



## Product Description

Parsec's PTA-900E-U.FL-001 Antenna is an efficient, broadband antenna that provides extended range for LoRa and SIGFOX for M2M module applications. This high quality antenna uses a center-fed structure to provide a consistent pattern across both the 863-870 MHz and 902-928 MHz bands. 80 deg. vertical beamwidth allows the PTA-900DI-2-001 to be mounted at an angle with minimal loss in performance. True omnidirectional azimuth pattern with equal gain in any direction when mounted vertically.

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

### Features

- Frequency range: 863 – 870 and 902 – 928 MHz
- Omni-directional
- High Efficiency >86%
- Ground independent
- Broad Elevation Pattern
- U.FL connector

### Applications

- LoRa, M2M, IoT
- Mobile asset tracking, automatic meter reading, low-power unlicensed communications systems

## Electrical Specifications

| ID                      | Parameters    | Units | Typ. |
|-------------------------|---------------|-------|------|
| Peak Gain               | 863 – 870 MHz | dBi   | 2    |
|                         | 902 – 928 MHz |       | 2    |
| Return Loss (50 Ω)      | 863 – 870 MHz | dB    | 18   |
|                         | 902 – 928 MHz |       | 18   |
| Vertical 3 dB Beamwidth | 863 – 870 MHz | Deg.  | 81   |
|                         | 902 – 928 MHz |       | 80   |
| Efficiency              | 863 – 870 MHz | %     | 86   |
|                         | 902 – 928 MHz |       | 87   |
| RF Connector            |               |       | U.FL |

## Mechanical

|            |  |
|------------|--|
| Dimensions | 128 mm length x 26 mm width x 2.5 mm thickness |
| Cable      | 100 mm length                                  |

## Environmental

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



Figure 1. PTA-900DI-2-001

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### Typical Performance

Azimuth pattern with long axis vertical and 2D slice at horizon.

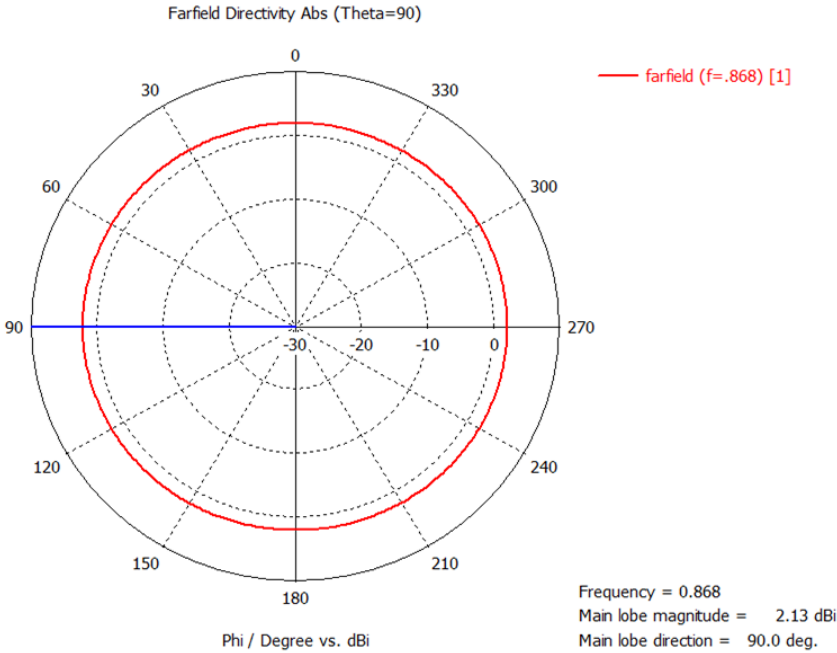


Figure 2. Typical Azimuth Pattern (868 MHz)

