

2.4GHz Weather-Proof Whip Antenna



AANE-WH-0209

Request Samples



Check Inventory



Ø10 x 172 mm

RoHS/RoHS II Compliant

MSL Level = N/A

Features

- 2.4GHz Dipole Whip Antenna
- Peak Gain 2.0 dBi
- High Efficiency up to 75%
- Swivel Connector Design for Straight, Right-Angle and 45-Degree Positioning
- Weather-Proof and IP65 Rated
- Fully Customizable Connectors

Applications

- Bluetooth®/ ZigBee® / Thread/ Matter/Wi-Fi®
- Bluetooth®/ Wi-Fi® Modules
- Medical Wearables & Tele-Medicine
- Smart Home & Smart Building
- Asset Tracking & Telematics
- Smart Metering
- Intelligent Lighting

Product Image



12117 Bee Caves Rd, Bldg-3, Suite 200 Bee
Cave, TX 78738
Phone: 512-371-6159 | Fax: 512-351-8858
For terms and conditions of sales, please visit:
www.abracon.com

REVISED: 08-27-25

ABRACON IS
ISO9001-2015
CERTIFIED

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Electrical Specification

Parameter	Specification	Unit
Operating Frequency	2400 - 2500	MHz
VSWR (Typ.)	< 2.0	
Peak Gain	2.0	dBi
Maximum Efficiency	75	%
Average Efficiency	72	%
Impedance	50	Ω
Polarization	Linear	
Radiation Pattern (Azimuth)	Omni-directional	
Input Power (Ambient 25°C)	5	W

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

Mechanical Specification

Parameter	Specification
Dimensions	Ø10 x 172 mm
Material	UV Resistant ABS (Optional)
Recommended Torque for Mounting	0.565 N·m
Color	Black
Antenna Type	Whip (Dipole)
RF Connector ⁽¹⁾	RP-SMA(M)

(1): Fully Customizable Connectors

Environmental Specification

Parameter	Specification
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C
IP Rating	IP65 (Optional)
RoHS Complaint	Yes



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Ordering Information

Part Number	Description	Connector Option
AANE-WH-0209-1	2.4GHz Weather-Proof Whip Antenna with RP-SMA(M) Connector, IP65 & UV-Resistant Housing	RP-SMA(M)
AANE-WH-0209-2	2.4GHz Weather-Proof Whip Antenna with SMA(M) connector, IP65 & UV-Resistant Housing	SMA(M)
AANE-WH-0209-3	2.4GHz Whip Antenna with RP-SMA(M) connector	RP-SMA(M)
AANE-WH-0209-4	2.4GHz Whip Antenna with SMA(M) connector	SMA(M)

Note: Different connector configurations that are not listed may be available upon request via [Abracon online support](#)



