



Datasheet

Omnidirectional 2.4GHz 5.8GHz Dual-band WiFi PCB Antenna

Model: AEWP002

PN: M02-0200370R0A

Description:

Mini Black Rugged Waterproof WiFi/Bluetooth/Zigbee Antenna with LPM Encapsulation
Operating Frequency: 2400-2500 MHz | 5100-5900 MHz

Features:

- Peak Gain: 5.62 dBi @2480 MHz
- Cable: LMR-200-UF Cable, L: 1.12 Meter
- Connector: SMA Male
- Dimensions: 20.9 x 40.55 x 11.4 mm
- Ground Plane Independent
- IP68 Rating Waterproof
- Custom Cable and Connector Available
- RoHS Compliant



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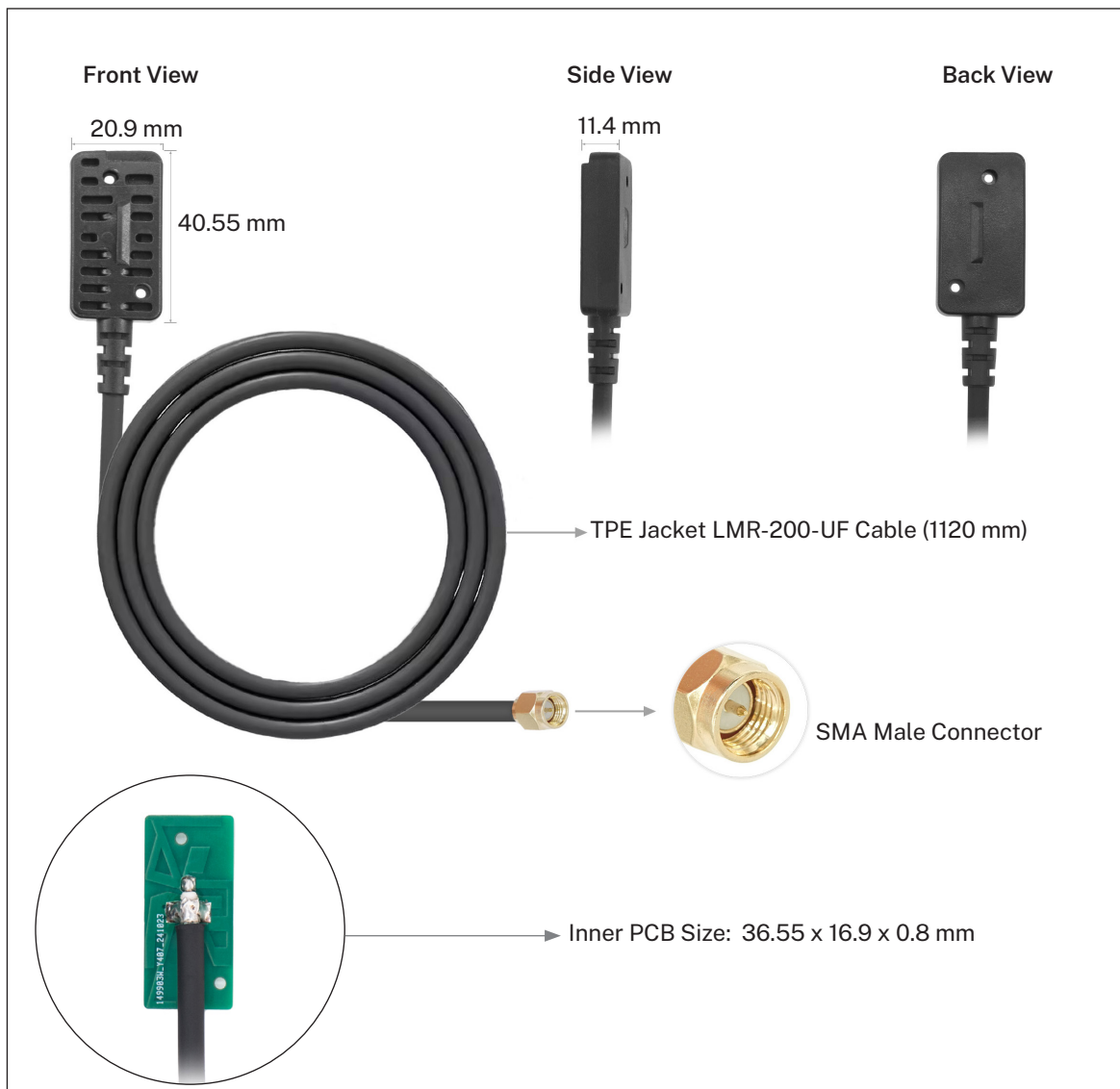


FEATURES & BENEFITS

- 2.4 & 5.8 GHz dual-band performance
- Improved durability with low-pressure injection molding packaging process
- Mini and Compact
- IP68 rated waterproof
- Ground plane independent
- Tailored for household fresh air purifiers
- Customizable RF cables and connectors

