applications. The antenna is optimized for application in compact M2M modules without the large ground plane demands of other multi-band cellular antennas. The antenna edge mounts directly to a host PCB for low-loss, low-cost connection to the cellular transceiver.

Detailed product information and options are available under NDA. Patent pending.

Features

- **Frequency range: 699 – 894 MHz
1710 – 2155 MHz**
- **Omni-directional**
- **High Efficiency: 60%**
- **PCB Edge Mount**
- **Small ground plane requirement: 1.5 x 2.0"**
- **No external matching components needed**
- **Supports PTCRB certification**
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Applications

- **M2M, IoT, OBD, Telematics Applications**
- **Mobile asset tracking, automotive connectivity & diagnostics, medical device connectivity**

Electrical Specifications

ID	Parameters	Units	Typ.
Radiated Efficiency	699 – 787 MHz		40
	824 – 894 MHz		50
	1710 – 1755 MHz	%	60
	1850 – 1990 MHz		60
	2110 – 2155 MHz		60
Peak Gain	699 – 787 MHz		0
	824 – 894 MHz		0
	1710 – 1755 MHz	dBi	1
	1850 – 1990 MHz		1
	2110 – 2155 MHz		1
Return Loss (50 Ω)	699 – 787 MHz		6
	824 – 894 MHz		6
	1710 – 1755 MHz	dB	9
	1850 – 1990 MHz		9
	2110 – 2155 MHz		9
Max Input Power		Watts	5
Polarization			Linear

Notes:

1. Electrical specifications based on connection to host PCB with 1.5 x 2.0" solid ground plane.
2. Radiated efficiency of 50% within 699 to 787 MHz range is achievable using larger ground plane.

Mechanical

Dimensions	1.722" x .759" x .472"
Interface	Solder pads

Environmental

Operating Temperature	-40°C to 85°C
Storage Temperature	-40°C to 105°C
Relative Humidity	95% RH, non-condensing at 65°C

