



Datasheet

External Circular Polarized Active GPS Antenna with Screw Mount

Model: AEGW002

PN: M02-0300220R0A

Description:

Active B1/L1/G1 Band BDS/GPS/GLONASS Antenna

Operating Frequency: 1550 - 1610 MHz

Features:

UV-resistant, impact-resistant, waterproof

Cable: 100 mm RF 1.13

Connector: IPEX 1

Dimensions: Φ 32 x 59.9 mm

Customizable Options: RF cables, connectors

RoHS Compliant





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FEATURES & BENEFITS

- Lightweight, low profile and rugged design
- Easy installation with a built-in bolt interface, allowing it to be directly screwed onto devices without the need for additional screws.
- The perfect anti-vandal antenna with a UV and impact-resistant outer shell
- Dustproof and waterproof, durable and stable in harsh environments

APPLICATIONS

- Military, Law Enforcement, or Private Security
- Hand-held/Portable Devices
- Asset and Fleet Tracking
- Scientific Instrumentations
- Oil, Gas, and Mining Industries
- M2M Applications
- Precision Agriculture
- BeiDou B1 Band / GPS L1 Band / GLONASS G1 Band

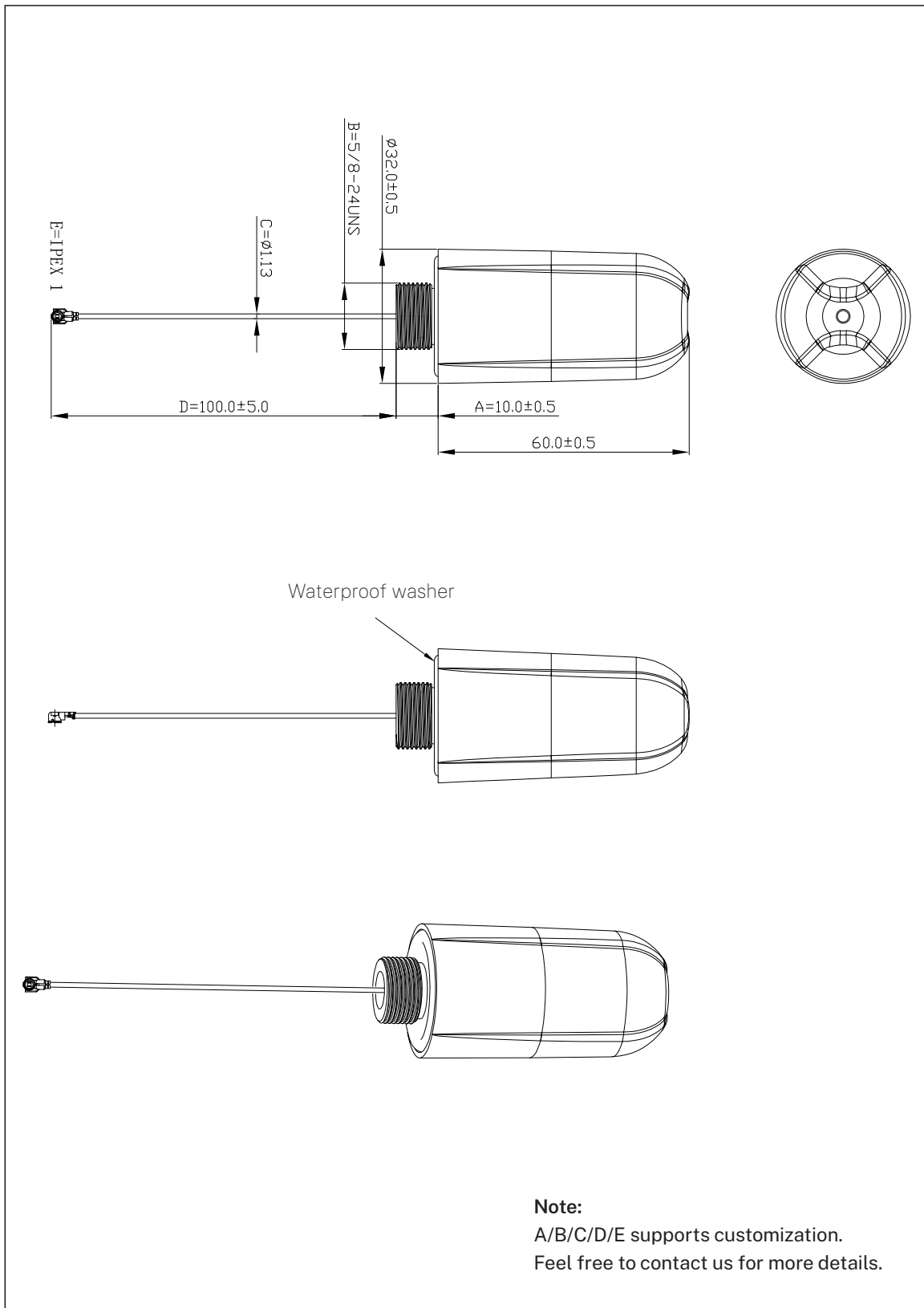


Antenna Image

ORDER INFORMATION

Product Name	External Circular Polarized GPS Antenna with Screw Mount
