



Datasheet

Circularly Polarized Passive GPS Embedded Ceramic Patch Antenna

Model: AIGC008

PN: M04-0102660R0A

Description:

GPS/GLONASS Passive Patch Antenna

Operating Frequency: 1572-1578 MHz

Features:

Ceramic Patch Element

Dimensions: 12 x 12 x 2mm

Tuned for 15 x 15 mm Ground Plane

Low Axial Ratio

Adhesive Mount

RoHS Compliant



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 Global Site: www.aboosty.com  China Site: www.aboosty.cn

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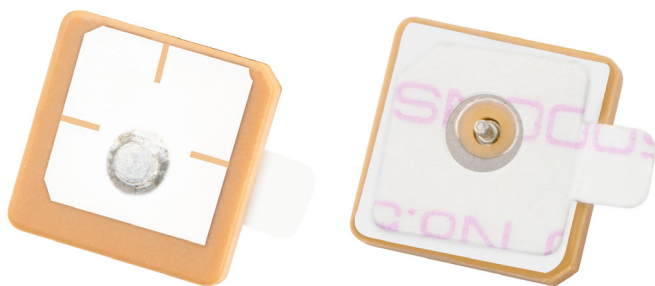


FEATURES & BENEFITS

- 12x12x2mm Embedded Ceramic Patch Element
- Miniaturized, Multi-system Compatible
- Low Axial Ratio
- Adhesive Mount
- RoHS Compliant
- Covering Bands: GPS (L1) / Galileo (E1)

APPLICATIONS

- Satellite Navigation Receivers
- Geodetic Surveying and Mapping
- Channel Surveying and Mapping
- Precision Agriculture
- Marine Surveying
- Asset and Fleet Tracking
- Oil, Gas, and Mining Industries
- M2M Applications
- Hand-held/Portable Devices



Antenna Image

ORDER INFORMATION

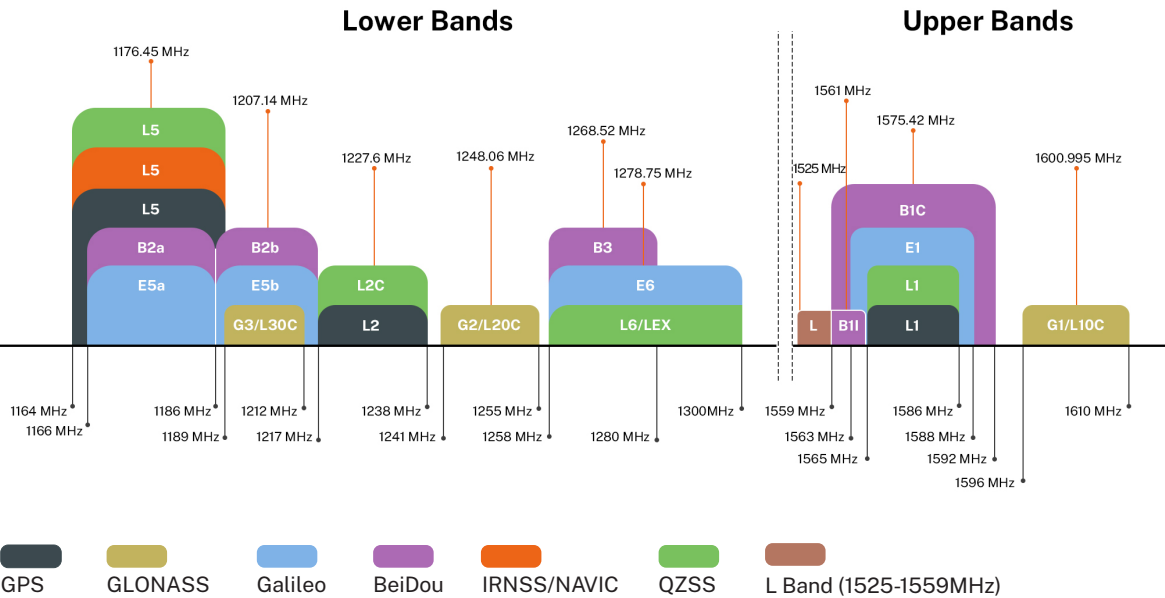
Product Name	Circularly Polarized Passive GPS Embedded Ceramic Patch Antenna
Model	AIGC008
Part Number	M04-0102660R0A
Dimensions	12x12x2mm
Weight	1.5g
Mounting	Internal/Embedded/Adhesive Mount
MOQ	500 pcs
Custom Options	Logo, Packaging, Cable and Connectors



