2.4 / 5 GHz Whip Antenna



APAMBJ-135

Request Samples | Check Inventory

Ø9.5 x 56 mm
RoHS/RoHS II Compliant
MSL Level = 1

Description

This versatile 2.4/5 GHz monopole whip antenna delivers robust dual-band performance for modern wireless protocols including Wi-Fi®, Bluetooth®, Zigbee®, Thread, and Matter. Featuring a peak gain of 4.0 / 5.2 dBi @ 2.4 / 5 GHz and customizable straight connectors, it enables flexible integration across diverse IoT applications. The antenna supports smart home systems, asset tracking, smart metering, and intelligent lighting installations. As a RoHS-compliant, MSL Level 1 component, it ensures reliable connectivity and manufacturing compatibility for deployments requiring consistent dual-band coverage and adaptable mechanical configurations in both residential and commercial environments.



Features

- 2.4 / 5 GHz Monopole Whip Antenna
- Peak Gain 4.0 / 5.2 dBi @ 2.4 / 5 GHz
- Connector Design for Straight
- Fully Customizable Connectors
- RoHS Compliant | MSL Level 1

Applications

- Bluetooth®/ ZigBee® / Thread / Matter / Wi-Fi
- Smart Home & Smart Building
- Asset Tracking & Telematics
- Smart Metering
- Intelligent Lighting

Ordering Information

Part Number	Description	Connector Option
APAMBJ-135	2.4 / 5 GHz Whip Antenna with SMA (M)	SMA (M)
APAMBJ-135A	2.4 / 5 GHz Whip Antenna with RP-SMA (M)	RP-SMA(M)

Note: Other options not listed may be available upon request via Abracon online support

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Phone: 512-371-6159 | Fax: 512-351-8858
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Electrical Specification

Parameter	Specification		Unit
Operating Frequency	2.4	5	GHz
VSWR (Typ.)	1.5		:1
Peak Gain	4.0	5.2	dBi
Impedance	50		Ω
Polarization	Linear		
Radiation Pattern (Azimuth)	Omni-directional		
Input Power (Ambient 25°C)	20		W

Please note: All measurement data is based on the standard configuration (conducted in free space unless otherwise specified).

Mechanical Specification

Parameter	Specification
Dimensions	Ø9.5 x 56 mm
Material	UV-Resistant ABS
Recommended Torque for Mounting	0.565 N·m
Color	Black
Antenna Type	Whip (Monopole)
RF Connector (1)	SMA(M)
Additional Resources	Download STEP File, Package Drawing, 3D PDF

(1): Fully Customizable Connectors

Environmental Specification

Parameter	Specification
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C
RoHS Complaint	Yes

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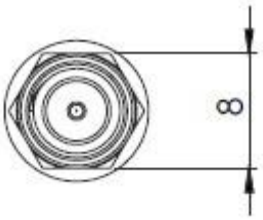


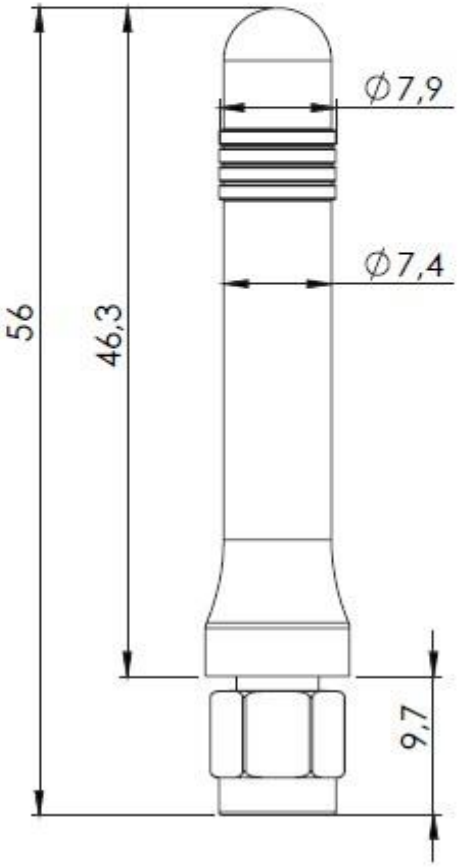
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Product Dimensions