Part Number	M02-0300220R0A
Dimensions	Ø32 x 59.9 mm
Weight	31 g
Color	Black
Outer Shell Material	PC+ABS+UV
Mounting	Screw mount
Cable	Default IPEX 1 RF 1.13 coaxial cable (Ø 1.13 x 100 mm) , customizable.

MECHANICAL DIMENSIONS





REFERENCE GUIDE

Antenna				
Frequency	1550-1610 MHz			
Technical Features	BeiDou	GPS	GLONASS	
	1561 ± 2 MHz	1575.42 ± 2 MHz	1602 ± 5 MHz	
Frequency Bands	B1 Band	L1 Band	G1 Band	
Passive Efficiency (Max)	34.24 %	33.40 %	29.09 %	
Passive Gain	1.24 dBic	0.87 dBic	0.23 dBic	
Axial Ratio (AR)	<1.5 dB			
Passive VSWR	<2			
Input Impedance	50 Ω			
Polarization	RHCP			
Radiation Pattern	Directional			
LNA				
Active Gain	29.16 dB	27.16 dB	27.31 dB	
LNA Gain	28.71 dB	28.10 dB	27.44 dB	
Noise Figure	1.5 Max			
DC Voltage	3.3 ± 0.3 V			
DC Current	12 ± 2 mA (@3.0 V)			
Environmental				
Operating Temperature	-40°C to +85°C			
Storage Temperature	-40°C to +90°C			
Relative Humidity	Non-condensing 65°C 95% RH			
Vibration	Wave Form: Random Vibration			
	Test Time: 30min/Axis			
	Direction: X, Y, Z Axis			
	PSD Break Points for 9.8 RMS (m/s ²)	Frequency (Hz)	50	300
Acceleration ((m/s ²)/Hz)		0.38416	0.38416	
RoHS Compliant	Yes			
All data were measured with an 100-mm-long RF 1.13 cable. Application data might vary.				