GNSS FREQUENCY BANDS

GNSS Frequency Bands Covered					
GPS	L1	L2	L5		
	●	○	○		
GLONASS	G1	G2	G3		
	○	○	○		
Galileo	E1	E5a	E5b	E6	
	●	○	○	○	
Bei Dou	B1I	B1C	B2a	B2b	B3
	○	●	○	○	○
QZSS (Regional)	L1	L2C	L5	L6	
	●	○	○	○	
IRNSS(Regional)	L5				
	○				
SBAS	L1/E1/B1	L5/B2a/E5a	G1	G2	G3
	○	○	○	○	○

*SBAS systems: WASS(L1/L5), EGNOS(E1/E5a), SDCM(G1/G2/G3), SNAS(B1,B2a), GAGAN(L1/L5), QZSS(L1/L5), KAZZ(L1/L5).





REFERENCE GUIDE

Antenna	
Frequency	1575±3 MHz
Bandwidth	6MHz
VSWR	2.0: 1
Peak Gain (dBi)	-5 (15×15mm ground plane)
Axial Ratio (dB)	<6
Polarization	RHCP
Radiation Pattern	Directional
Input Impedance	50 Ω

Environmental				
Operating Temperature	-40°C to +85°C			
Storage Temperature	-55°C to +100°C			
Relative Humidity	10%~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) ² /Hz)	0.38416	0.38416
RoHS Compliant	Yes			
All data were measured with a 15 x 15 mm ground plane. Application data might vary.				