Unit : mm

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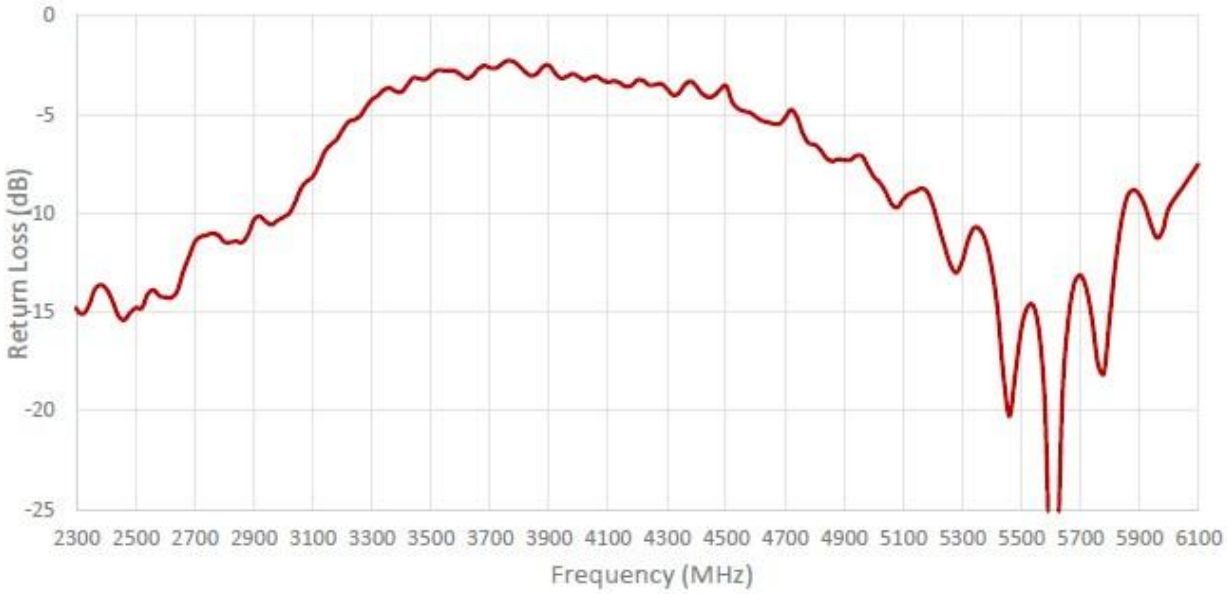


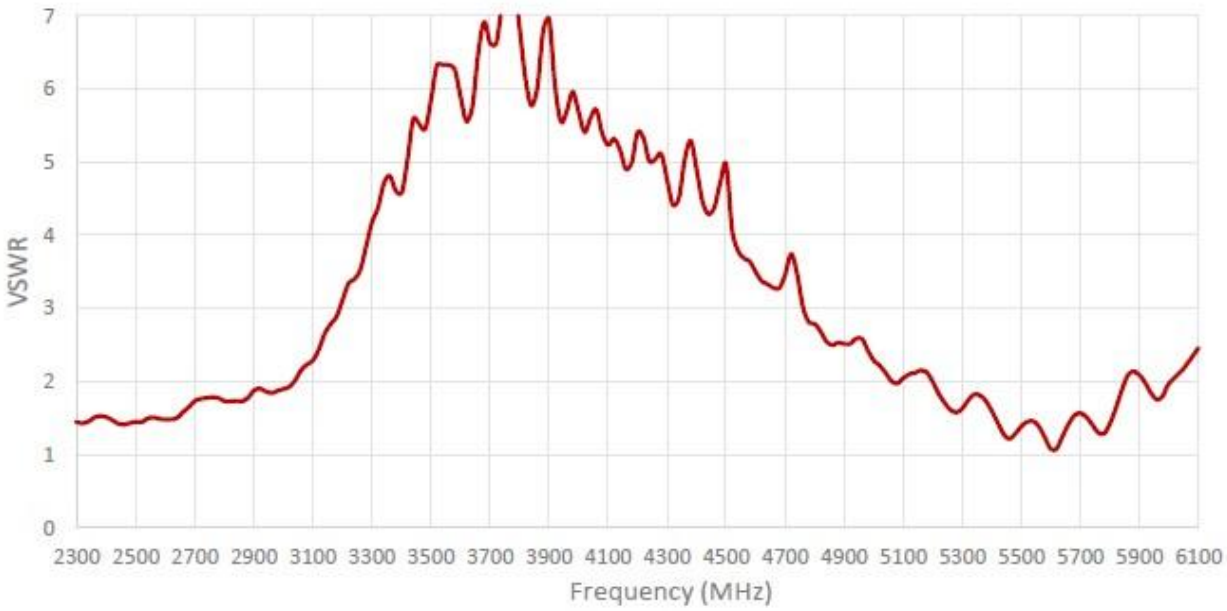
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Reflection Characteristics – Return Loss & VSWR