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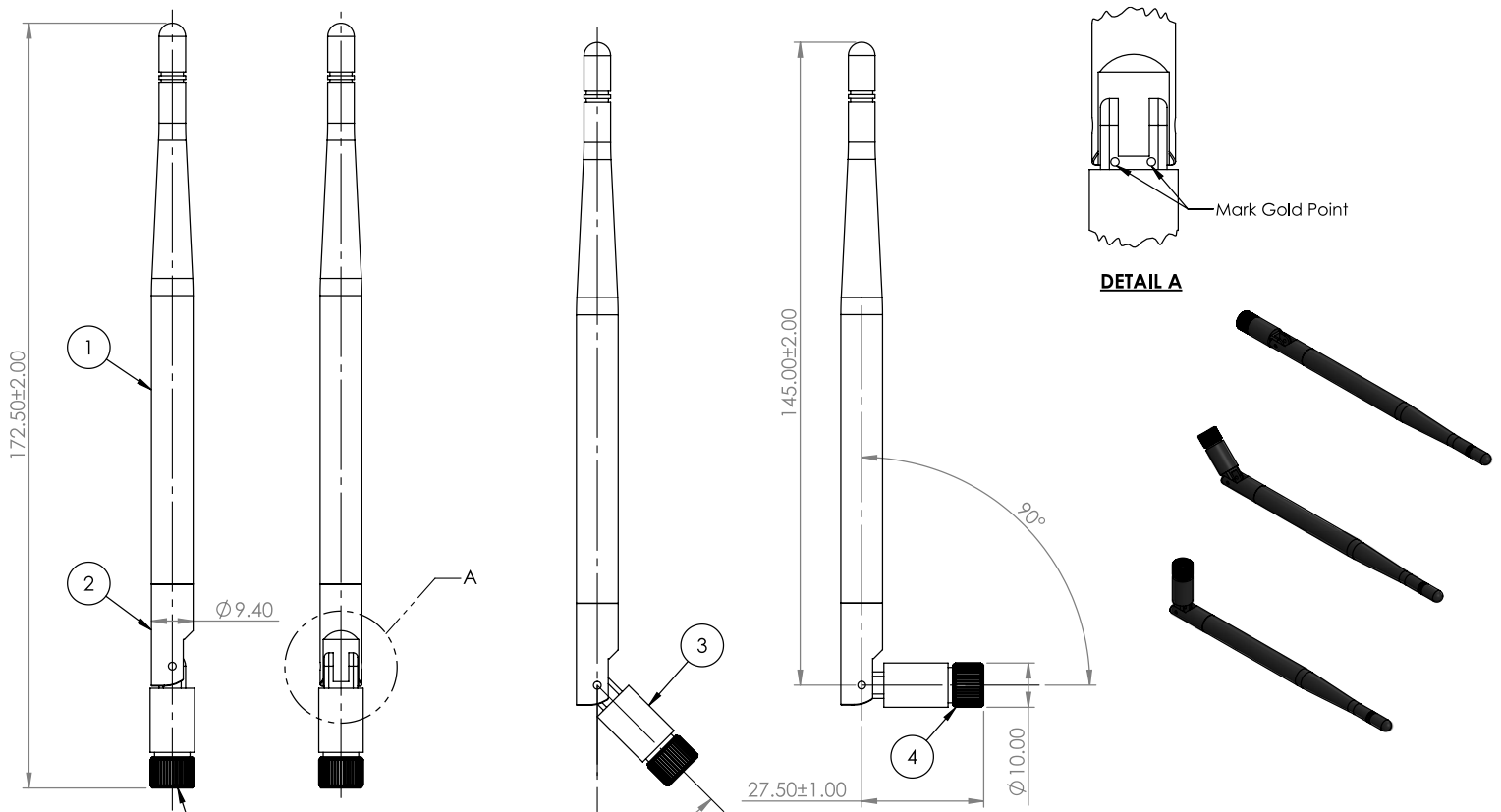


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Product Dimensions



Unit : mm

No.	Name	Material	Finish
1	Body 1	TPEE	Black
2	Body 2	ABS	Black
3	Body 3	ABS	Black
4	Connector	RP-SMA(M)	Black

