



Datasheet

Circularly Polarized Passive GPS Embedded Ceramic Patch Antenna

Model: AIGC004

Description:

GPS/GALILEO/BeiDou Passive Patch Antenna

Operating Frequency: 1559-1602 MHz

Features:

Ceramic Patch Element

Low Axial Ratio

Dimensions: 25 x 25 x 2 mm

Adhesive Mount

RoHS & Reach Compliant





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

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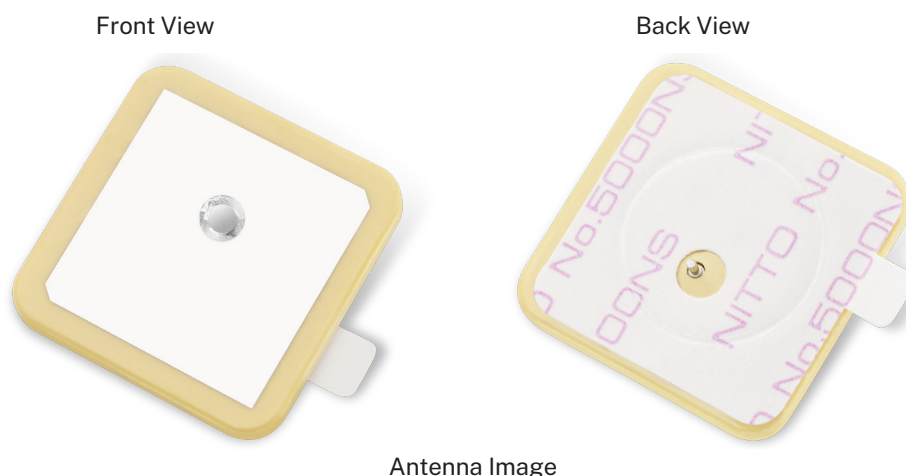


FEATURES & BENEFITS

- 25x25x2 mm Embedded Ceramic Patch Element
- Miniaturized, Multi-system Compatible
- Low Axial Ratio
- Adhesive Mount
- RoHS & Reach Compliant
- Covering Bands: GPS (L1) / Galileo (E1) / BeiDou (B1) / GLONASS G1