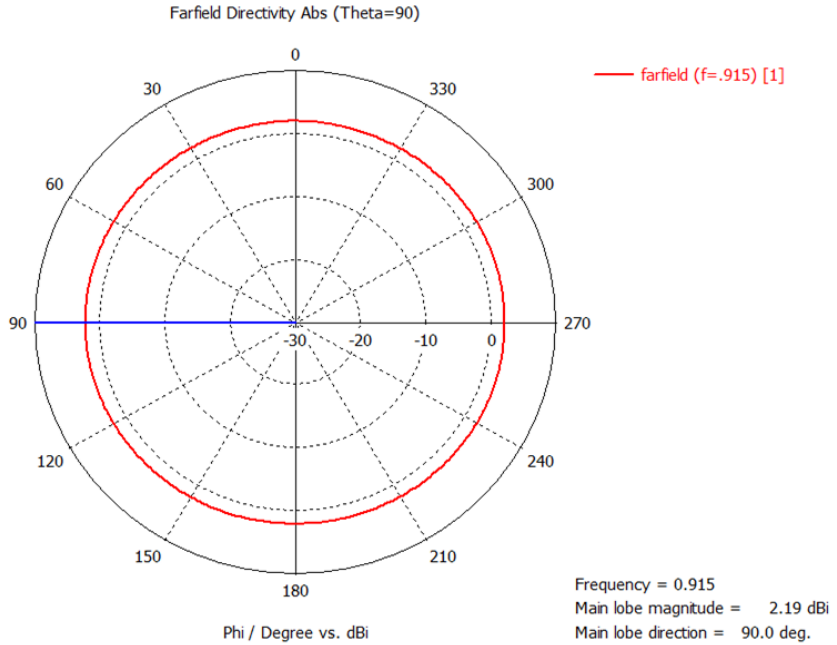


Figure 3. Typical Azimuth Pattern (915 MHz)

Elevation pattern with long axis vertical.

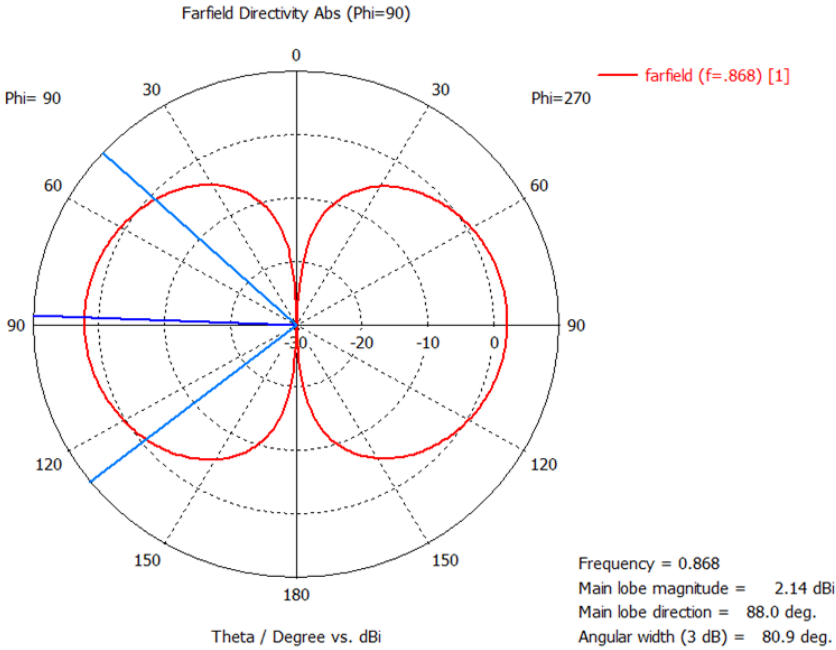


Figure 4. Typical Elevation Pattern (868 MHz)