Typical Performance

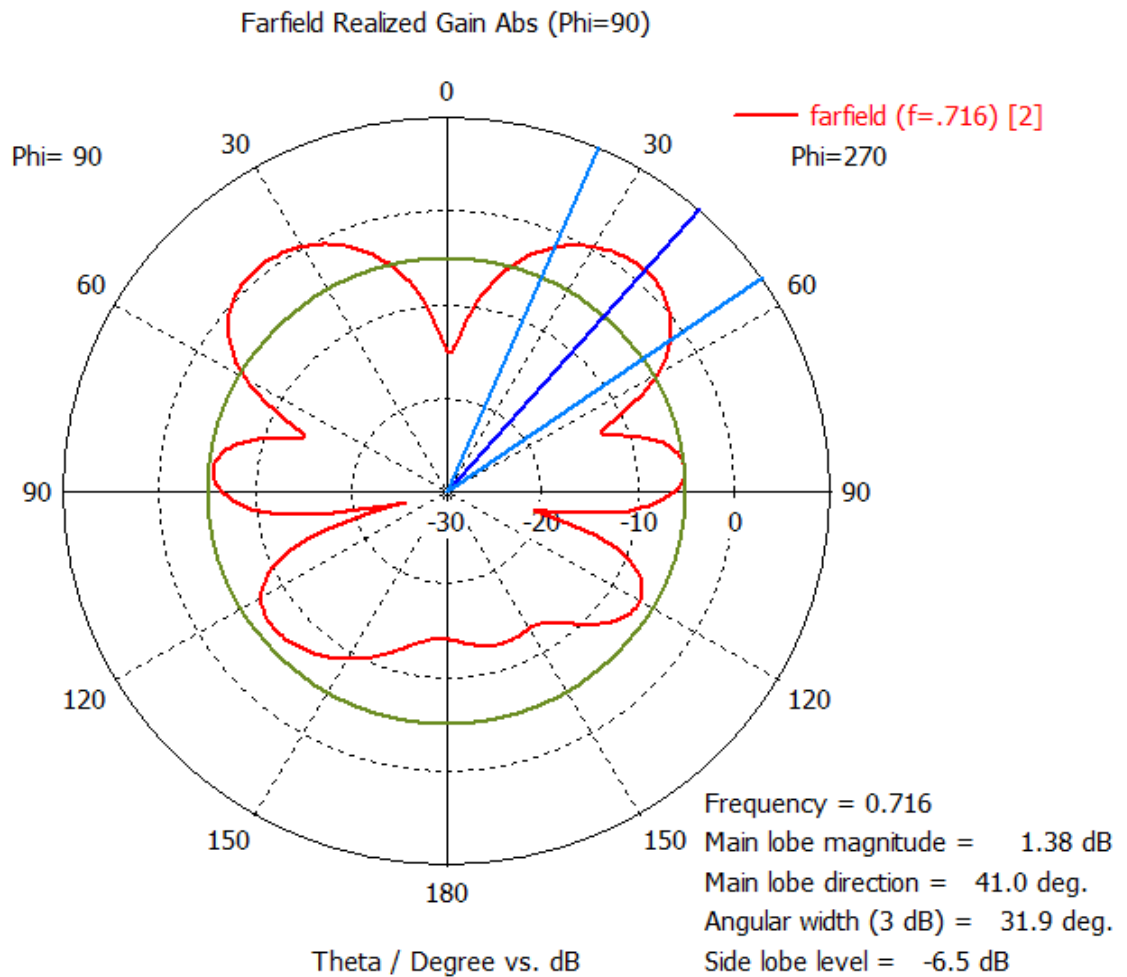


Figure 1. Typical Antenna Pattern (716 MHz)