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

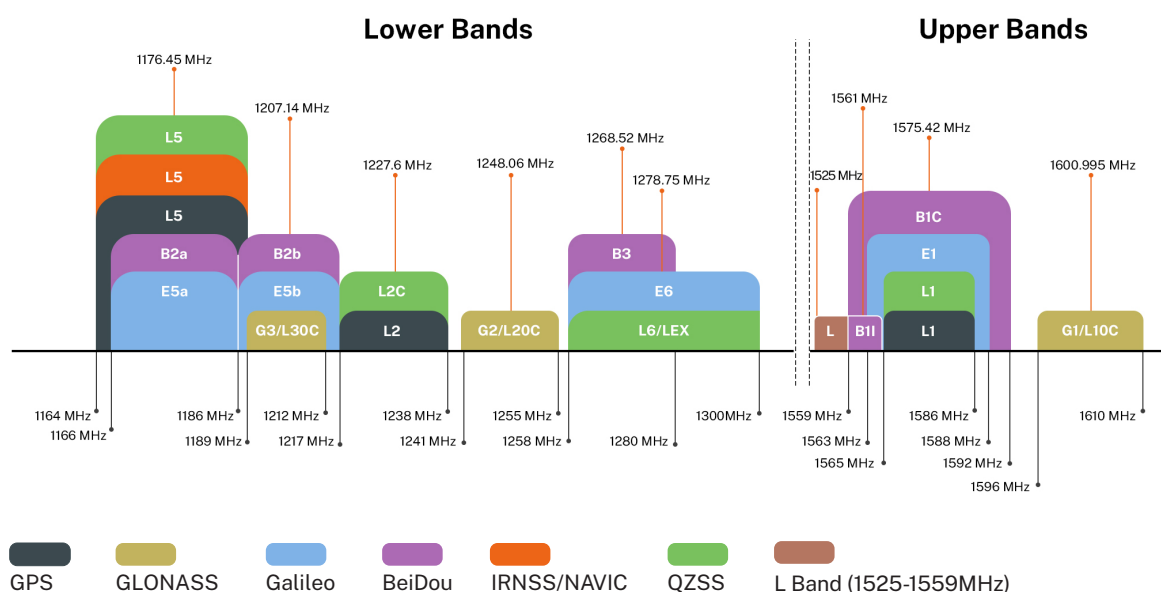
ORDER INFORMATION

Product Name	Circularly Polarized Passive GPS Embedded Ceramic Patch Antenna
Model	AIGC004
Dimensions	25 x 25 x 2 mm (PCB Board: 27 x 27 x 0.8 mm)
Weight	5.7 g
Mounting	Internal/Embedded/Adhesive Mount
MOQ	250 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	1568±5 MHz
Bandwidth	10 MHz
VSWR	1.5 : 1
Peak Gain (dBi)	0
Axial Ratio (dB)	<3
Polarization	RHCP
Radiation Pattern	Directional
Input Impedance	50 Ω

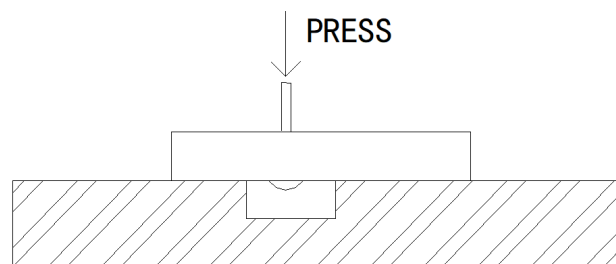
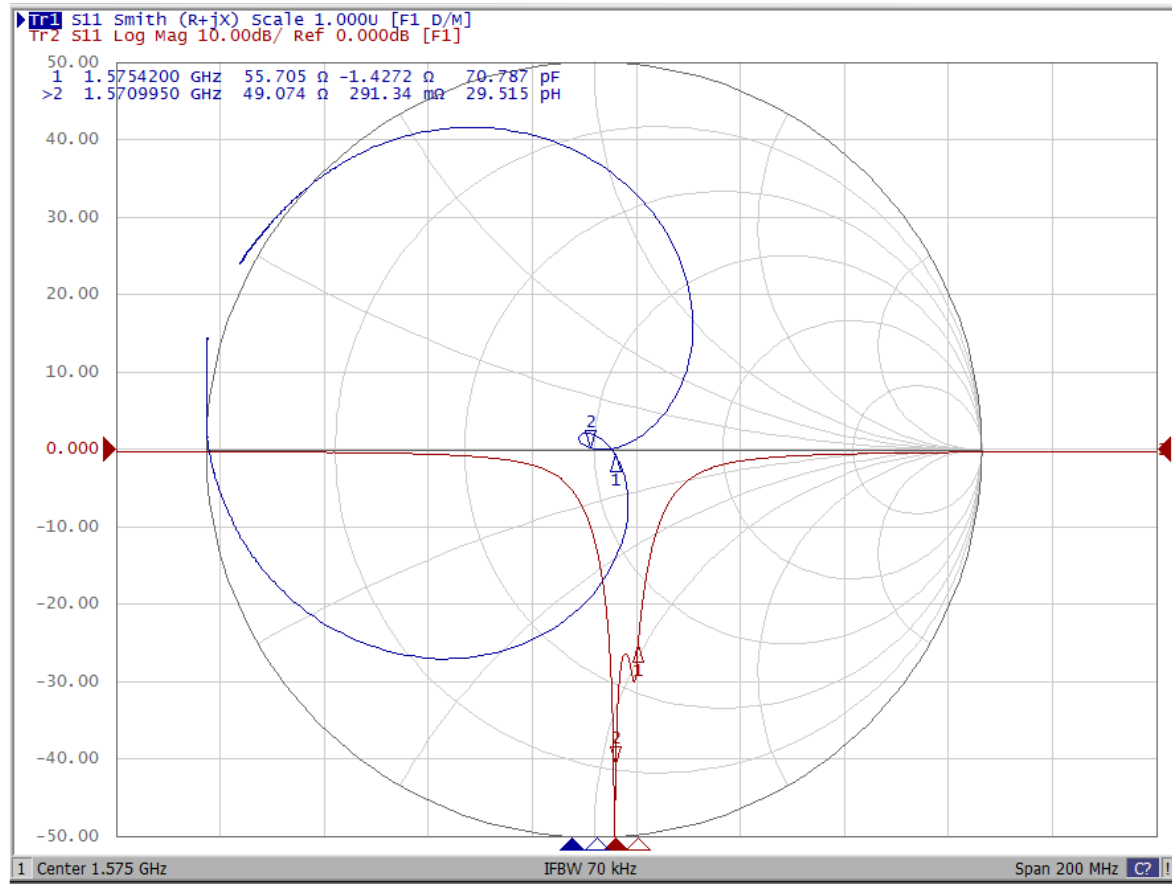
Environmental				
Operating Temperature	-40°C to +75°C			
Storage Temperature	-40°C to +85°C			
Relative Humidity	40% to 95%			
Vibration	Wave Form: Random Vibration			
	Test Time: 30min/Axis			
	Direction: X, Y, Z Axis			
	PSD Break Points for 9.8 RMS (m/s ²)	Frequency (Hz)	50	300
		Acceleration ((m/s ²) ² /Hz)	0.38416	0.38416
RoHS Compliant	Yes			
All data were measured with an 27x27 mm ground plane. Application data might vary.				

