



# Cisco Bi-Directional Train Top Antenna (IW-ANT-SKD-513-Q)

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## Overview

The Cisco Bi-Directional Train Top Antenna (IW-ANT-SKD-513-Q) is a 5 GHz 13 dBi Shark bi-directional antenna with a QMA connector.

The antenna is designed to survive high vibration rail installations, including roof mounting on locomotive and passenger cars.

**Figure 1: IW-ANT-SKD-513-Q Antenna**



Features include the following:

- Dual feed, dual slant  $\pm 45^\circ$ , linear polarization
- Designed for metallic or non-metallic roof mounting, no ground plane required

- Extremely rugged purpose built for rail and metro applications
- Symmetrical patterns, maintains same pattern performance over each polarization
- High port-to-port performance correlation
- Designed to meet EN50155 & AAR certification requirements

## Electrical Specifications

The following table is a summary of the electrical specifications:

Typical VSWR	<2:1 (max 2.5:1)
Bandwidth	4.9-5.9 GHz
Nominal Impedance	50 $\Omega$
Gain	10-13 dBi
Beamwidth (Free Space, Non-Metallic Ground Plane)	H-Plane 42° E-Plane 28°
Beamwidth (Ground Plane Mounted)	H-Plane 39° E-Plane 21°
Polarization	Dual Slant 45°, Linear
Port-to-Port Isolation	> 22 dB

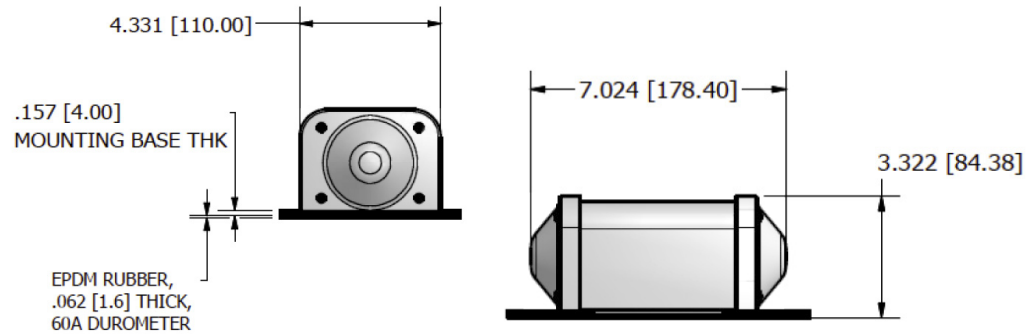
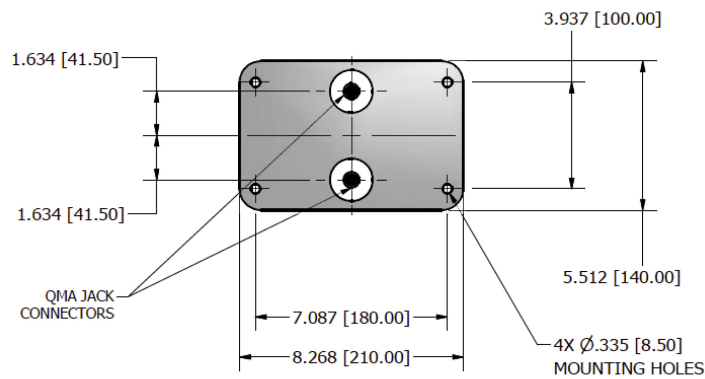
## Mechanical and Environmental Specifications

The following table is a summary of the mechanical and environmental specifications:

Dimensions	8.3 x 5.5 x 3.3 inches (210 x 140 x 85 mm)
Weight	2.7 lbs
Housing Antenna Material	Aluminum, hard coat anodized
Temperature Range	-40°C to +85°C
Ingress Protection	IP56/IP67

## Mechanical Drawing

The following diagram provides mechanical details of the antenna.

**Figure 2: Front and Side View****Figure 3: Bottom View**

## Installation Instructions

Complete details can be found in the [Cisco Ultra-Reliable Wireless Backhaul FM SHARK Installation and Configuration Manual](#).

## Radiation Patterns

The following figures show the antenna radiation patterns.



**Note** These radiation patterns show frequencies tested by the antenna vendor outside of the supported 4.9-5.9 GHz frequency range.

Radiation Patterns