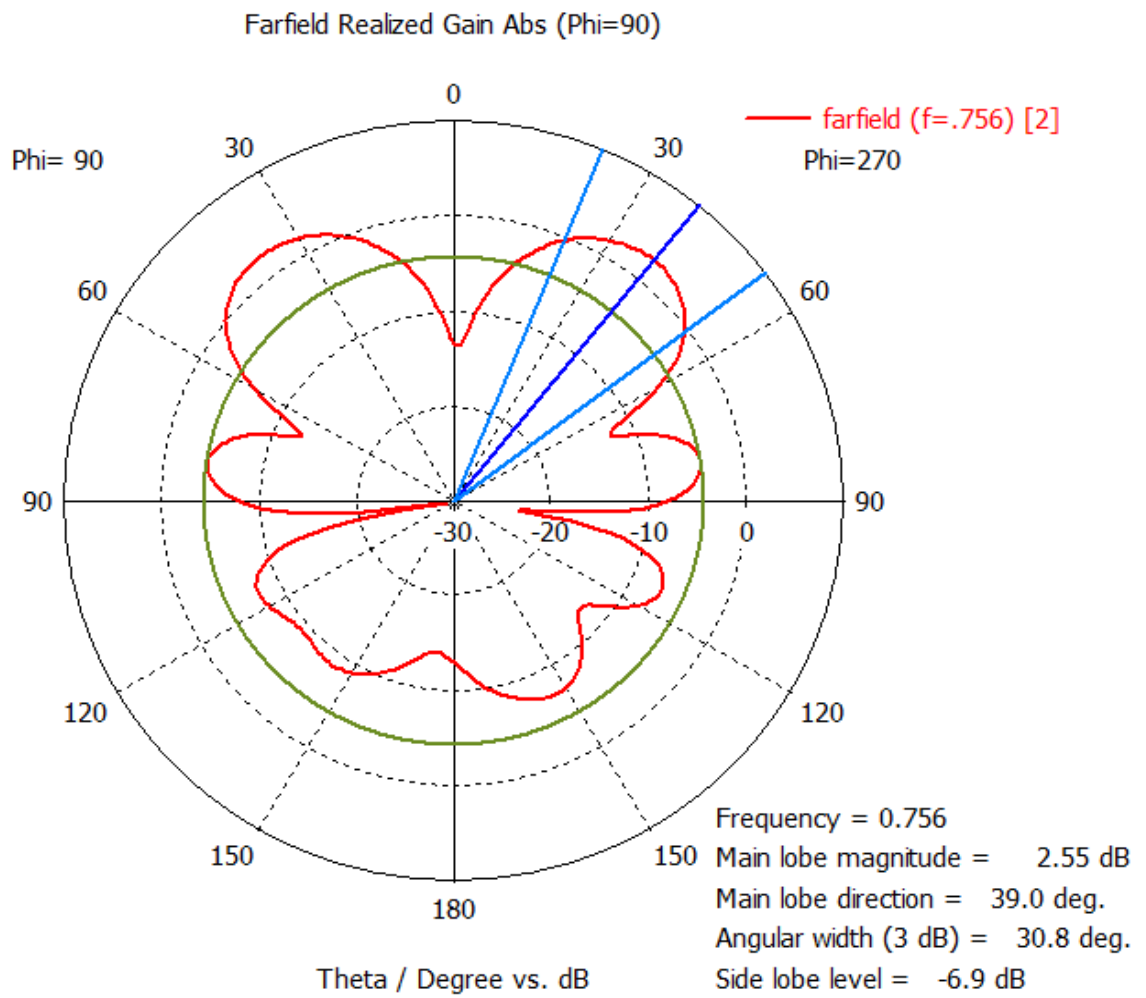


Figure 2. Typical Installed Antenna Pattern (756 MHz)