ELECTRICAL PERFORMANCE

ⓘ Note

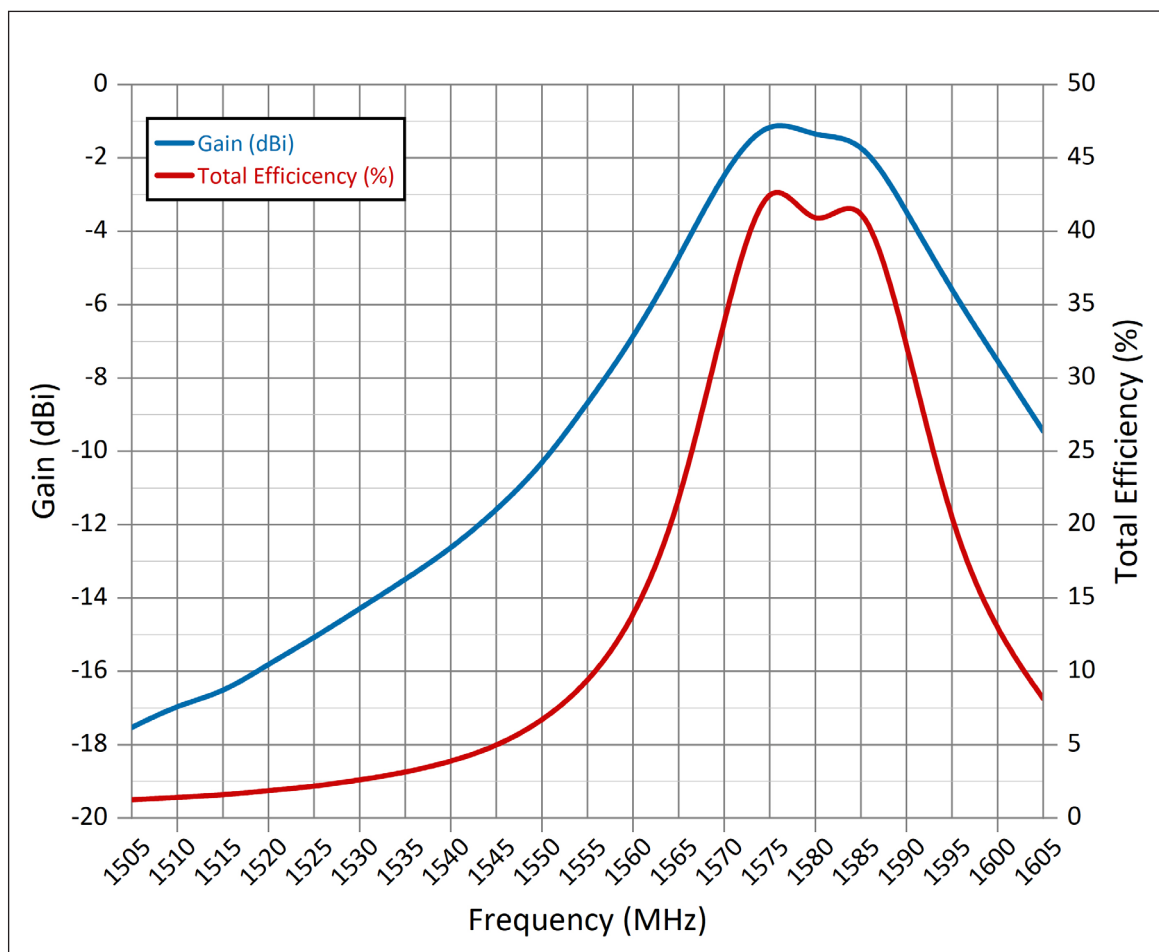
All data displayed in "ELECTRICAL PERFORMANCE" were measured with a 27 x 27 mm ground plane.