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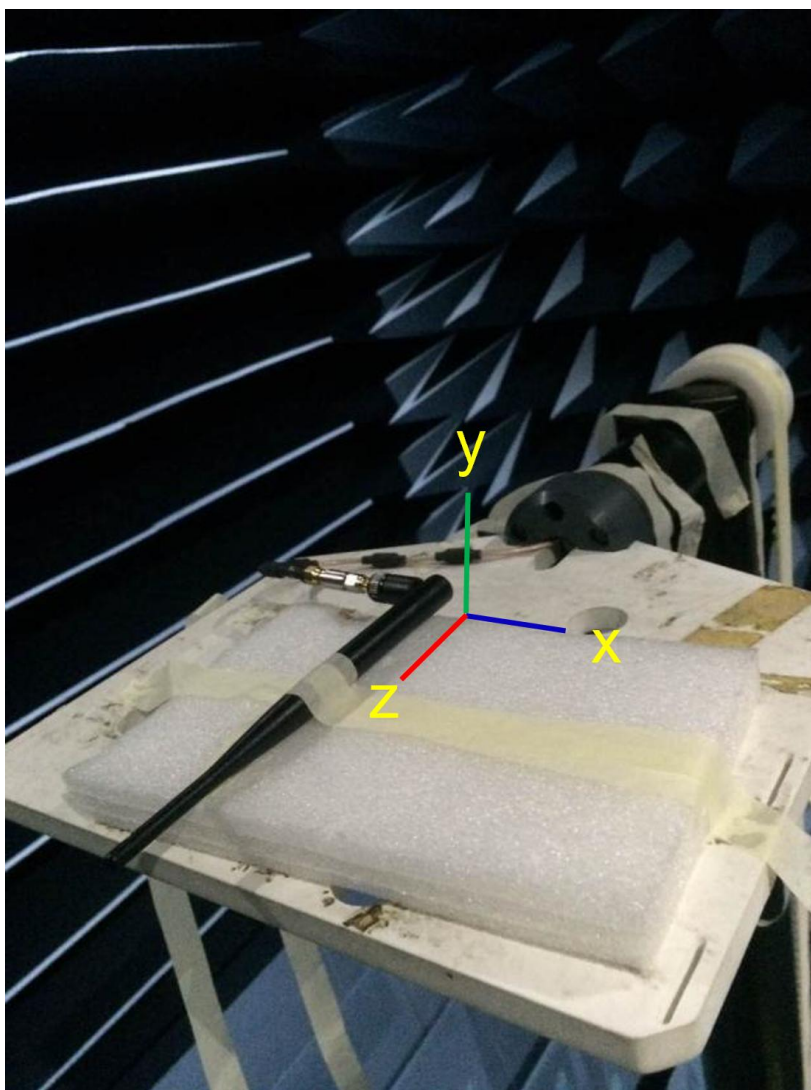