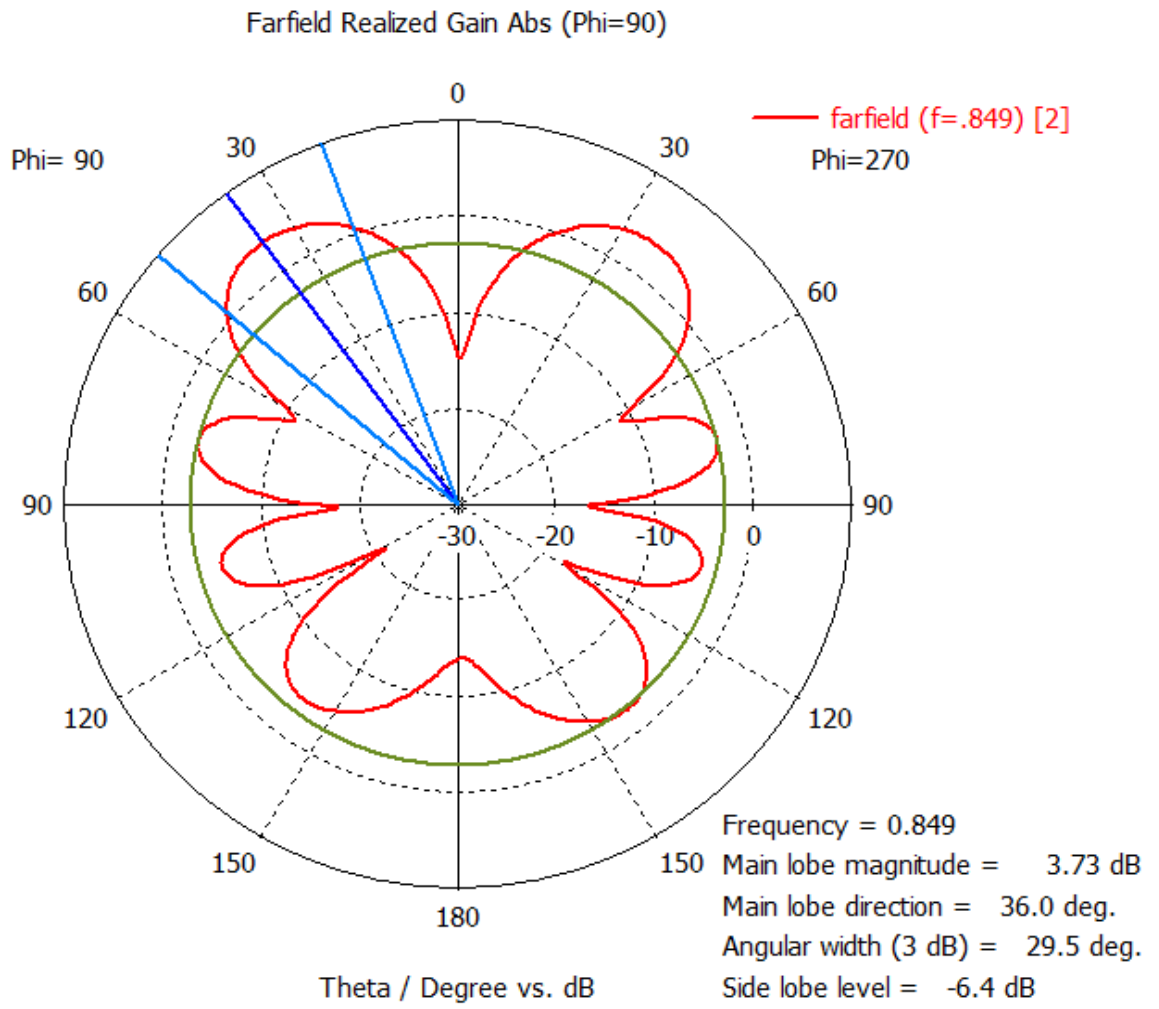


Figure 3. Typical Installed Antenna Pattern (849 MHz)

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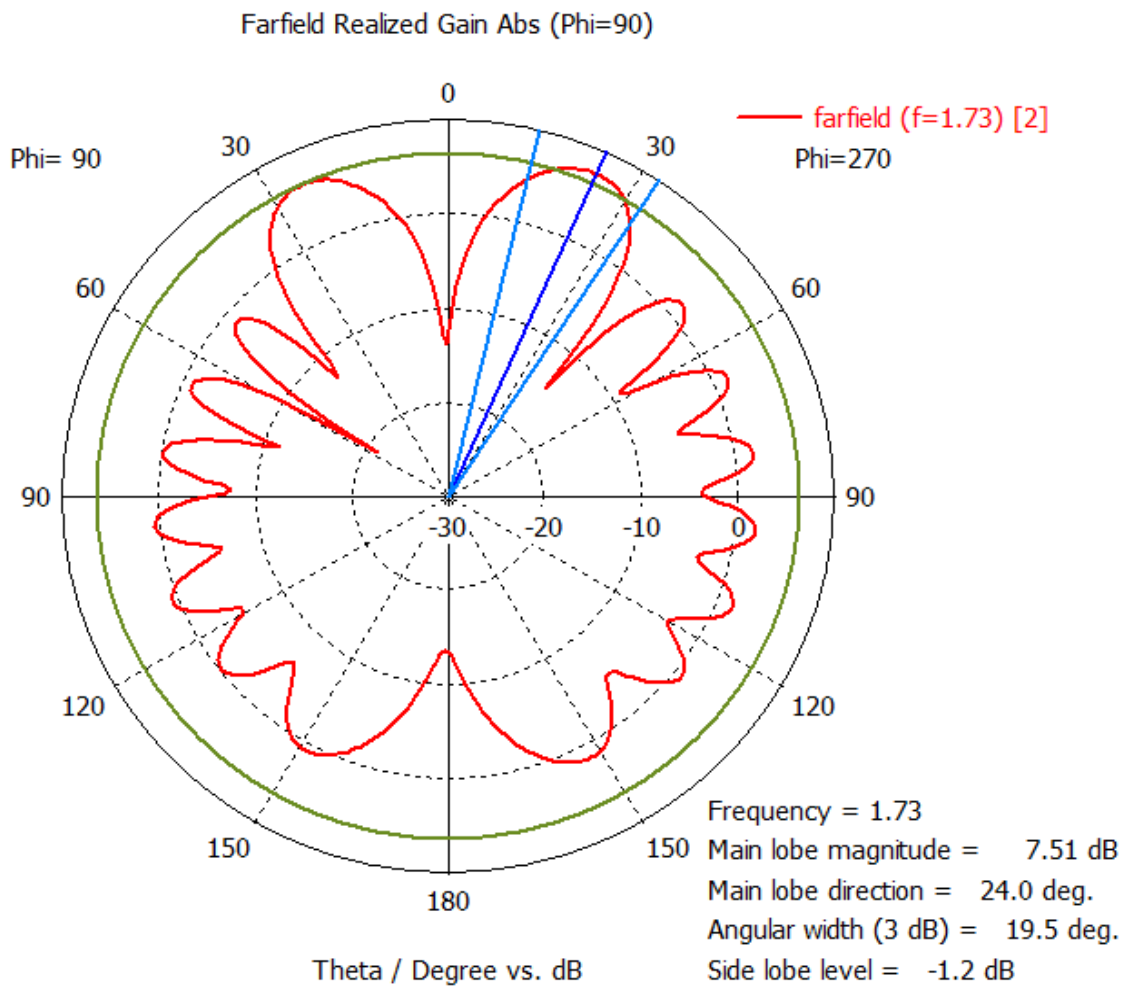


