IPJ-A0311-USA

Threshold-FS Antenna Datasheet

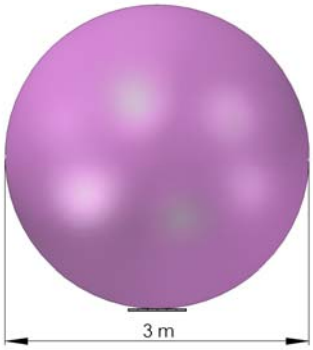
Overview

Initially designed for boundary/threshold crossing applications, the Impinj Threshold antenna has a very wide beam width to maximize zone coverage. Threshold antennas provide a consistent and continuous read zone when linearly distributed head-to-tail. At 46 x 9 x 2 cm, the Threshold antenna's planar form factor fits readily onto fencing or other borders.

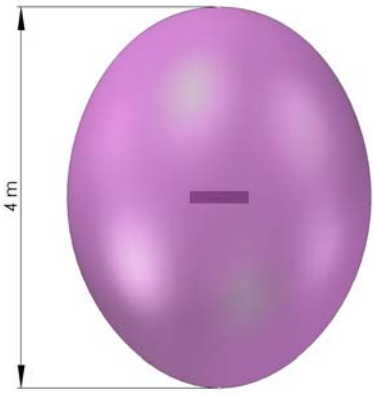
Features

- Strong far-field performance
- Wide beam width to maximize zone coverage
- Low profile form factor of 457 x 89 x 19 mm
- Optimized performance for operation from 902–928 MHz

Read Zone Characteristics



By lining Threshold antennas up along the short edge, one continuous read zone may be established along a boundary line.



The Threshold antenna's wide beam width provides extensive coverage across a boundary edge.

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Electrical Specifications

All electrical characteristics are derived, measured, and tested with the antenna embedded within a polyurethane cable protector. These specifications are not guaranteed if the antenna is used outside of an Impinj-approved cable protector. The specifications are guaranteed at 915 MHz.

Parameter	Typical	Units	Conditions/Notes
Frequency Range	902 to 928	MHz	
Far-field Gain	5.0	dBi	
HPBW (x-z plane)	60º±3º	Deg	3 dB beam width
HPBW (y-z plane)	120º±3º	Deg	3 dB beam width
Pattern Variation (x-y plane)	10	dBi	Between max and min
Polarization	Linear		Parallel to short axis
VSWR[1]	2:1		
Input Impedance	50	Ω	
Input Power	30	dBm	33dBm absolute max
ESD	2	KV	Human Body Model

[1] Some item-level applications—where the tag is close to the reader antenna—can cause a 2:1 VSWR from the antenna to the reader. Users should ensure that their reader can tolerate a VSWR as high as 2:1.

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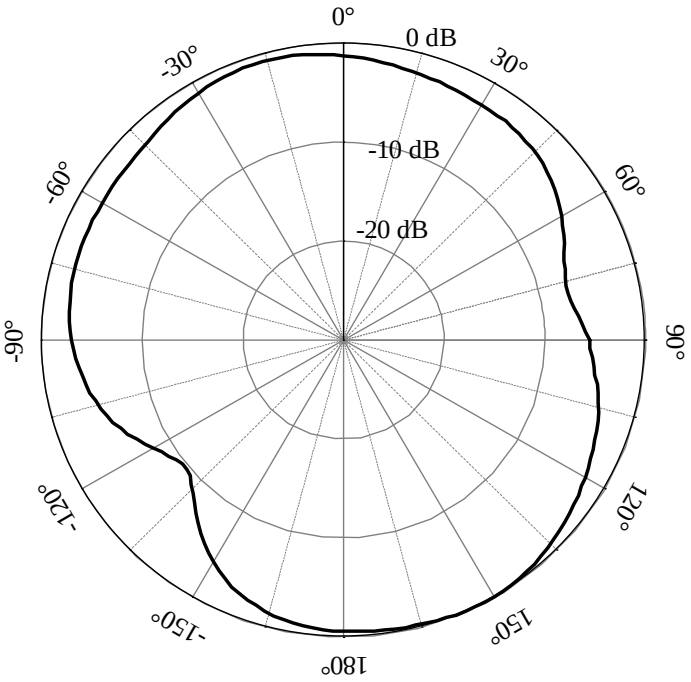
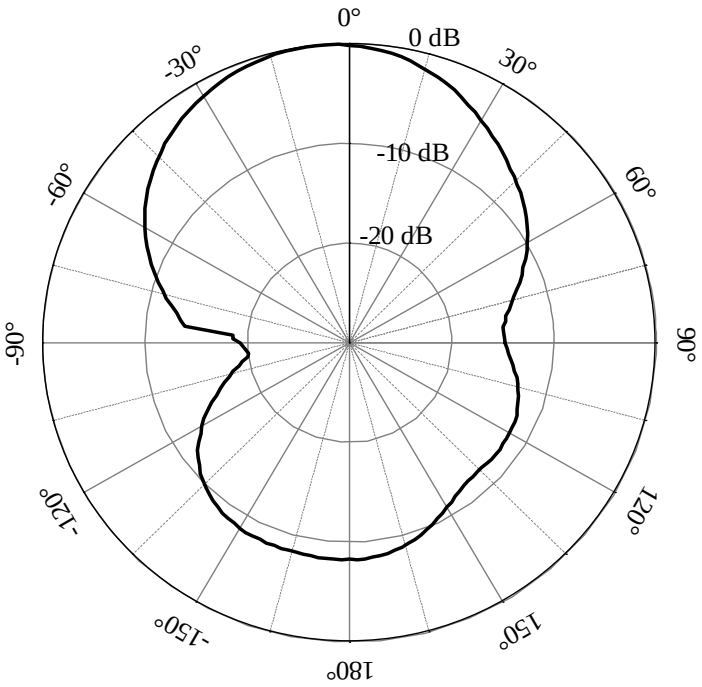
Radiation Pattern at 915 MHz (x-y plane)