APPLICATIONS

- Smart Home Automation
- IoT Devices
- Telecommunications
- Healthcare
- Consumer Electronics
- Transportation and Logistics
- Smart Agriculture





ORDER INFORMATION

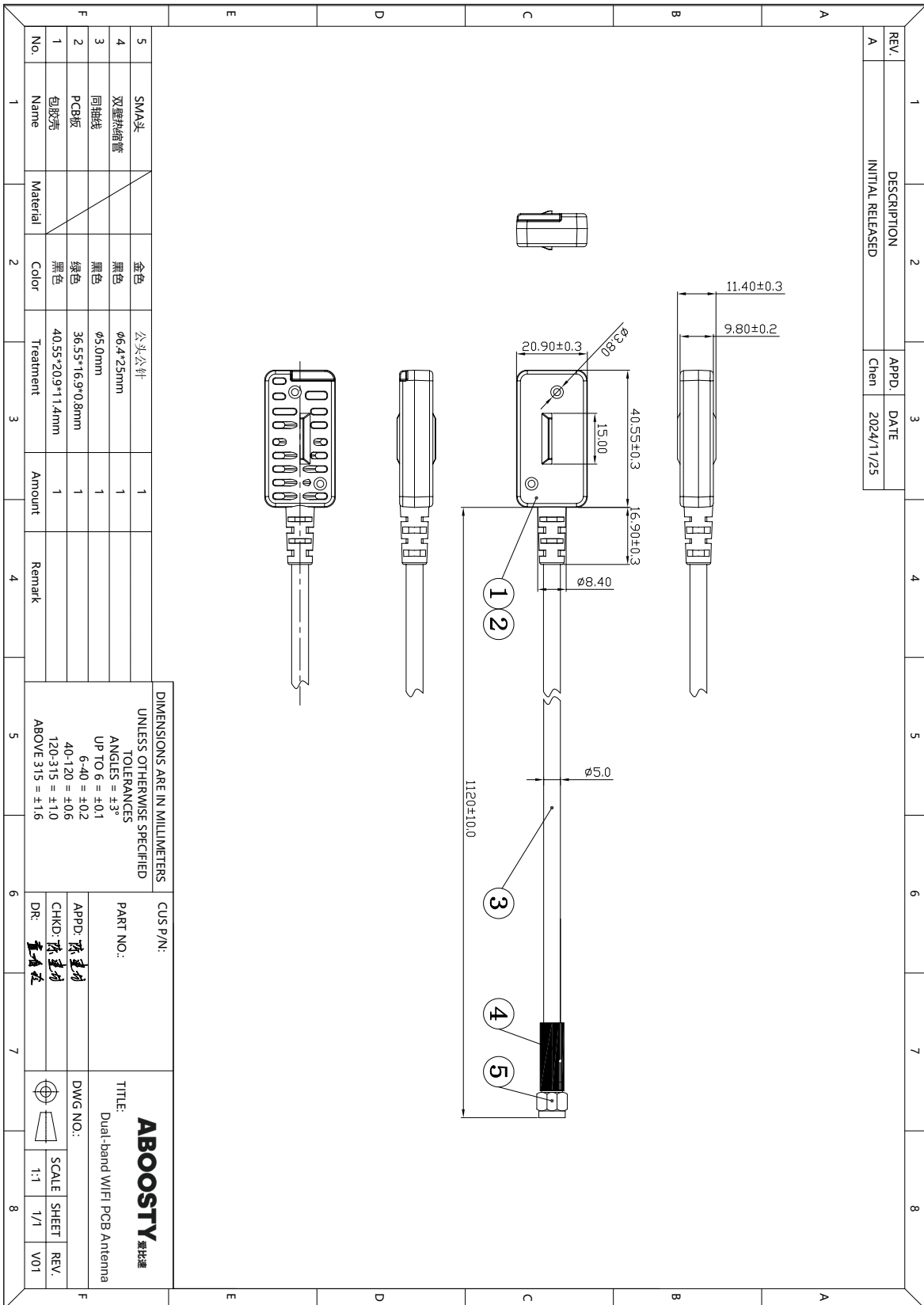
Product Name	Omnidirectional 2.4GHz 5.8GHz Dual-band WiFi PCB Antenna
Model	AEWP002
Part Number	M02-0200370R0A
Dimensions	20.9 x 40.55 x 11.4 mm
Weight	48.2 g (with default cables)
Color	Black
Mounting	Surface mount; mount through two housing fixing holes
Cable	Default TPE jacket LMR-200-UF x 1120 mm length cable, customizable.
Connector	Default SMA MALE connector, customizable.

REFERENCE GUIDE

Technical Features (MHz)	2400-2500	5100-5900
Max VSWR	2.02:1	1.71:1
Max Return Loss	-9.4 dB	-11.6 dB
Max Efficiency	53.81%	63.48%
Peak Gain	5.62 dBi	4.59 dBi
Max Input Power	10 Watts CW	
Radiation Pattern	Omnidirectional	
Polarization	Linear	
Input Impedance	50 Ω	
Operating Temperature	-40°C to +85°C	
Storage Temperature	-40°C to +85°C	
Relative Humidity	10 to 70%	
Material Substance Compliance	RoHS Compliant	
All data were measured with an LMR-200-UF 1.3-meter-long cable. Application data might vary.		