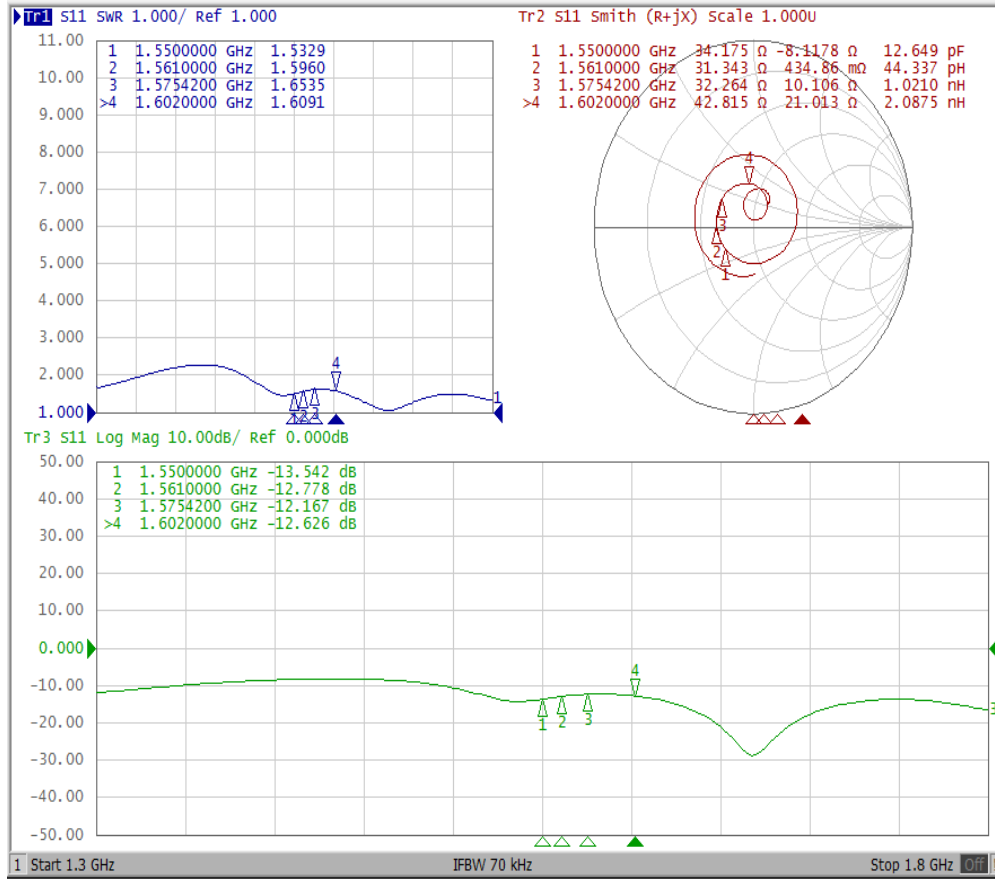


ELECTRICAL PERFORMANCE

© Note

All data displayed in "ELECTRICAL PERFORMANCE" were measured with a 100-mm-long RF 1.13 cable.

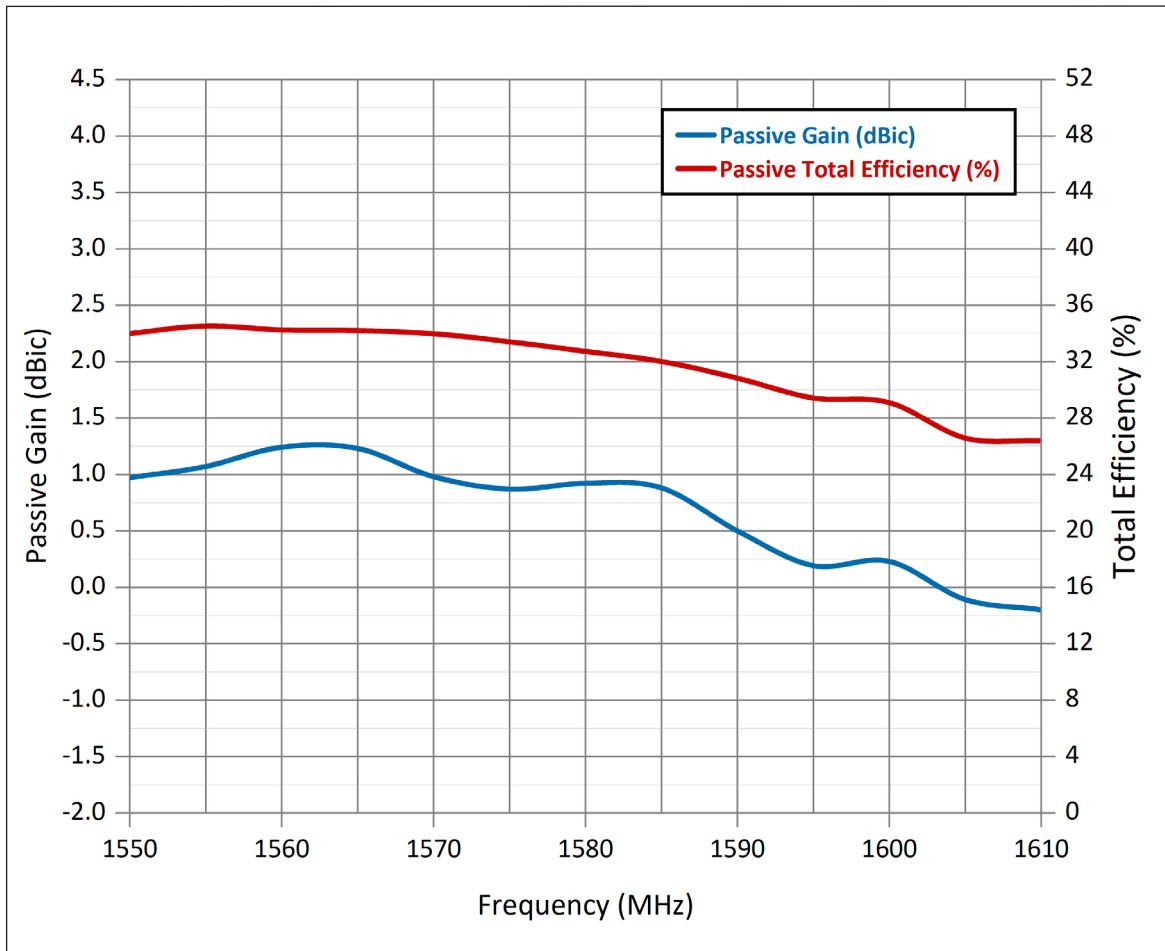
Passive S11 (dB)



(Note: Data were tested with 100 mm of RF 1.13 cable.)