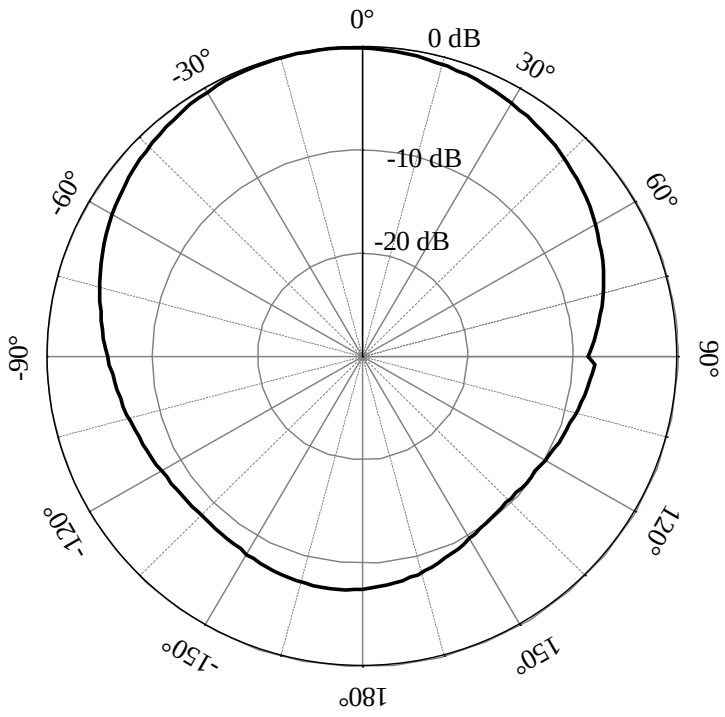
Please note that all radiation patterns are normalized. See the mechanical dimension drawings to correlate the radiation patterns to the appropriate axes and planes of the antenna.



Radiation Pattern at 915 MHz (x-z plane)



Radiation Pattern at 915 MHz (y-z plane)



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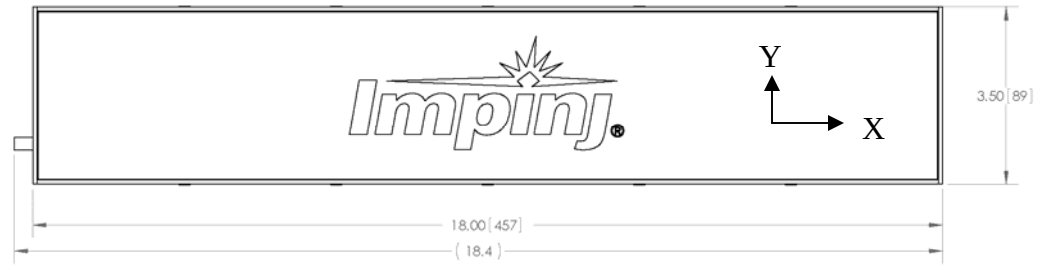
Environmental Specifications

Parameter	Typical	Units	Conditions/Notes
IP Rating	IP54		Indoor and outdoor use
Temperature	-25–55	°C	Indoor and outdoor
Humidity	5–95	%	Relative, non-condensing Performance will be severely degraded if antenna is subjected to any standing water
RoHS	N/A		Designed to meet RoHS, not certified RoHS

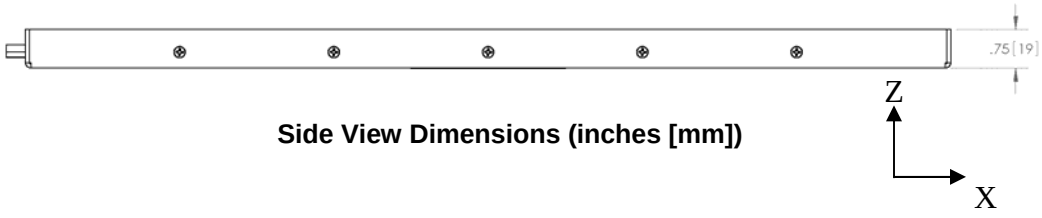
Mechanical Specifications

Parameter	Typical	Units	Conditions/Notes
Weight	710	grams	
Connector	BNC plug		Antenna comes standard with BNC jack to BNC jack converter
Cable length	305	mm	+/- 12 mm
Radome	ABS		
Enclosure	Bent sheet aluminum		Clear finish
Dimensions	457 x 89 x 19	mm	See drawing for detailed dimensions

Mechanical Enclosure



Top View Dimensions (inches [mm])



Side View Dimensions (inches [mm])

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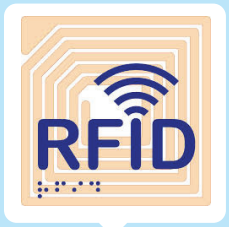

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