Figure 4. Typical Installed Antenna Pattern (1730 MHz)

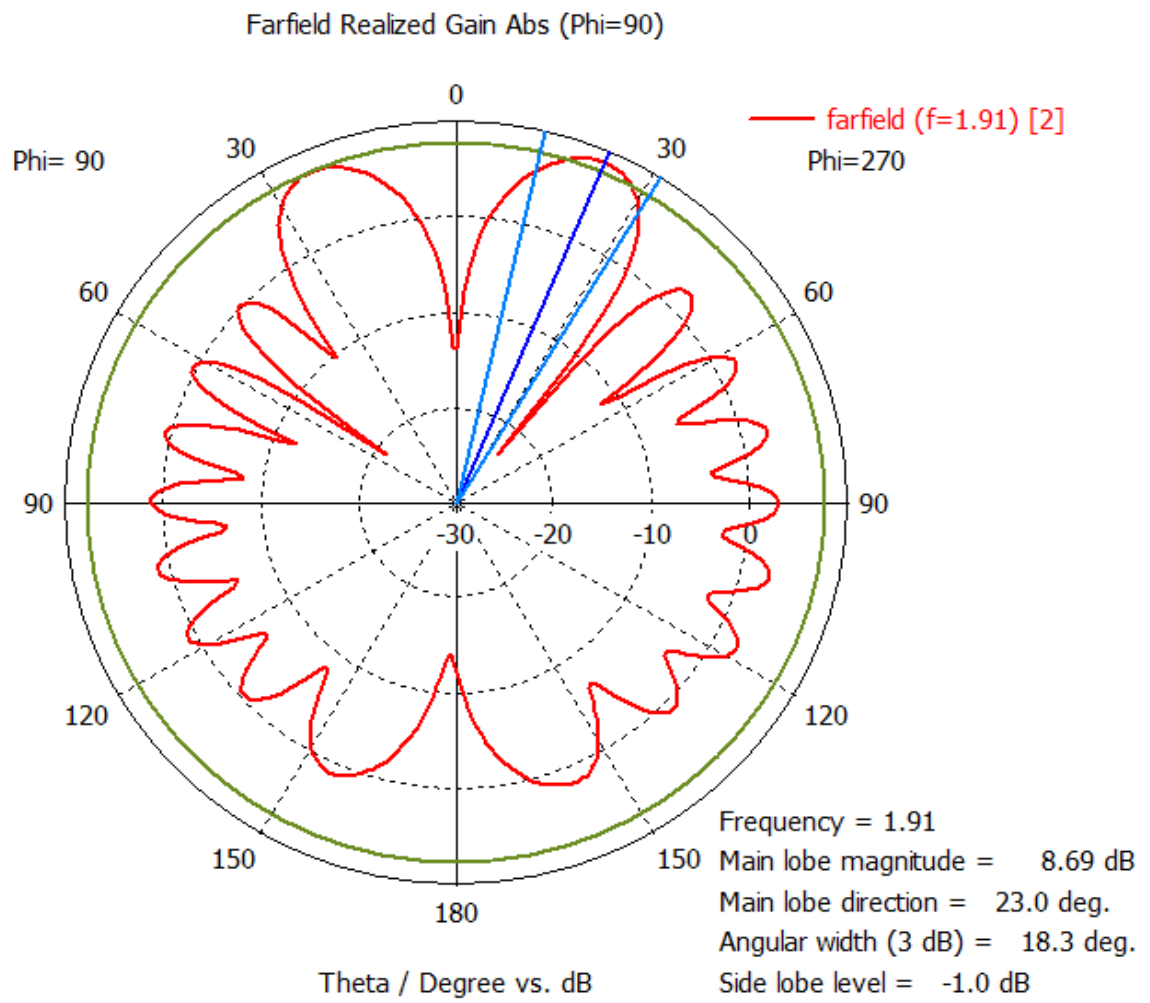


Figure 5. Typical Installed Antenna Pattern (1910 MHz)