S11



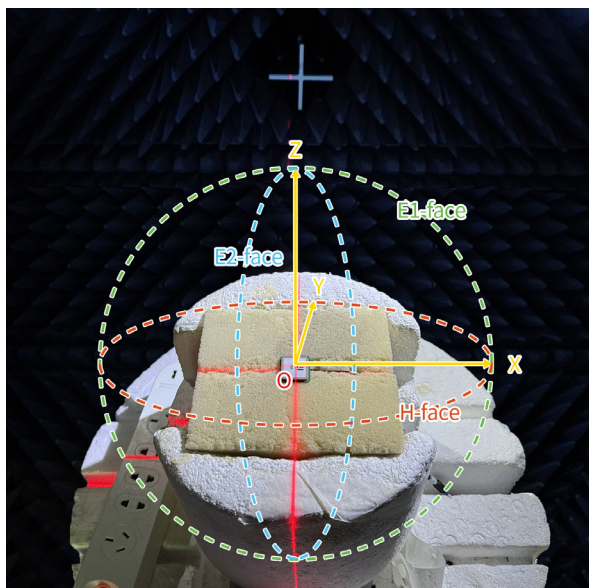
Item	Specification After Test (MHz)
Center Frequency Change	±2.0
-10dB Bandwidth Change	±2.0

Passive Gain (dBi) and Total Efficiency (%)