MECHANICAL DIMENSIONS



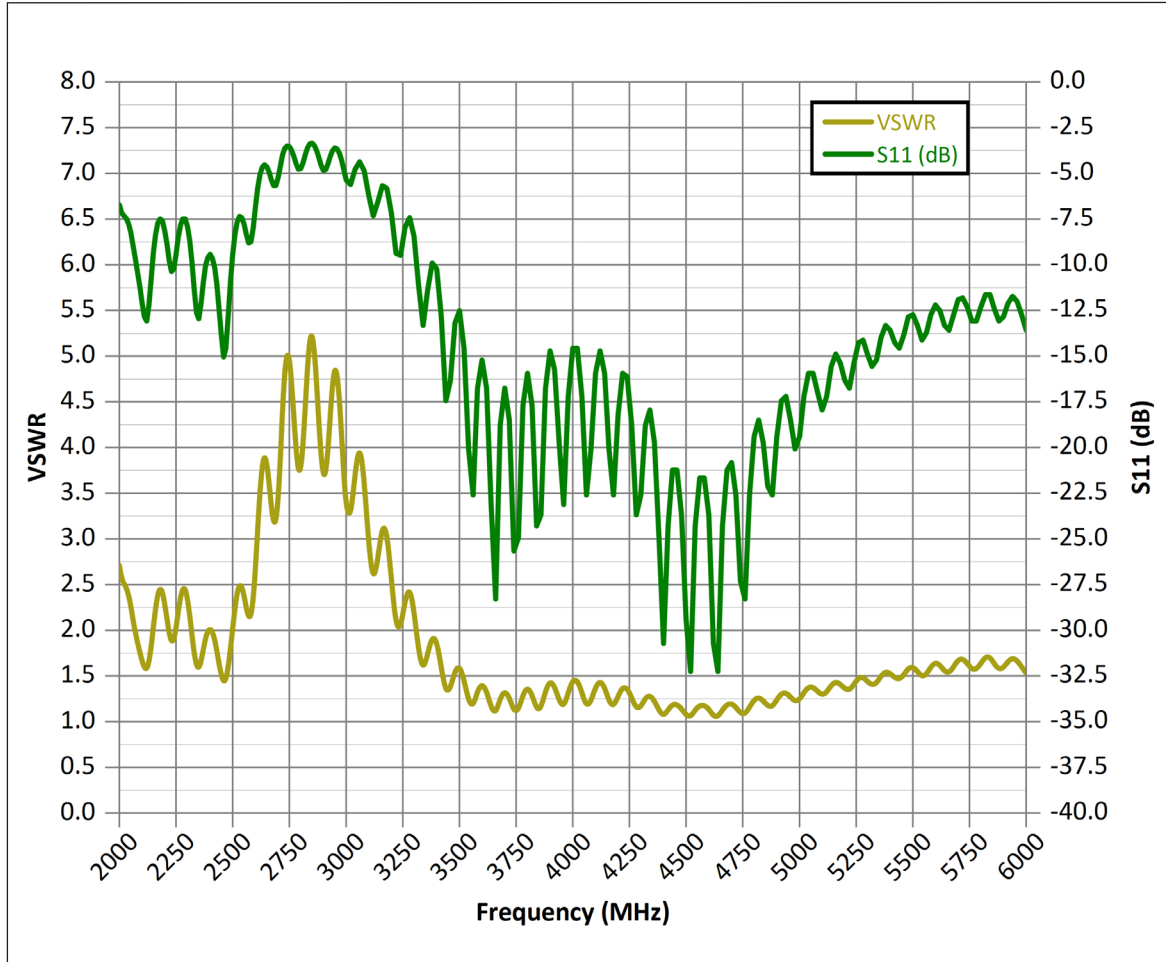


ELECTRICAL PERFORMANCE

© Note

All data displayed below were measured using a 1.3-meter-long LMR-200-UF cable.