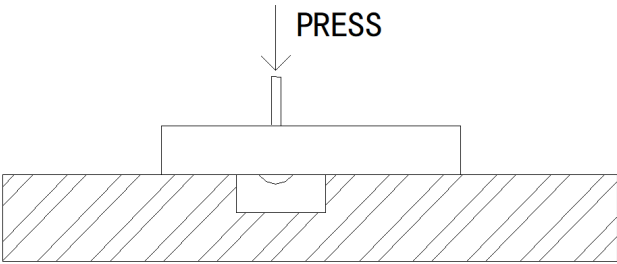
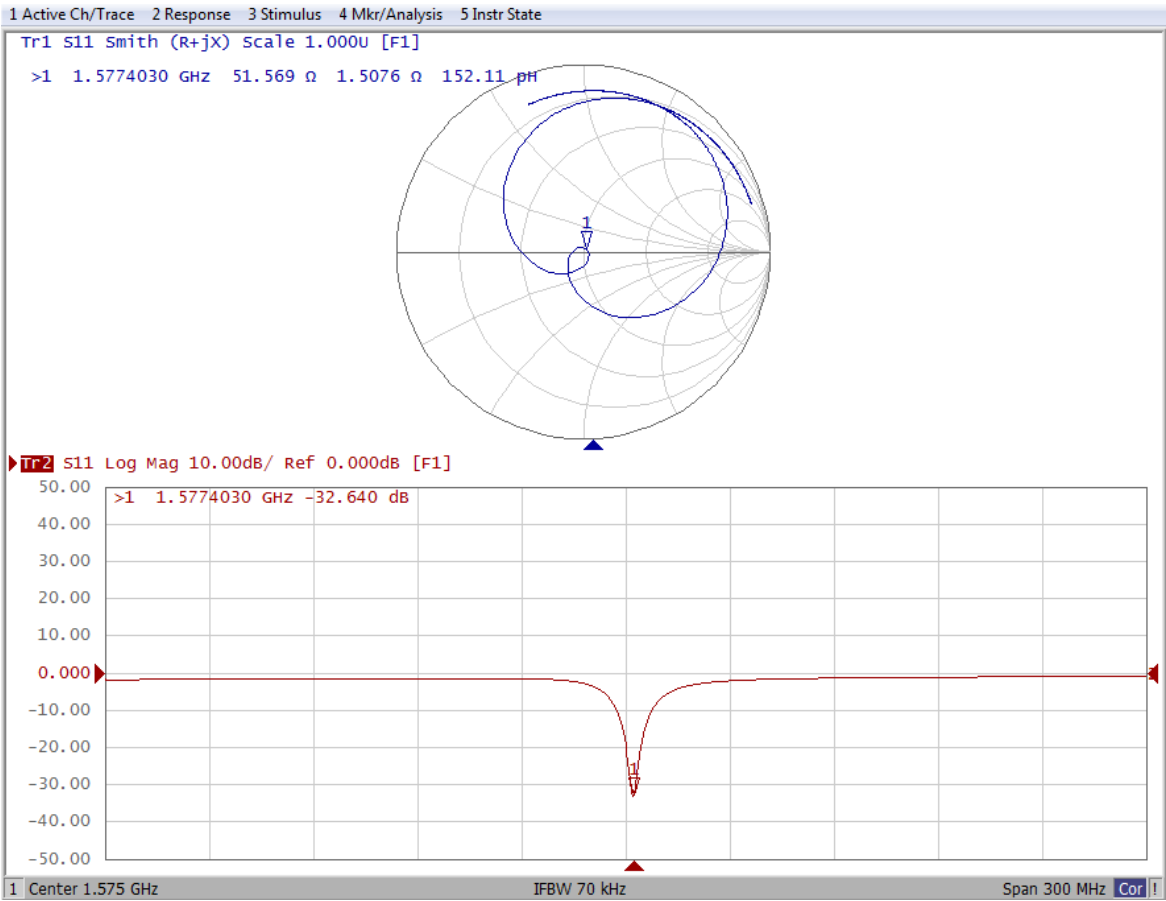


ELECTRICAL PERFORMANCE

ⓘ **Note**

All data displayed in "ELECTRICAL PERFORMANCE" were measured with a 15 x15 mm ground plane.