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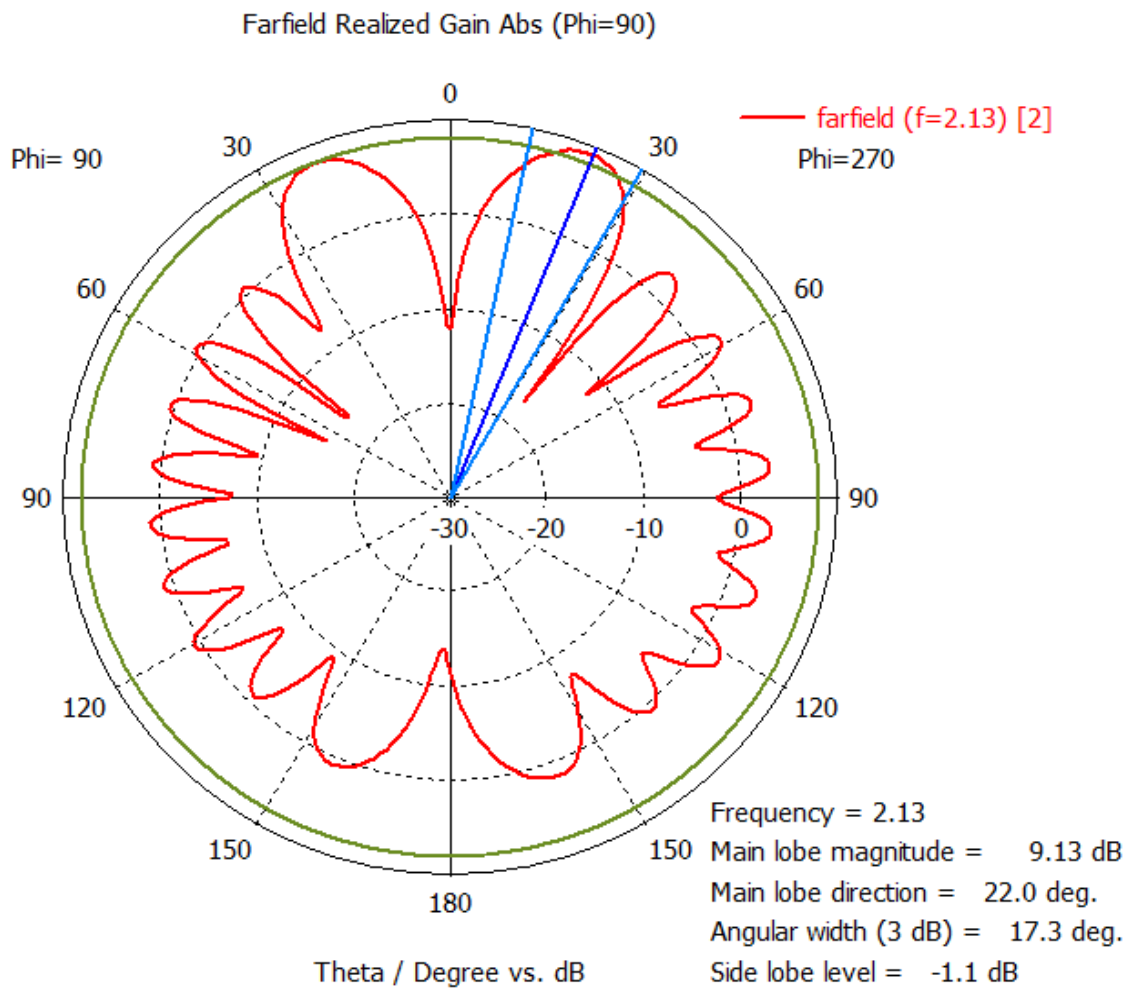


Figure 6. Typical Installed Antenna Pattern (2130 MHz)