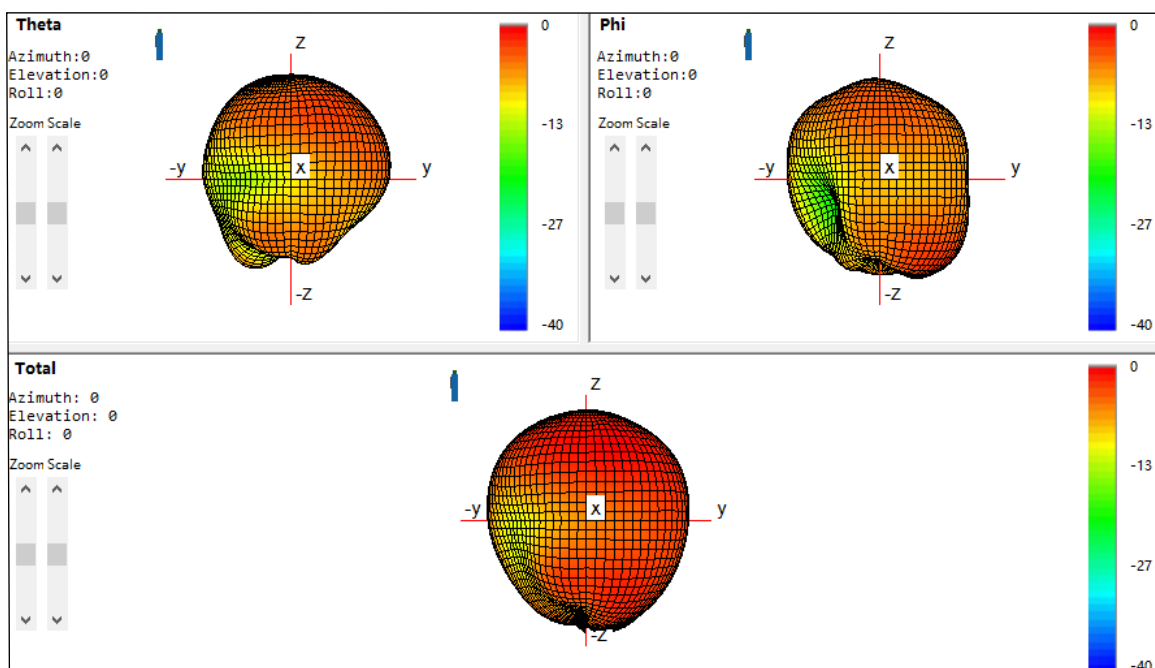


Freq (MHz)	Gain (dBi)	Efficiency (%)	Freq (MHz)	Gain (dBi)	Efficiency (%)
1505	-17.53	1.25	1560	-6.93	13.36
1510	-16.92	1.4	1565	-4.74	20.8
1515	-16.59	1.57	1570	-2.34	34.18
1520	-15.8	1.87	1575	-0.79	45.37
1525	-15.09	2.15	1580	-1.48	39.08
1530	-14.29	2.59	1585	-1.36	43.86
1535	-13.5	3.1	1590	-3.46	32.47
1540	-12.66	3.84	1595	-5.63	19.51
1545	-11.62	4.86	1600	-7.54	12.56
1550	-10.38	6.56	1605	-9.45	8.13
1555	-8.69	9.14			

3D Radiation Patterns (1505-1605 MHz)