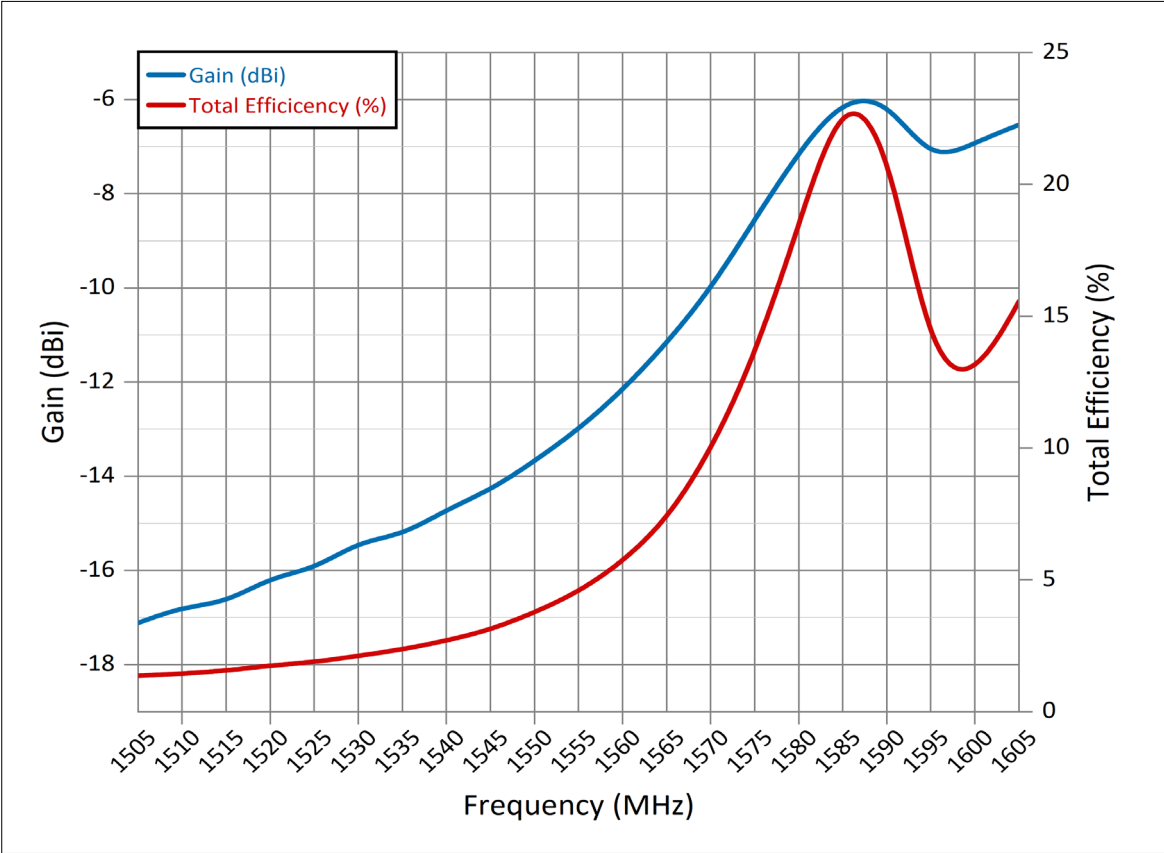
S11



Item	Specification After Test (MHz)
Center Frequency Change	±2.0
-10dB Bandwidth Change	±2.0