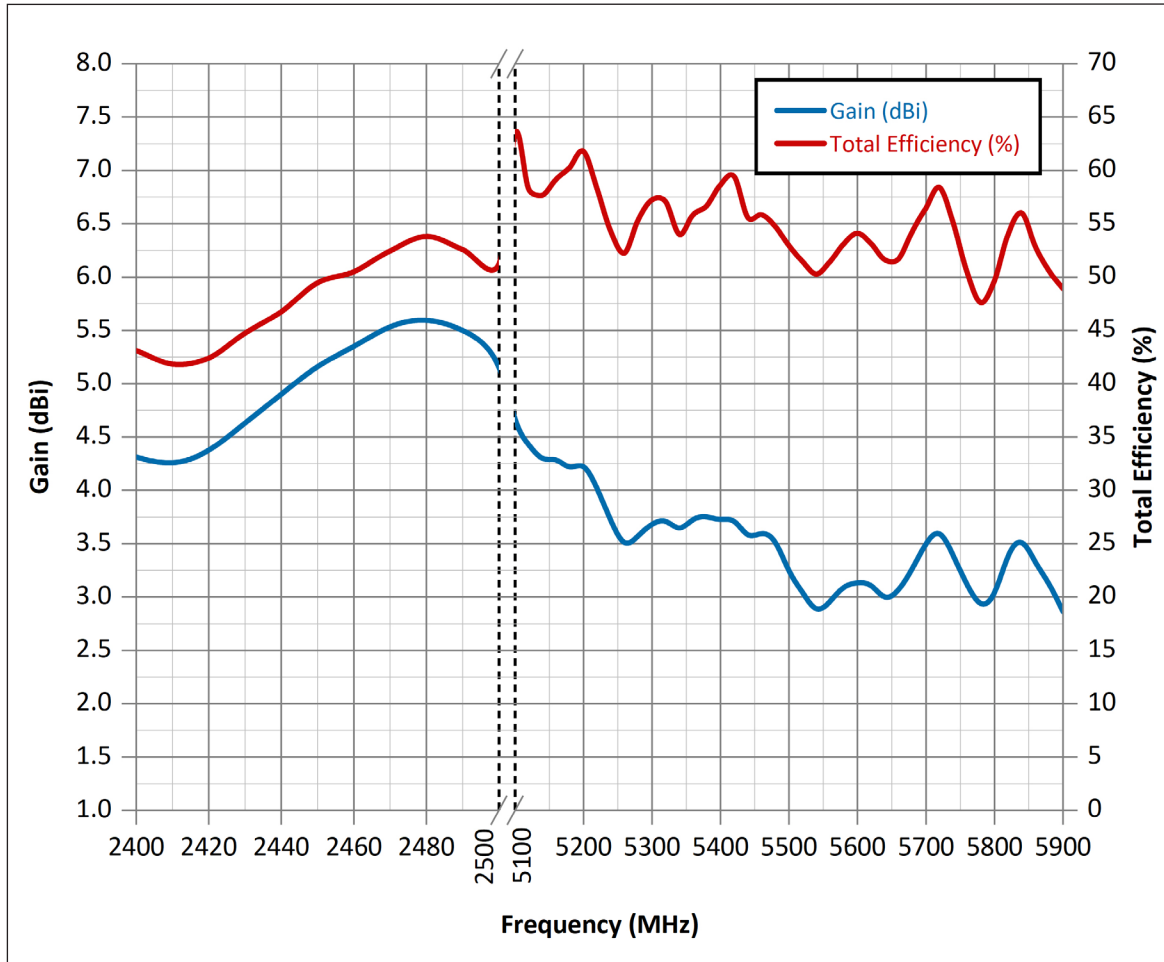
VSWR and Return Loss (S11)