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Measurement Setup



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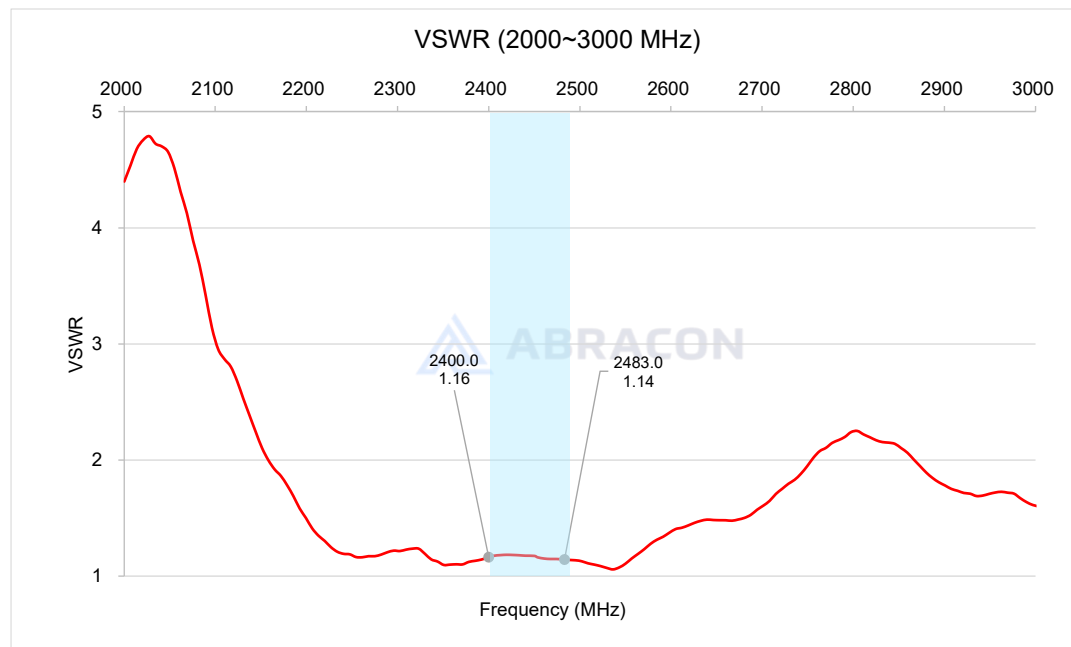
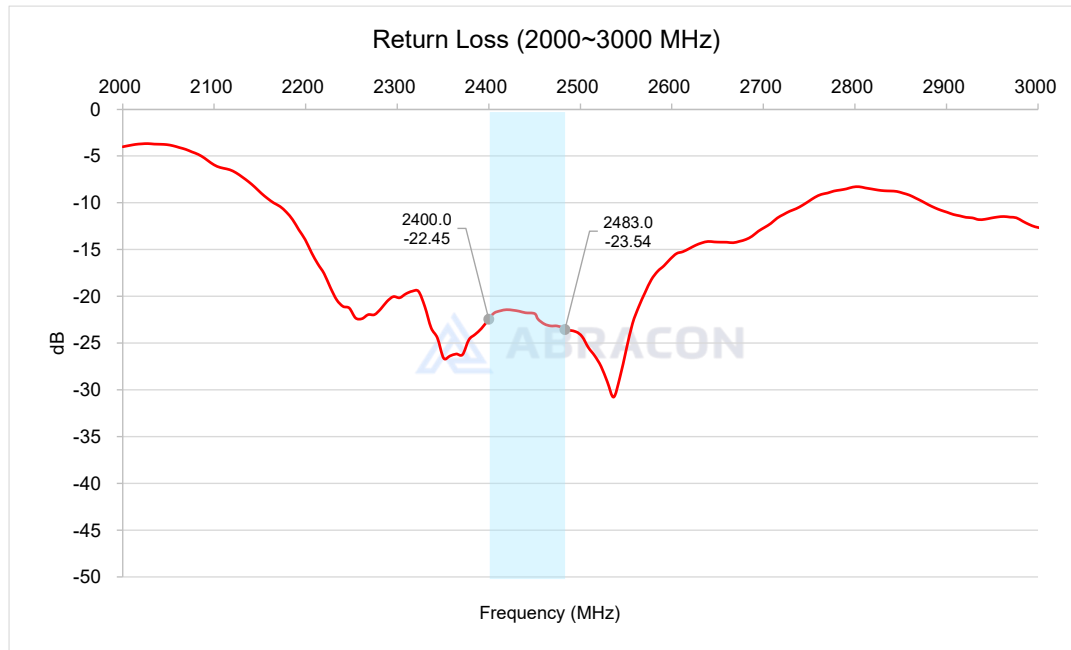


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Reflection Characteristics – Return Loss & VSWR