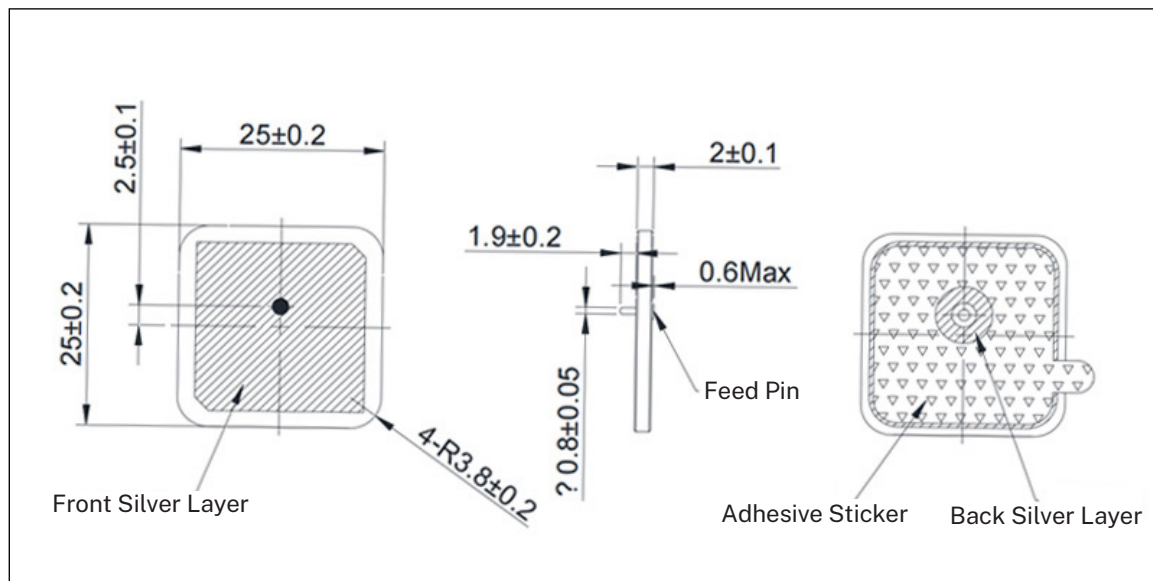


The Antenna in the Aboosty's Anechoic Chamber



3D at 1575 MHz, Gain=-0.79 dBi

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



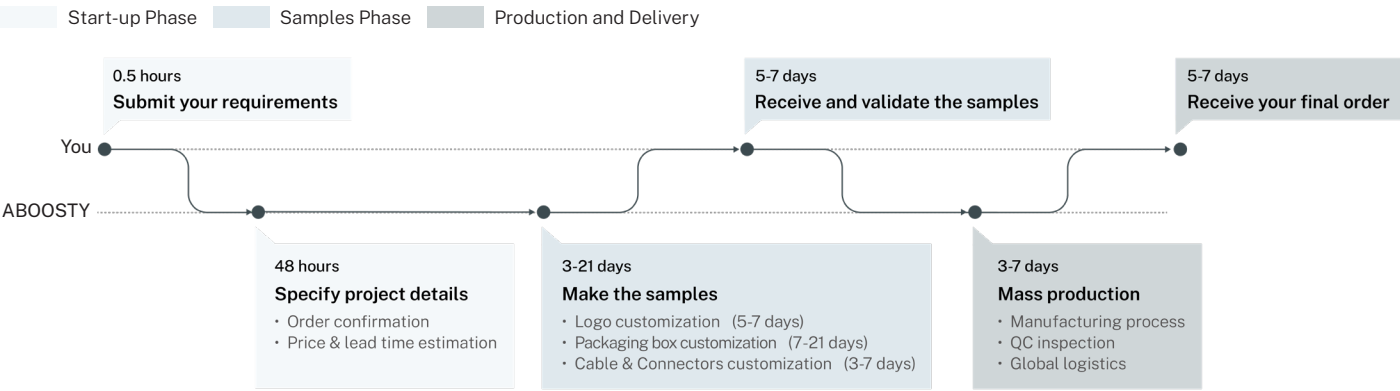
Professional team support & prompt reply within 24h

What We Provide

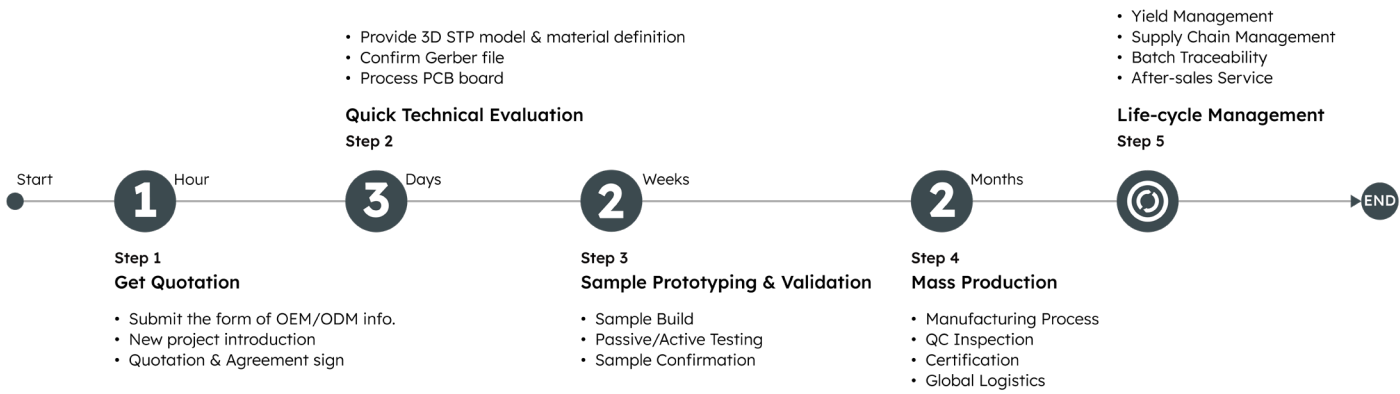
OEM/ODM Services	Light Customization	Deep Customization
	• Logo • Packaging • Cables & Connectors	• In-depth tailoring for specific applications • Functional enhancements • Environmental adaptations • Vertical certifications • ...

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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