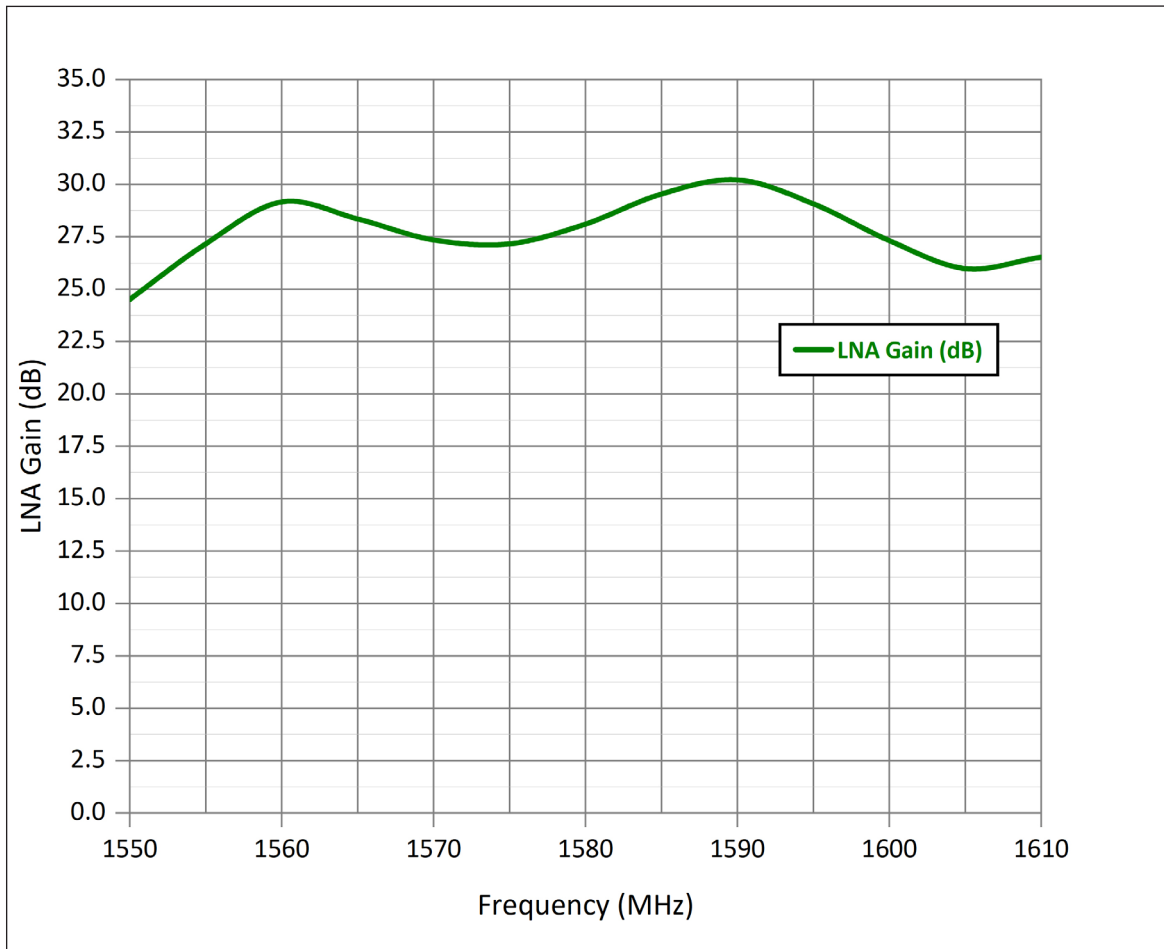
Passive Gain (dBic) and Total Efficiency (%)



(Note: Data were tested with 100 mm of RF 1.13 cable.)



Active Gain (dB)