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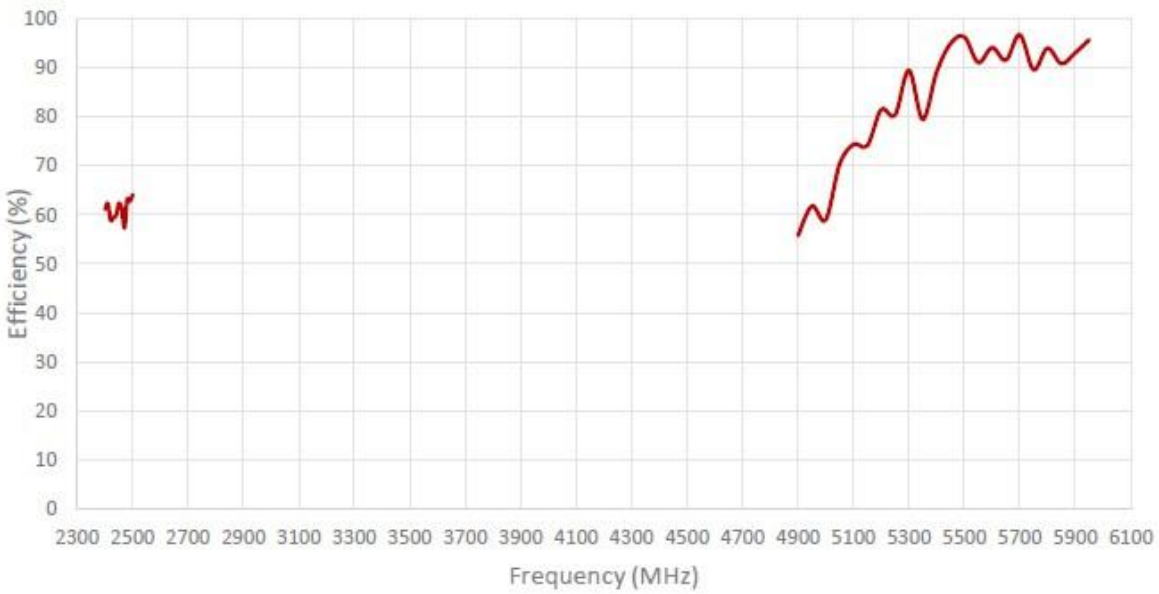


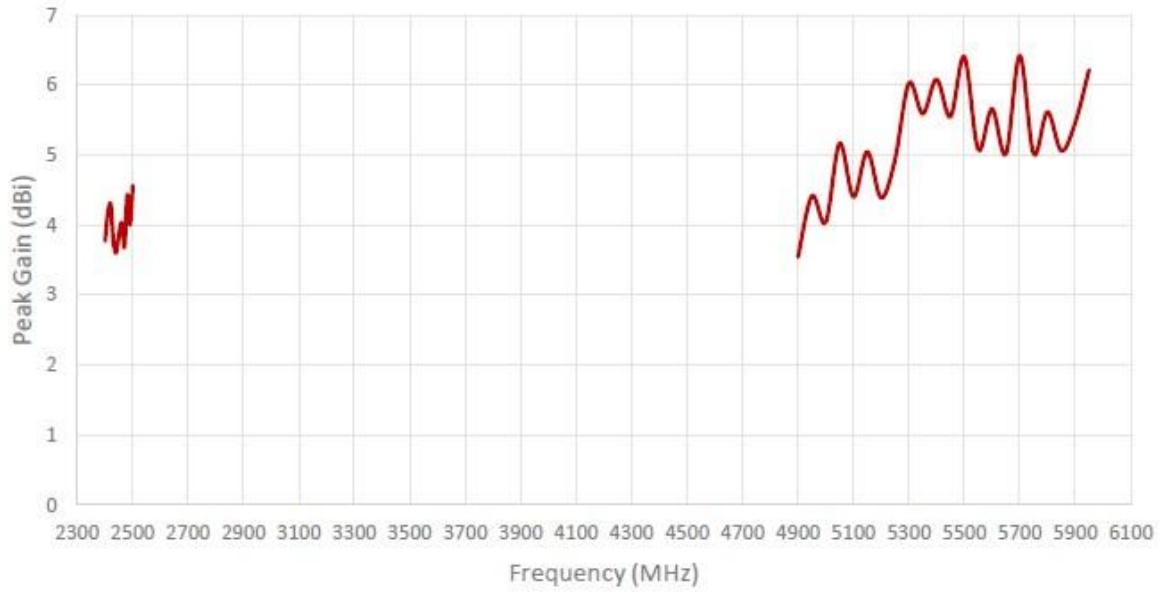
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Radiation Characteristics – Total Efficiency (%) & Peak Gain