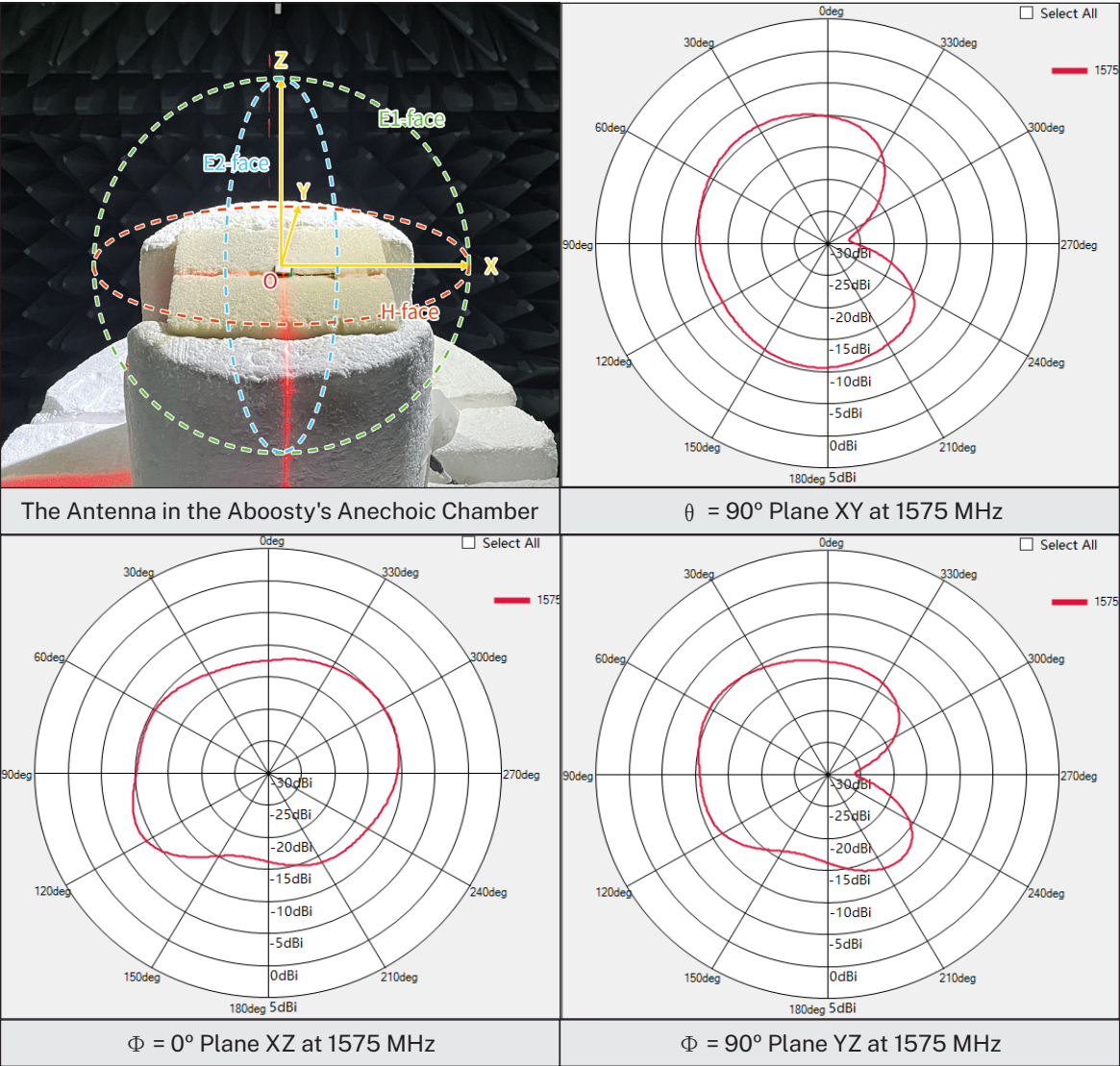


Passive Gain (dBi) and Total Efficiency (%)

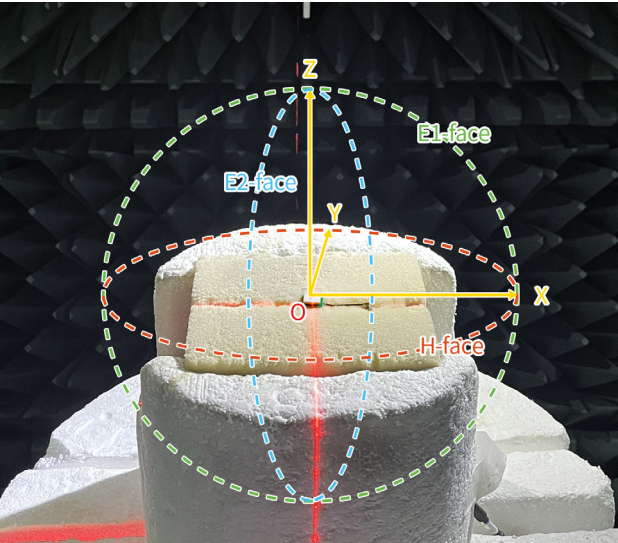


Freq (MHz)	Gain (dBi)	Efficiency (%)	Freq (MHz)	Gain (dBi)	Efficiency (%)
1505	-17.11	1.37	1560	-12.17	5.69
1510	-16.77	1.45	1565	-11.17	7.28
1515	-16.68	1.56	1570	-10.02	9.89
1520	-16.14	1.76	1575	-8.54	13.48
1525	-15.97	1.89	1580	-7.1	18.48
1530	-15.38	2.13	1585	-5.97	23.64
1535	-15.25	2.37	1590	-5.98	21.85
1540	-14.7	2.7	1595	-7.34	13.13
1545	-14.29	3.11	1600	-6.91	12.6
1550	-13.67	3.77	1605	-6.53	15.57
1555	-13	4.55			