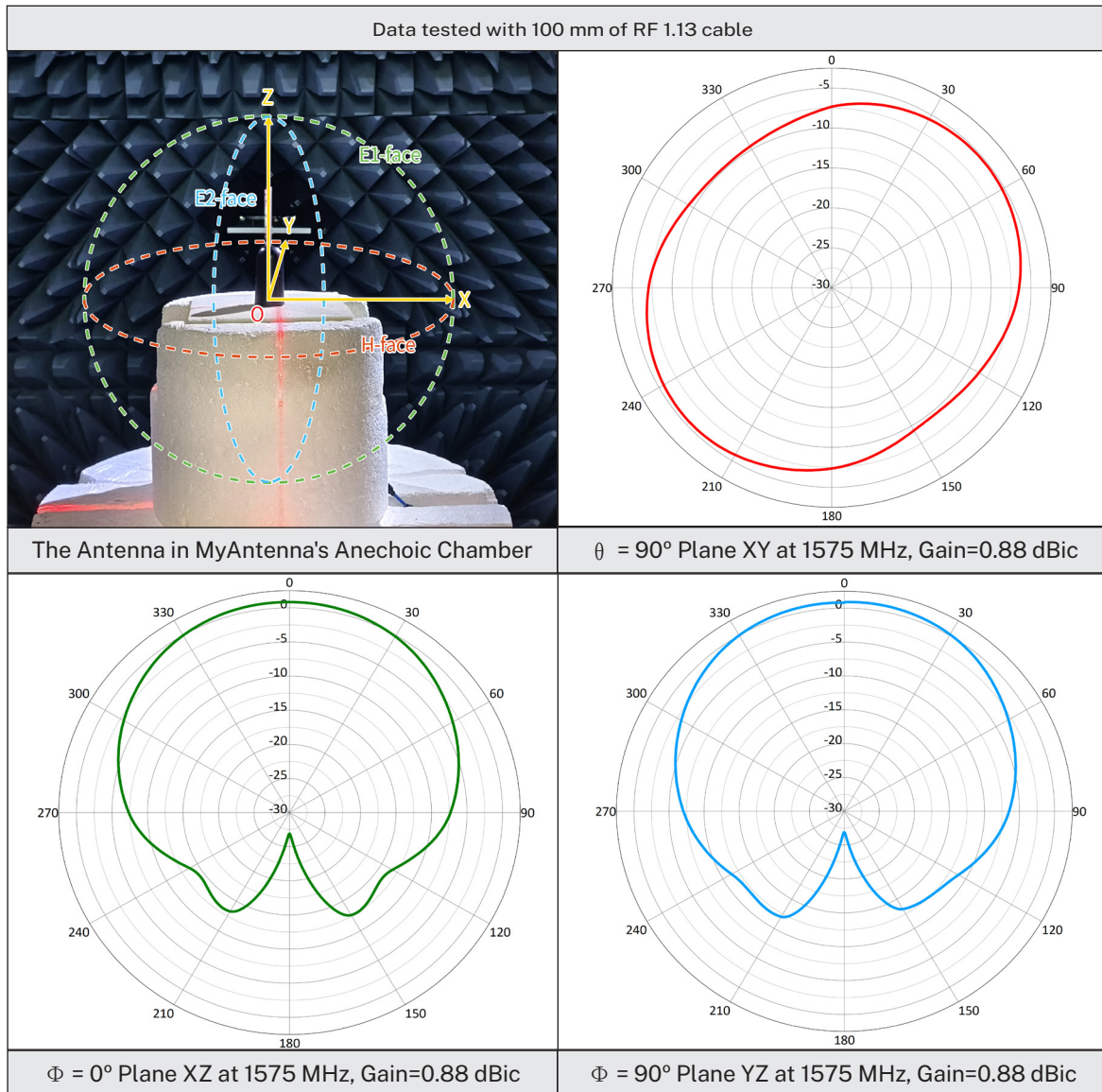


(Note: Data were tested with 100 mm of RF 1.13 cable.)

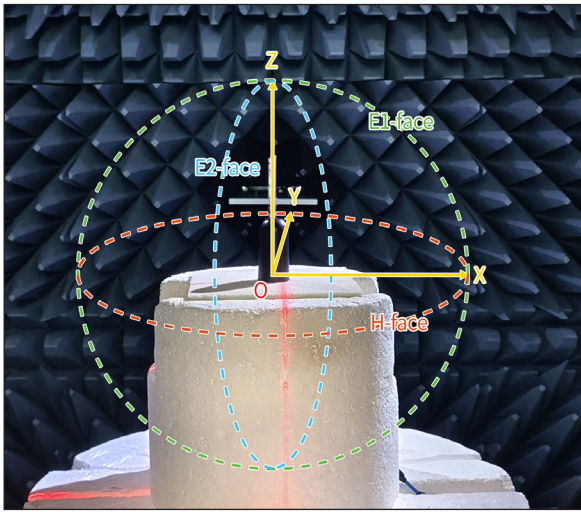


Antenna Data			
Freq (MHz)	Passive Gain (dBic)	Passive Efficiency (%)	Active Gain (dB)
1550	0.97	33.99	24.5
1555	1.07	34.52	27.16
1560	1.24	34.24	29.16
1565	1.23	34.2	28.34
1570	0.98	33.98	27.34
1575	0.87	33.4	27.16
1580	0.92	32.73	28.1
1585	0.88	32	29.53
1590	0.5	30.82	30.21
1595	0.19	29.41	29.07
1600	0.23	29.09	27.31
1605	-0.11	26.57	25.98
1610	-0.2	26.38	26.52