Note: Data measured with 1.3m(4'3") of LMR-200-UF Cable



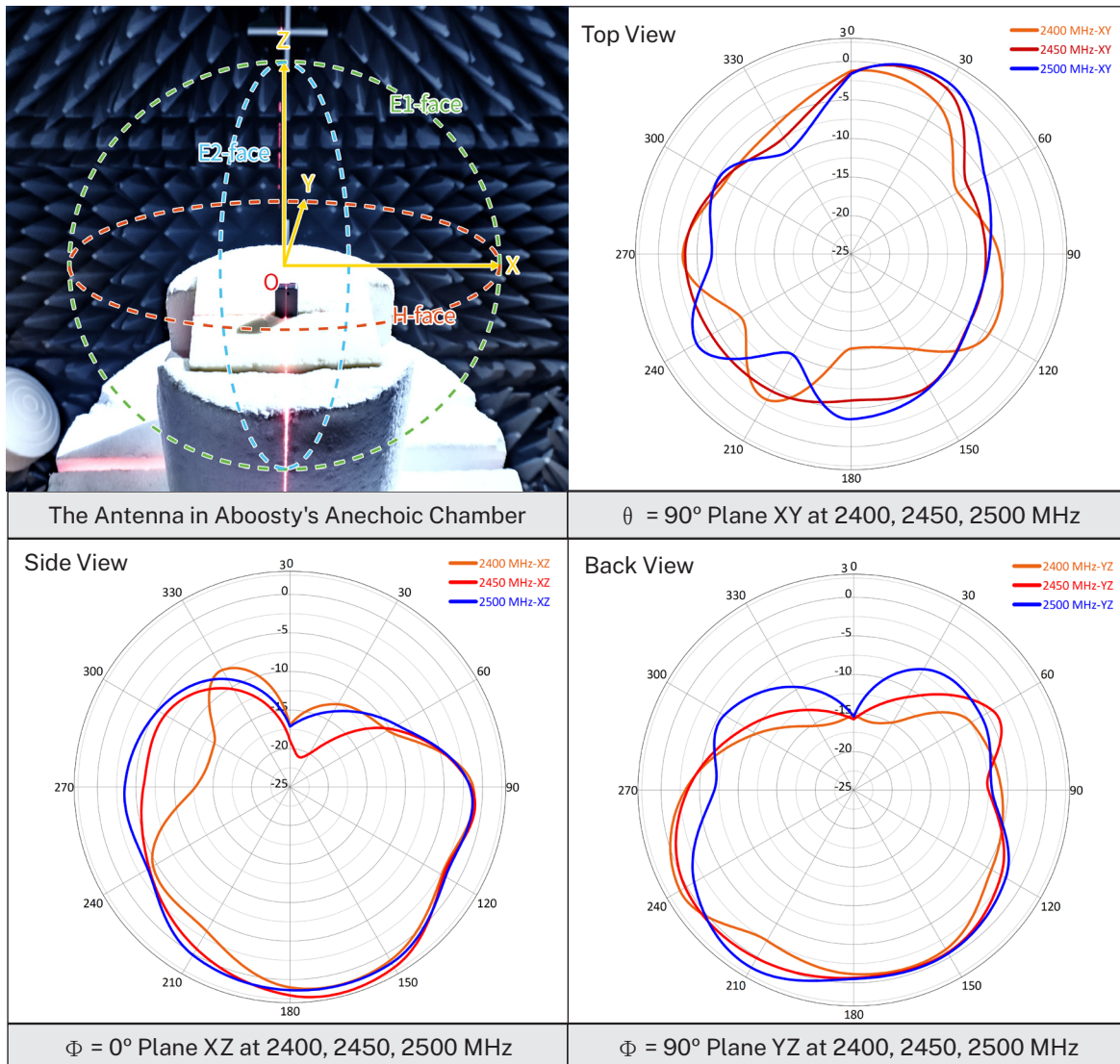
Gain (dBi) and Total Efficiency



Note: Data measured with 1.3m(4'3") of LMR-200-UF Cable

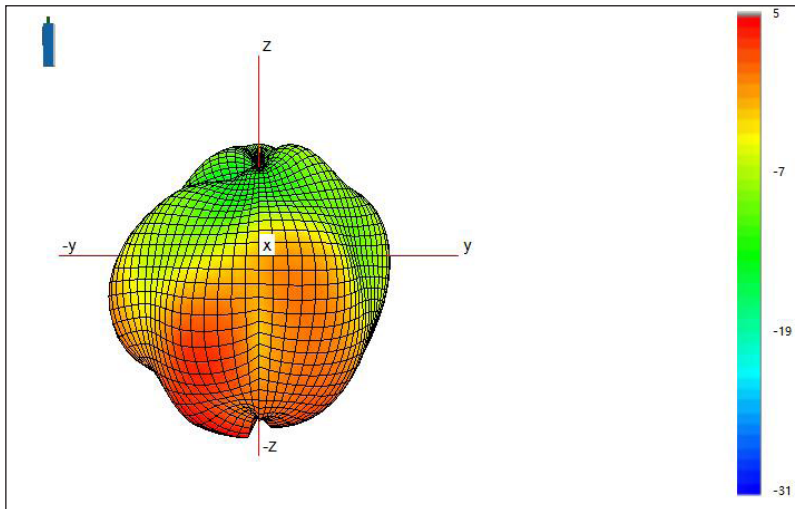
Freq (MHz)	Gain (dBi)	Efficiency (%)	Freq (MHz)	Gain (dBi)	Efficiency (%)
2400	4.31	43.11	2500	5.30	51.18
2410	4.22	41.83	5100	4.59	63.48
2420	4.35	42.38	5200	4.28	61.78
2430	4.64	44.72	5300	3.69	57.22
2440	4.90	46.72	5400	3.71	58.64
2450	5.18	49.44	5500	3.22	52.94
2460	5.34	50.48	5600	3.14	54.10
2470	5.56	52.43	5700	3.52	56.47
2480	5.62	53.81	5800	2.99	49.65
2490	5.52	52.57	5900	2.86	48.91

2D Radiation Patterns (2400-2500 MHz)