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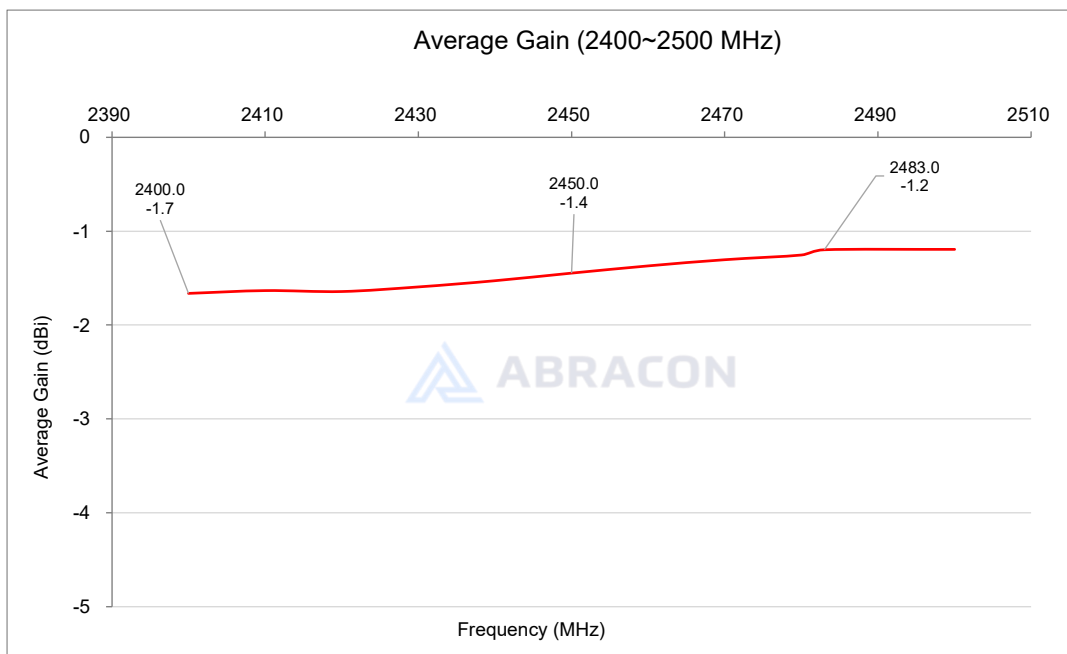
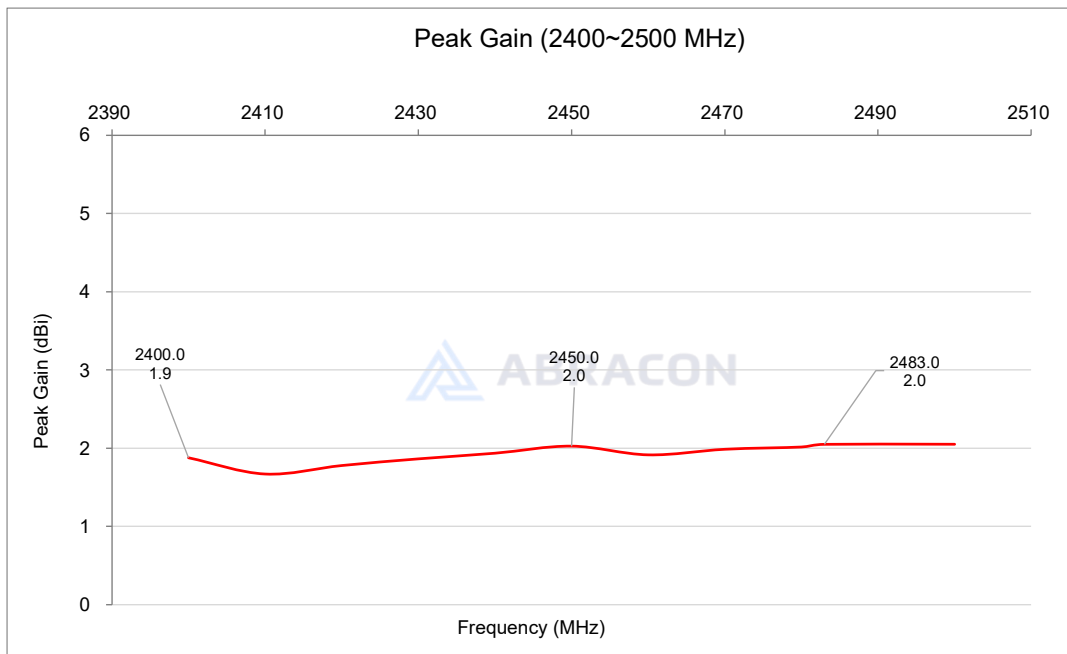


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Radiation Characteristics – Peak Gain & Average Gain