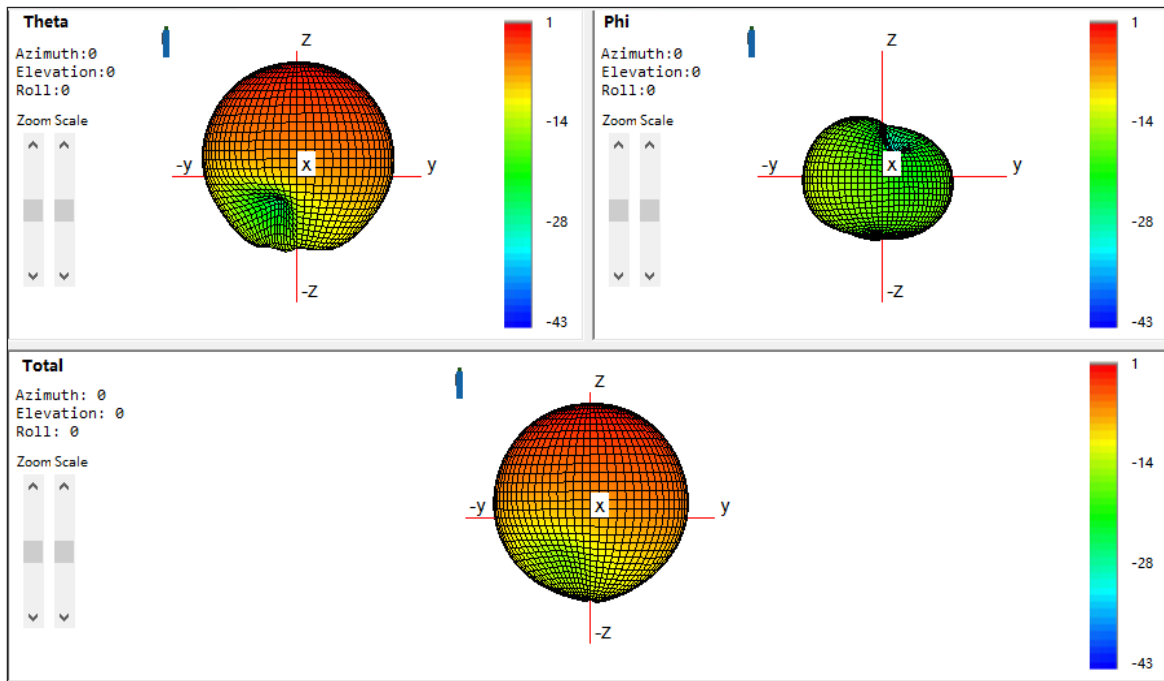
Passive 2D Radiation Patterns (1550-1610 MHz)



Passive 3D Radiation Patterns (1550-1610 MHz)