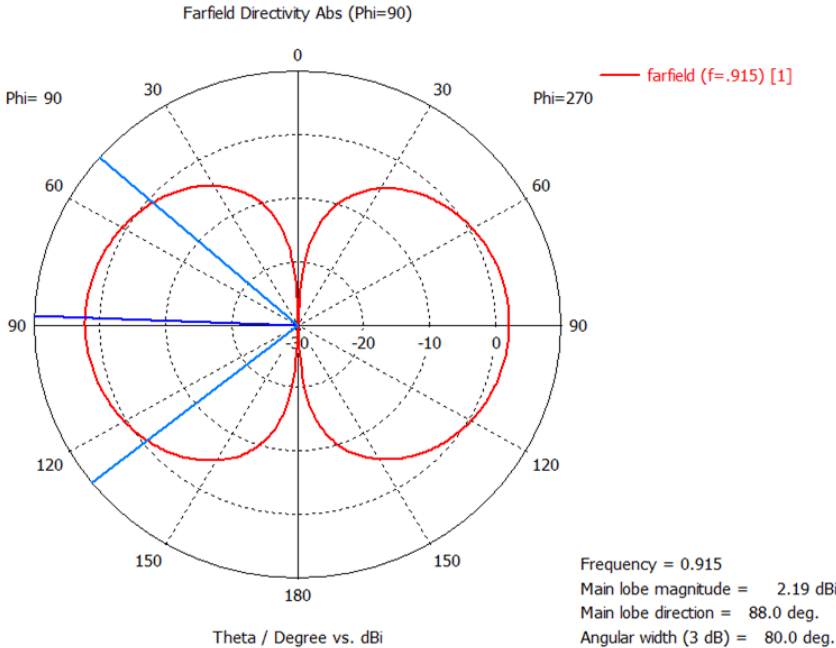


Figure 5. Typical Elevation Pattern (915 MHz)

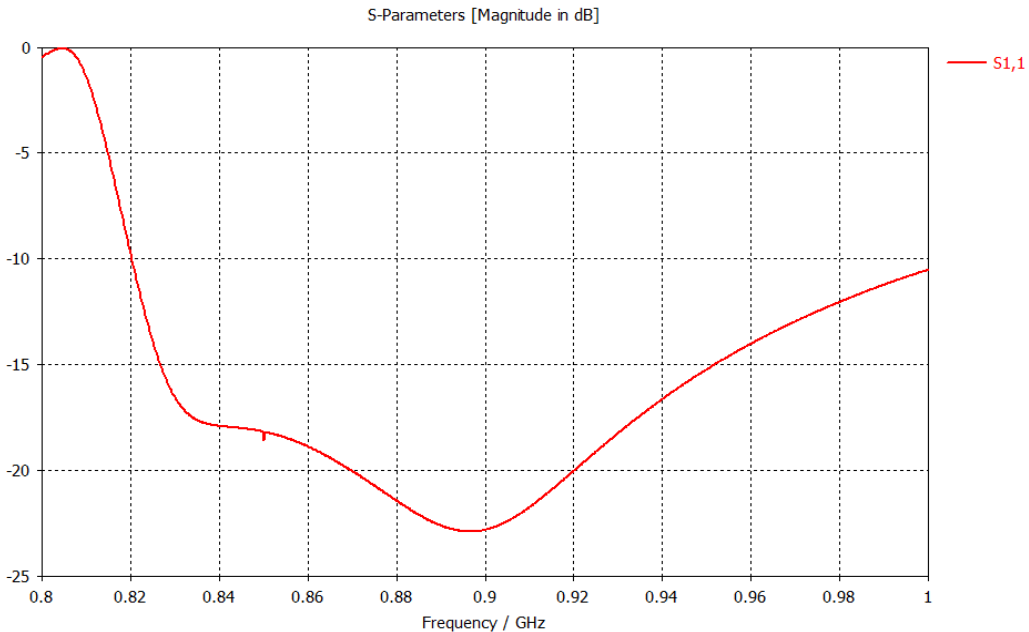


Figure 8. Typical Return Loss vs. Frequency

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**Ordering Information**

Part Number                    PTA-900E-U.FL-001  
Packing for Shipment        Individually plastic wrapped in protective box, qty. per box TBD.