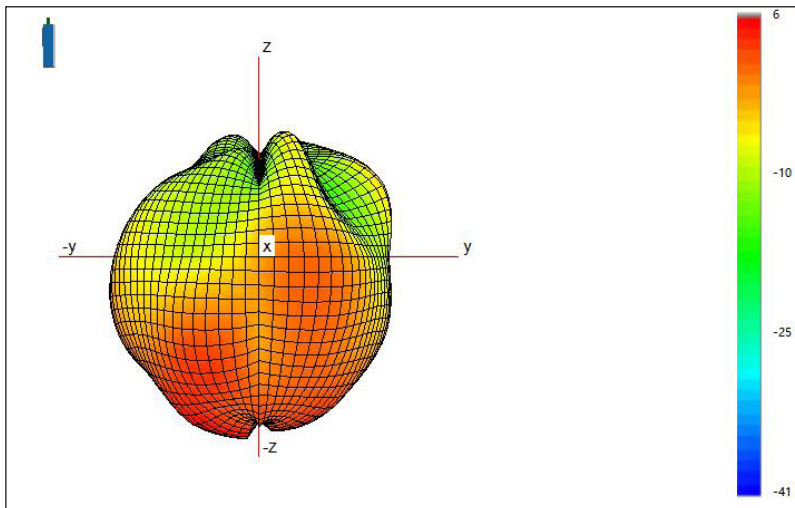


Gain = 4.31 dBi @2400 MHz; 5.18 dBi @2450 MHz; 5.30 dBi @2500 MHz

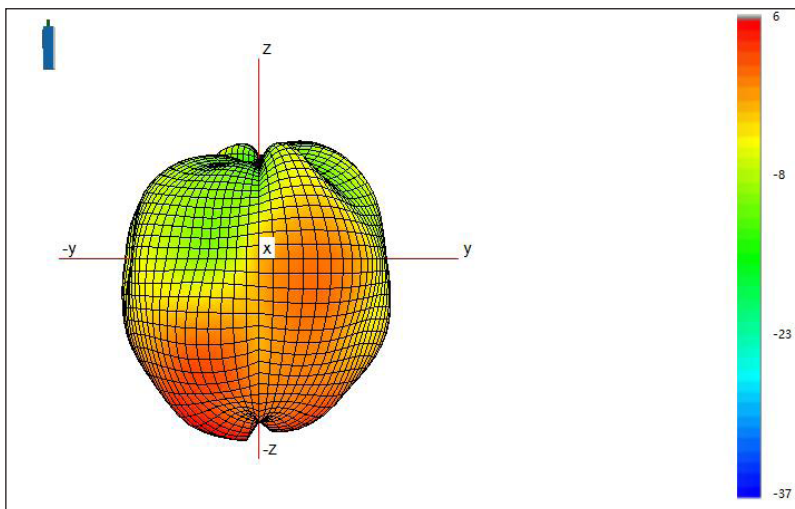
3D Radiation Patterns (2400-2500 MHz)