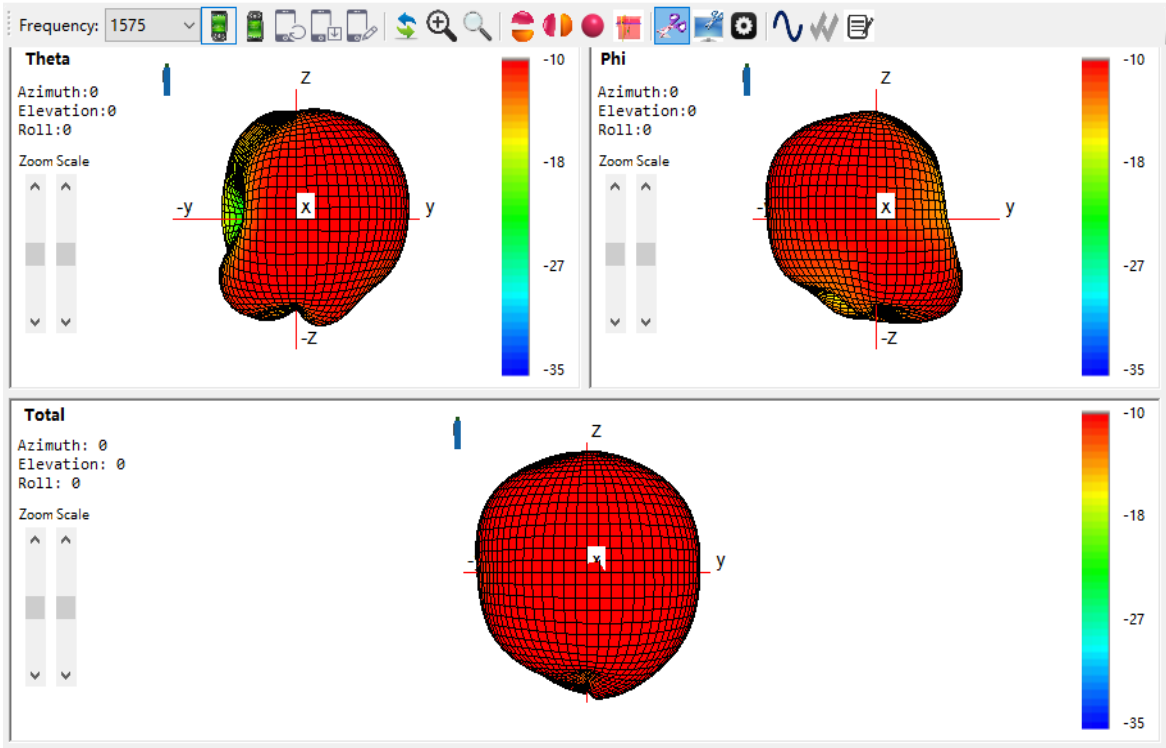
Active 2D Radiation Patterns (1575 MHz)



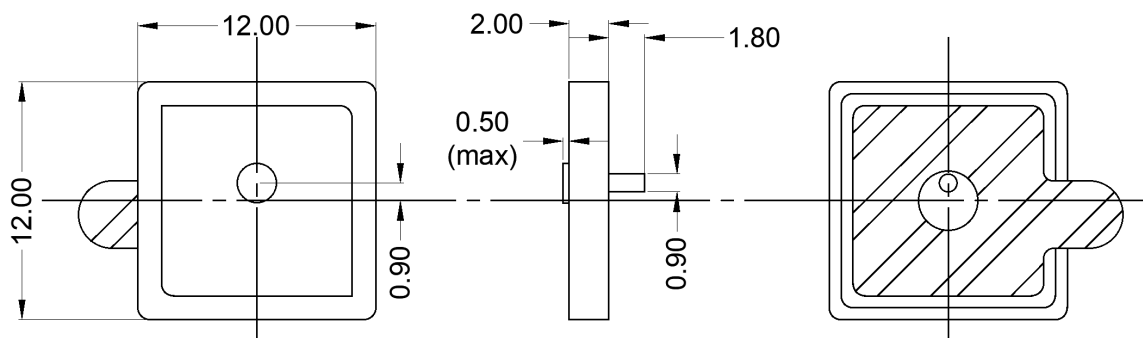
Active 3D Radiation Patterns (1575 MHz)