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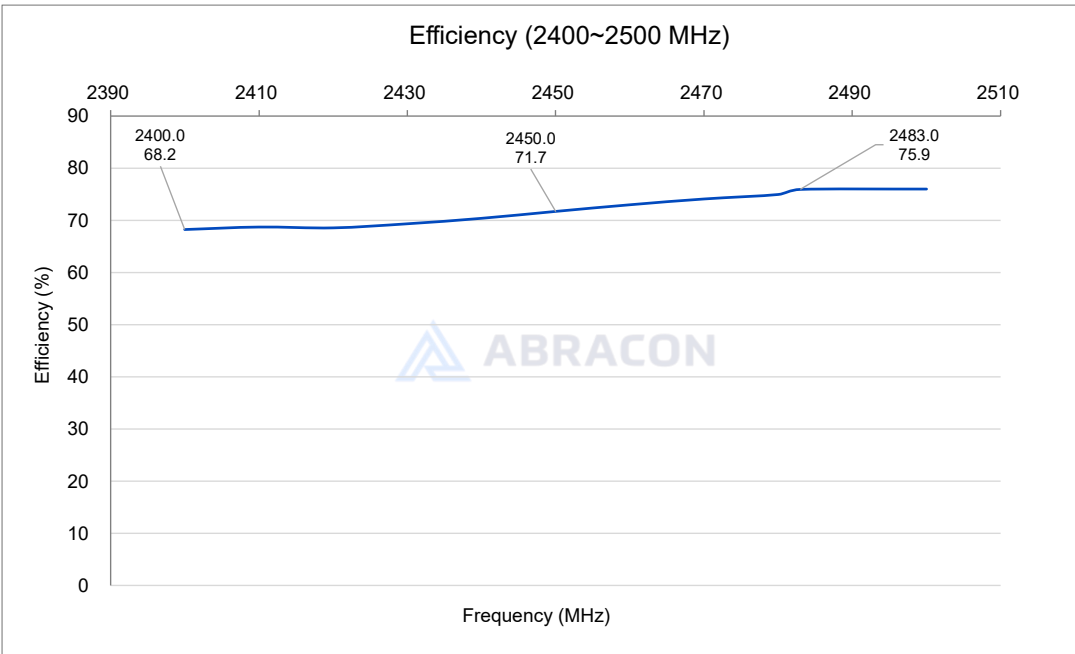


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Radiation Characteristics – Total Efficiency (%)



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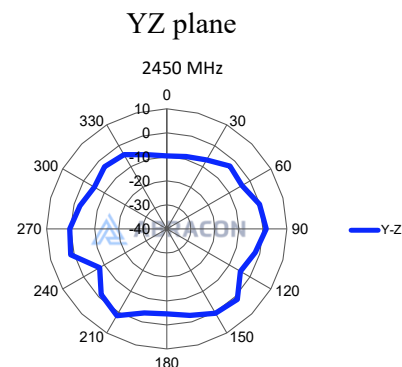
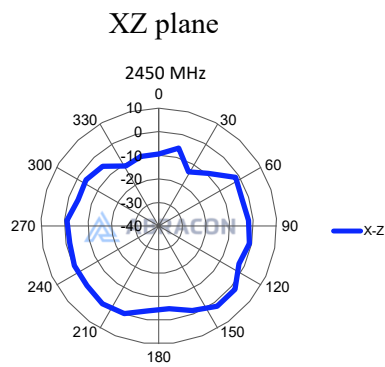
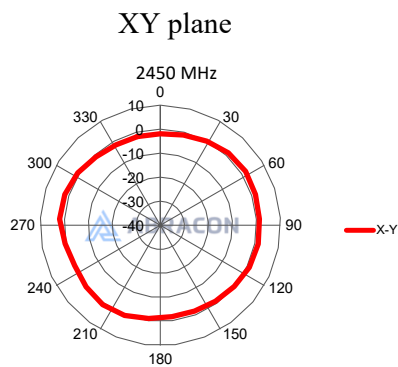
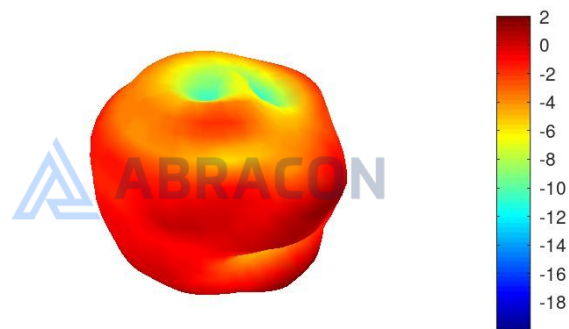
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Radiation Characteristics –3D & 2D Pattern

2450MHz



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Packaging

Number of antennas / PE bag: 40 pcs

Number of PE bags / carton: 10

Total antennas / carton: 400 pcs

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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