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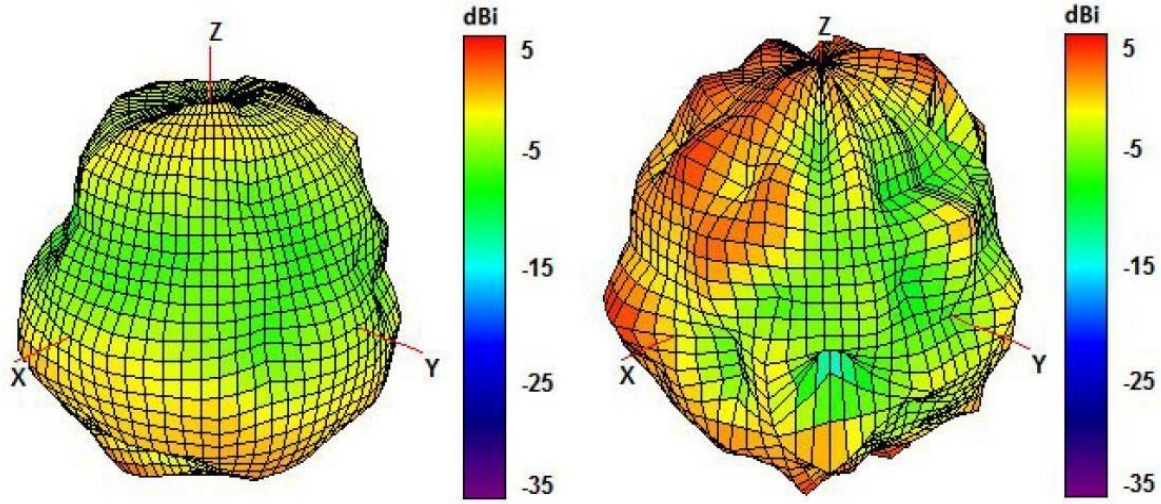


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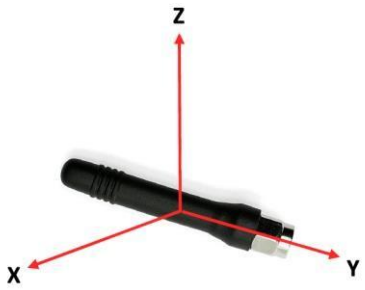
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Radiation Characteristics –3D Radiation Pattern



2450 and 5500 MHz Radiation pattern



Radiation pattern reference

Note: Mounted on Ground Plane of 70x35 mm
Measured in Certified CTIA 3D Anechoic Chamber

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Packaging

Package Type	Quantity	Dimensions
Plastic bag	1 pcs/ Plastic bag	100 x 150 mm
Outer Box	1000 pcs/box	470 x 310 x 210 mm

Additional Resources

STEP File: APAMBJ-135 STEP File

Package Drawing: APAMBJ-135 Package Drawing

3D PDF: APAMBJ-135 3D PDF

ATTENTION: Abracon LLC's products are Commercial-Off-The-Shelf ('COTS'), which are designed, intended, and validated for use in commercial, industrial, and automotive applications. The customer is responsible for testing and verifying the performance of an Abracon solution to meet their system-level requirements.

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