The Antenna in the Aboosty's Anechoic Chamber



MECHANICAL DIMENSIONS



ABOOSTY 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



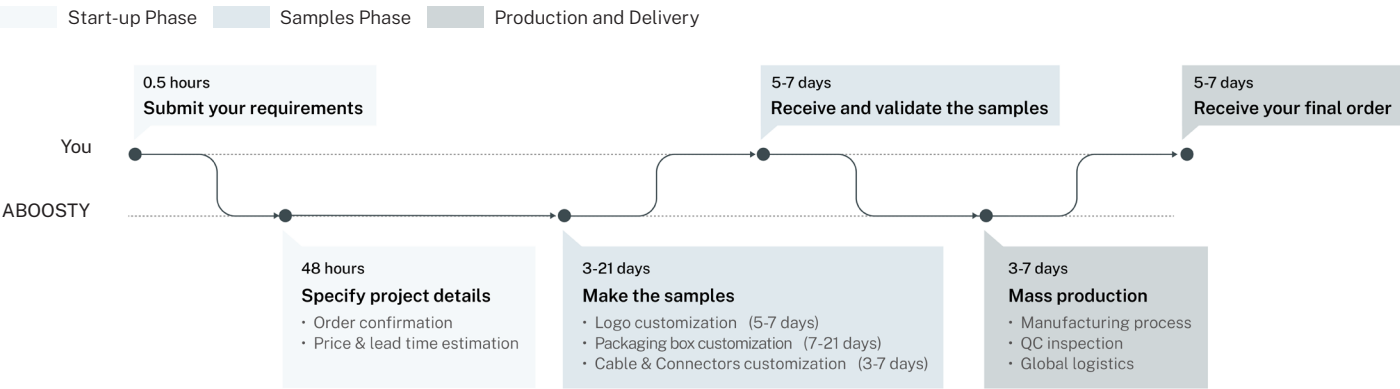
Professional team support & prompt reply within 24h

What We Provide

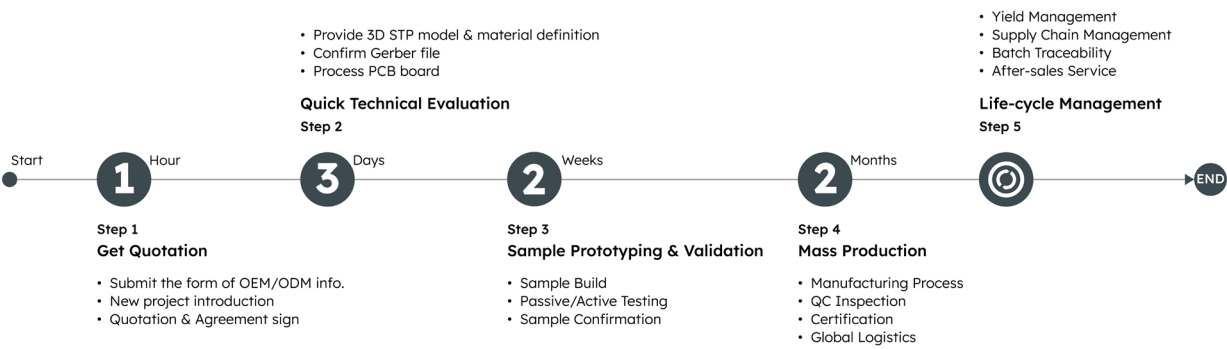
OEM/ODM Services	Light Customization	Deep Customization
	• Logo • Packaging • Cables & Connectors	• In-depth tailoring for specific applications • Functional enhancements • Environmental adaptations • Vertical certifications • ...

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

ABOOSTY

A Globally Leading Manufacturer and Supplier of
Multi-band Combination Antennas

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