@2400 MHz, Gain = 4.31 dBi

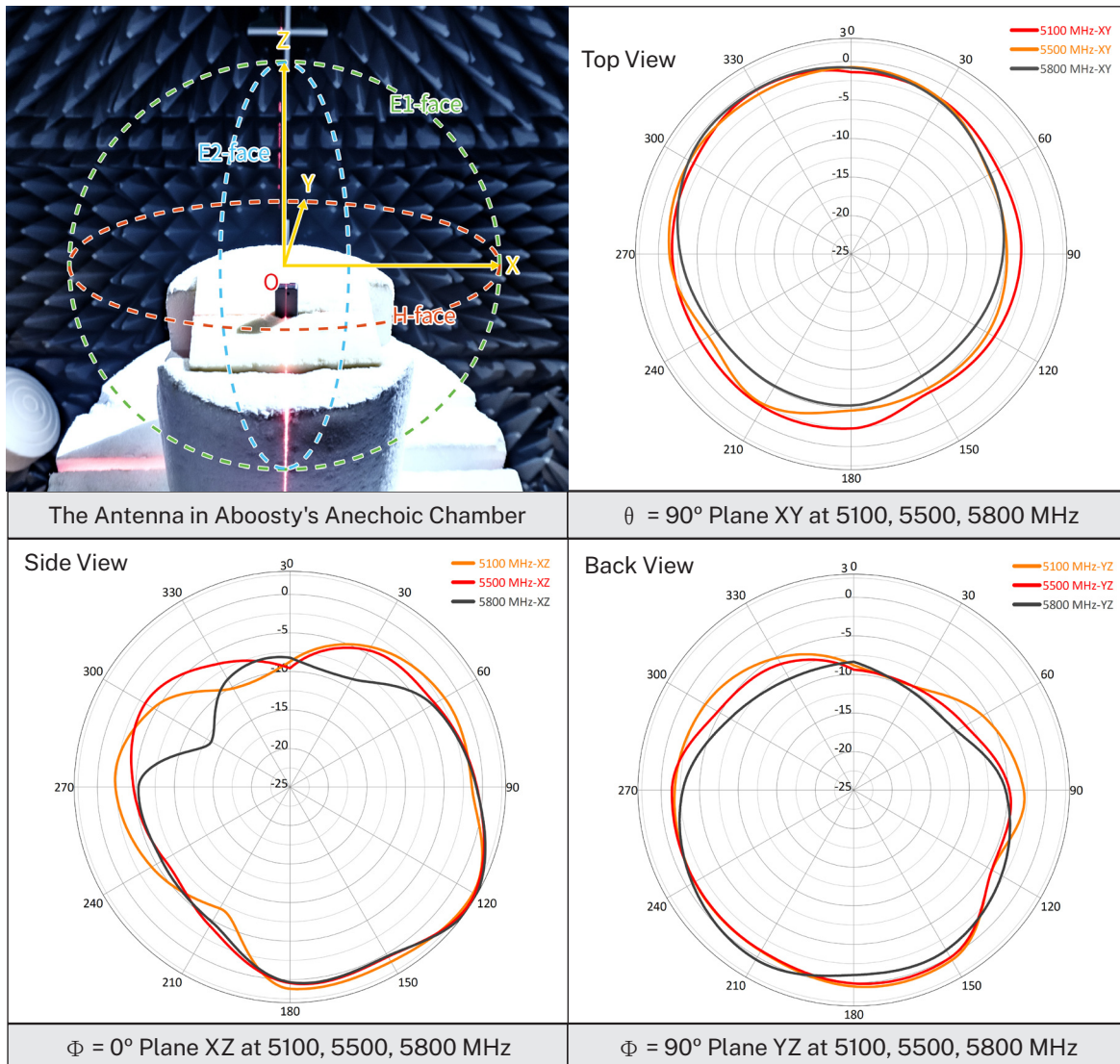


@2450 MHz, Gain = 5.18 dBi



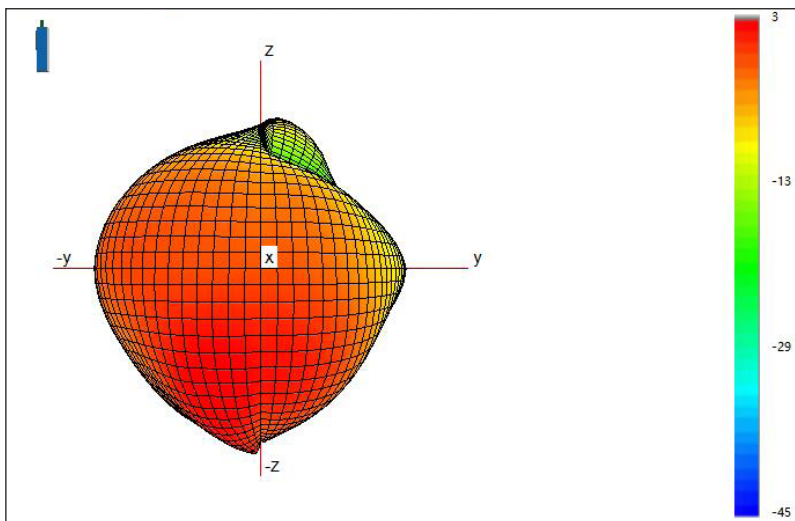
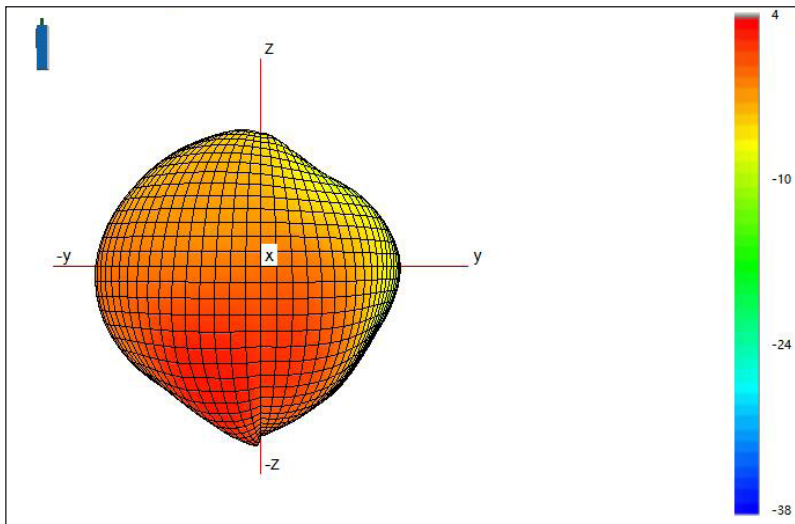
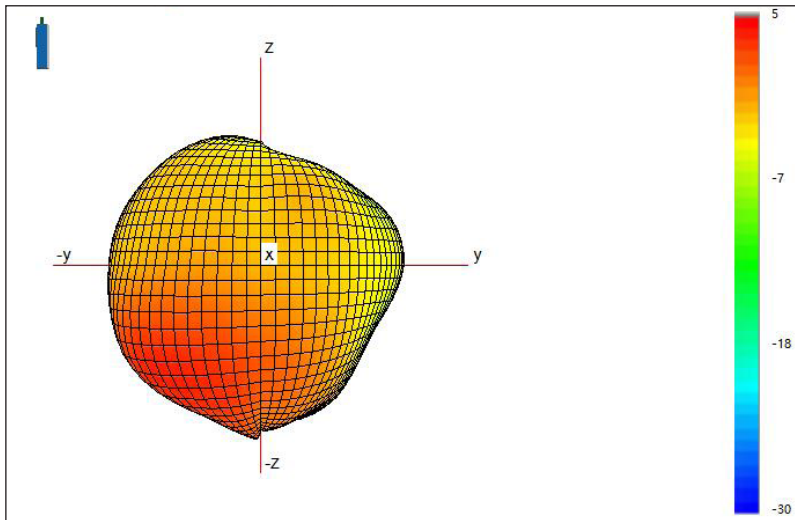
@2500 MHz, Gain = 5.30 dBi