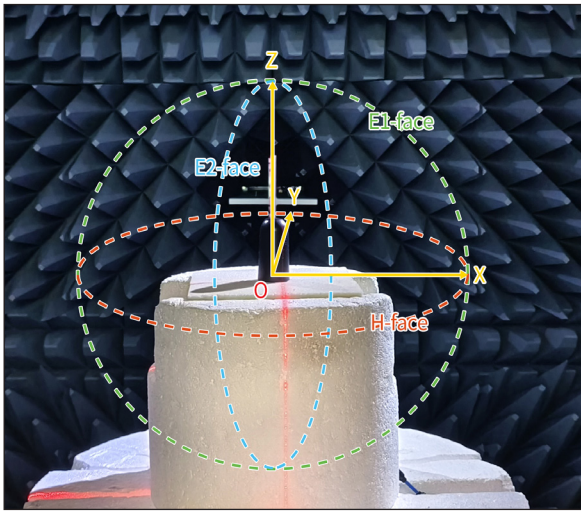


The Antenna in MyAntenna's Anechoic Chamber

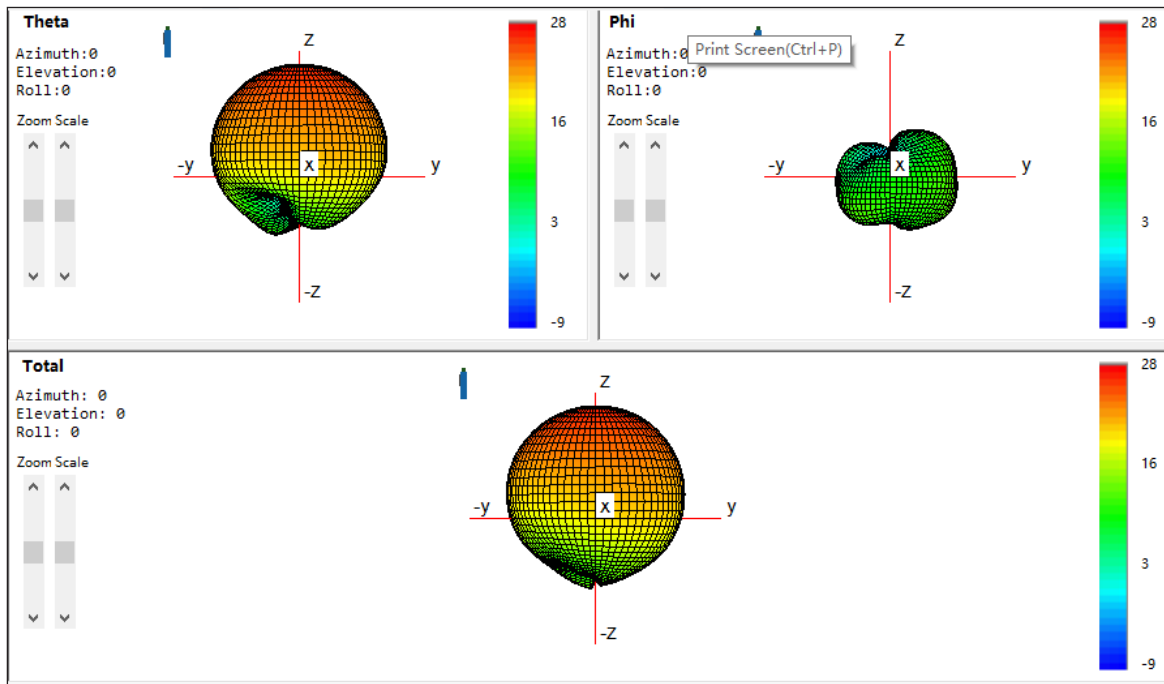


(Note: Data were tested with 100 mm of RF 1.13 cable.)

Active 3D Radiation Patterns (1550-1610 MHz)



The Antenna in MyAntenna's Anechoic Chamber



(Note: Data were tested with 100 mm of RF 1.13 cable.)



WELCOME ALL ANTENNA OEM/ODM PROJECTS

About ABOOSTY



10+ years in antenna R&D, production, and OEM/ODM



House of Aboosty: 1 M+ units annual output capacity



Factory directly competitive price



Industry-leading quality levels



Professional team-work & support



Quick price and lead time estimation

Why Choose ABOOSTY



Innovative and patented design solutions



Full terminal devices anechoic chamber test



Co-location with its custom



Competitive price



Strict inspection



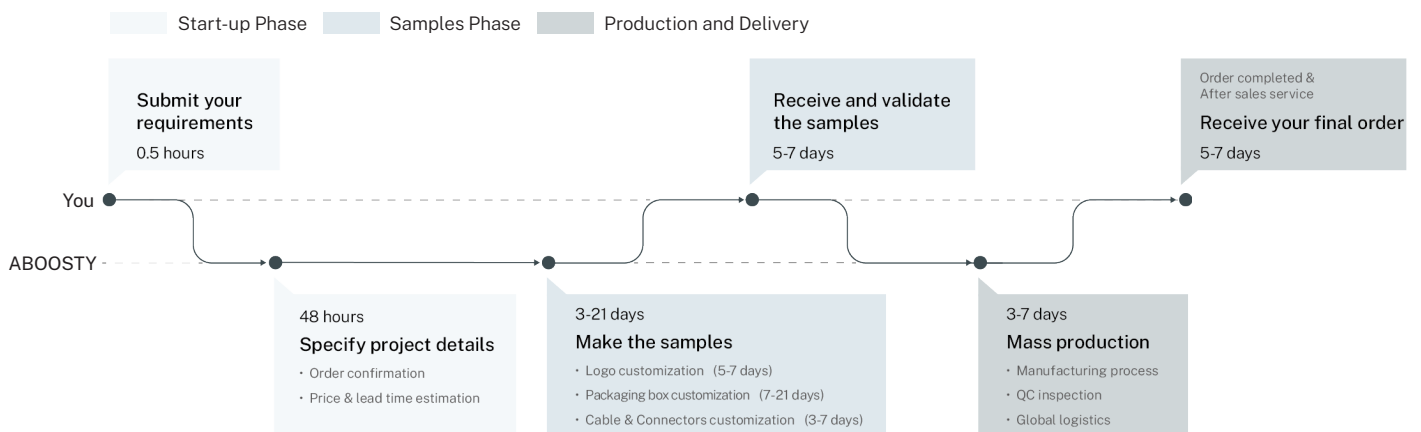
Prompt reply within 24h

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 • ...