Interface Dimensions

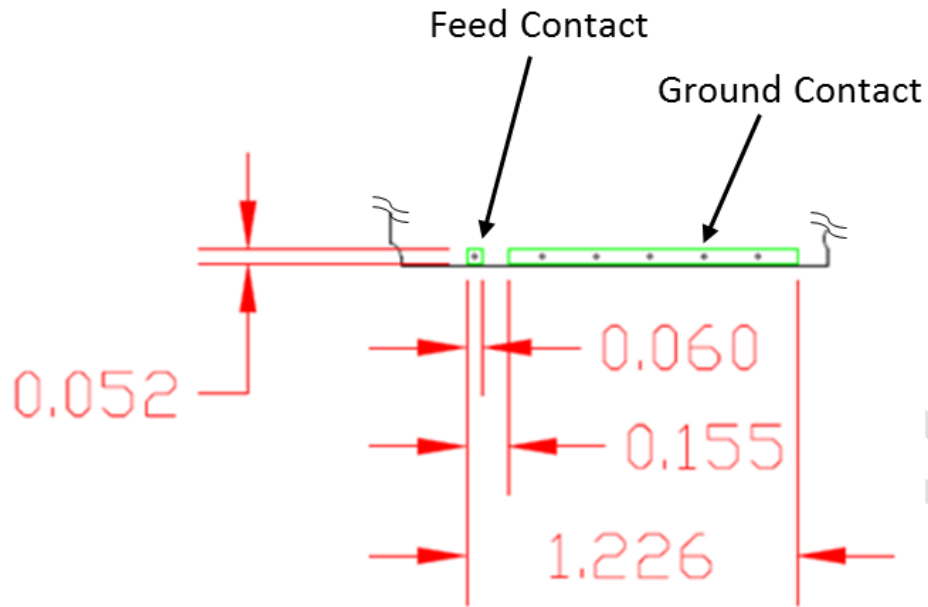


Figure 7. Antenna Mounting Interface

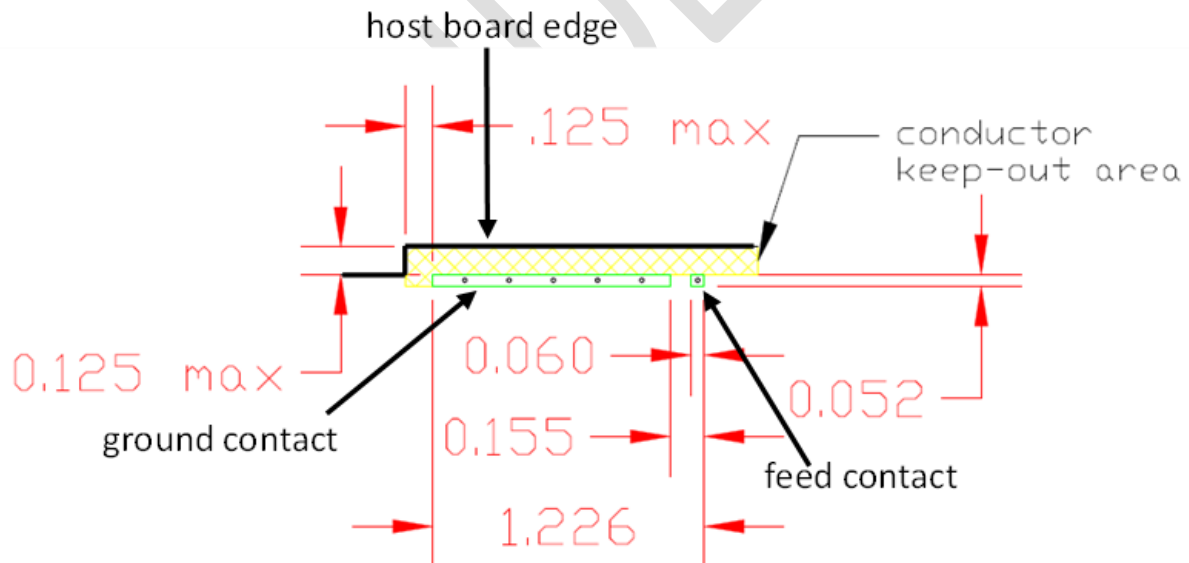


Figure 8. Host PCB Antenna Interface Footprint

For More Information: Email support@parsec-t.com