2D Radiation Patterns (5100-5900 MHz)









Gain = 4.59 dBi @5100 MHz; 3.22 dBi @5500 MHz; 2.99 dBi @5800 MHz

3D Radiation Patterns (5100-5900 MHz)



WELCOME ALL ANTENNA OEM/ODM PROJECTS

Why Choose ABOOSTY

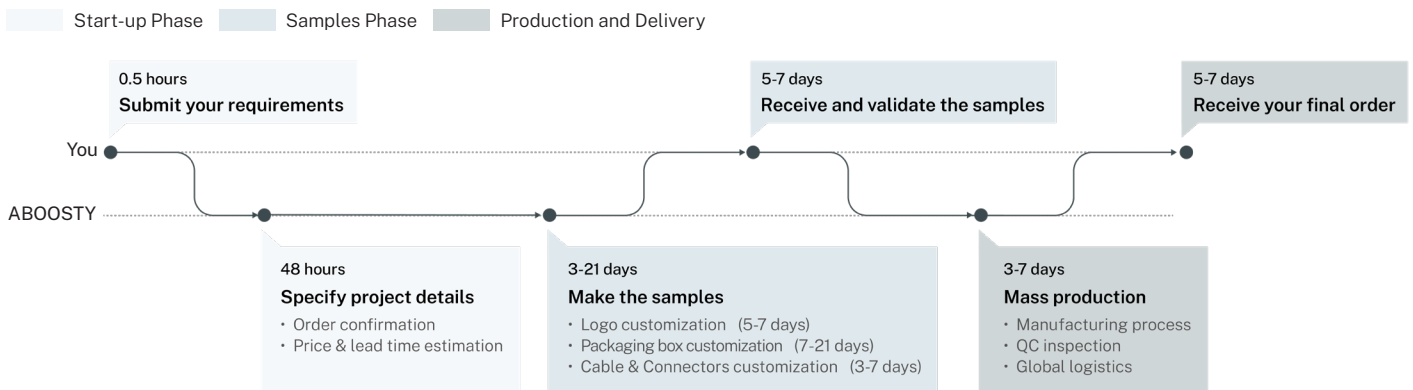
					
10+ years in antenna R&D, production, and OEM/ODM	MES system supported factory; 50M+ units annual output capacity	Factory directly competitive price	Quick price and lead time estimate	Innovative and patented design solutions	Professional team support & prompt reply within 24h

What We Provide

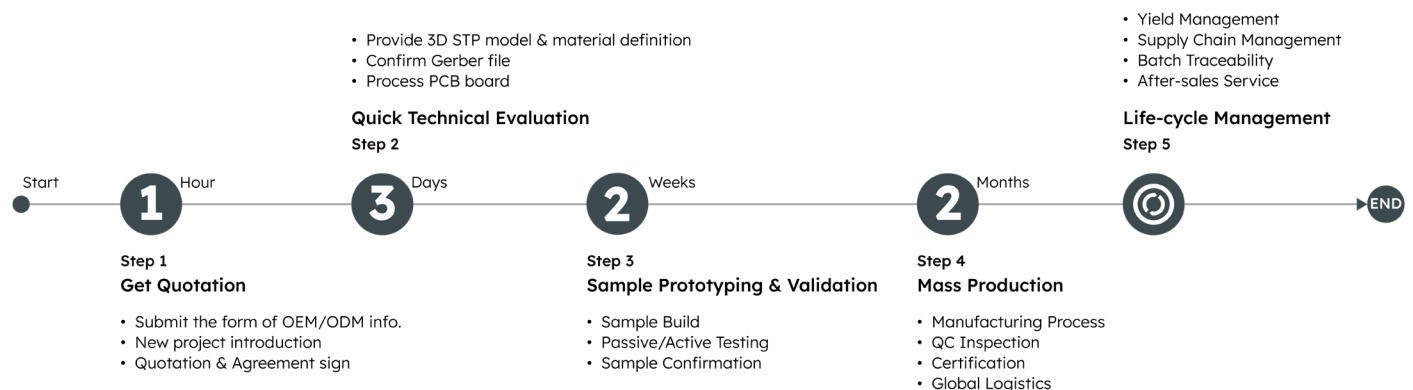
OEM/ODM Services	Light Customization	Deep Customization
	<ul style="list-style-type: none"> • Logo • Packaging • Cables&Connectors 	<ul style="list-style-type: none"> • In-depth tailoring for specific applications • Functional enhancements • Environmental adaptations • Vertical certifications • ...

Custom Process

Light Customization Process



Deep Customization Process



Note: You can let us handle the PCB prototyping or do it yourself. Choosing self-prototyping may add 2 to 5 weeks to the timeline.


Boost Your Signal
with Our Antennas

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