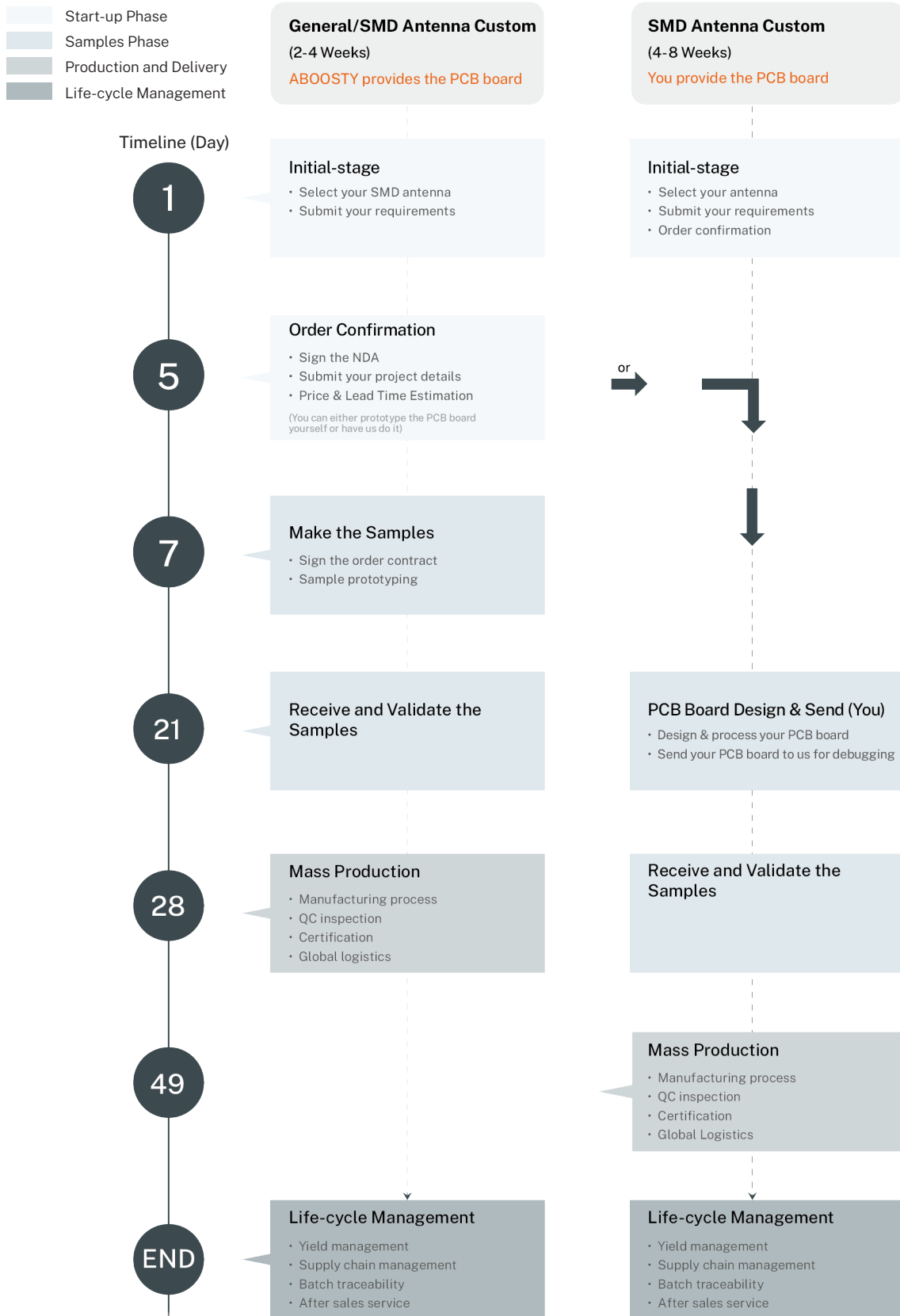
Custom Process

Light Customization Process





Deep Customization Process




Boost Your Signal
with Our Antennas

ABOOSTY

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