

# GNSS - External Helical Antenna



**AECC0502GB**

Request Samples



Check Inventory



**55.6 x Ø27.5 mm**  
**RoHS/RoHS II Compliant**  
**MSL Level = 1**

## Features

- Ultra- Low Profile
- Active GNSS
  - GPS : L1/L2
  - GLONASS : G1/G2
  - BEIDOU/Compass : B1/B2/B3
  - GALILEO : E1/E5b
- IP67 rated
- Easy installation using Connector

## Applications

- IoT
- M2M
- Surveillance
- Autonomous Driving
- Fleet Management & Asset Tracking
- Telematics
- Smart Agriculture / Precision Farming
- Instrumentation

## Product Image





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## Part Number Builder

AECC0502GB□-□

Color / UV Coating	
Code	Description
S (Standard)	Black without UV coating
A	Black with UV Coating
B	White without UV Coating
C	White with UV Coating

Connector Type	
Code	Connector Type
S (Standard)	SMA (M)
A	RP-SMA (M)
B	SMB (M)
C	N-Type (M)
D	TNC (M)
E	BNC (M)
F	MCX (M)
G	MMCX (M)

## Example Configurations :

Part Number	UV Coating / Color	Connector Type
AECC0502GBS-S	No / Black	SMA (M) (Standard)
AECC0502GBA-A	Yes / Black	RP-SMA (M)
AECC0502GBC-C	Yes / White	N-Type (M)

## Note :

- For the standard part number (AECC0502GBS-S), please refer to the packaging at the end of the document.
- For custom configurations (AECC0502GB□-□), MOQs, pricing and packaging changes may be applicable.

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## Electrical Specifications

Parameter	Specification			Unit
	Min	Typ	Max	
Center Frequency	GPS	L1	1575.42	MHz
		L2	1227.60	
	GLONASS	G1	1602.00	
		G2	1246.00	
	BeiDou / Compass	B1	1561.10	
		B2	1207.14	
		B3	1268.52	
	Galileo	E1	1575.42	
		E5b	1207.14	
VSWR			2.0	
Polarization	RHCP			
Peak Gain			2	dB
Impedance		50		Ω
Axial Ratio			3	dB
Horizontal Coverage		360		degree
<b>LNA</b>				
Gain	31	33	35	dB
Passband Fluctuation		±2		dB
NF			1.5	dB
VSWR			2	
Supply Voltage (DC)	3		16	V
Current Consumption			35	mA

## Mechanical Specifications

Parameter	Specification
Antenna Dimension	55.6 x Ø27.5 mm
Housing Material	PC + ABS
Mounting Type	Connector
RF Connector	SMA (M)



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# GNSS - External Helical Antenna

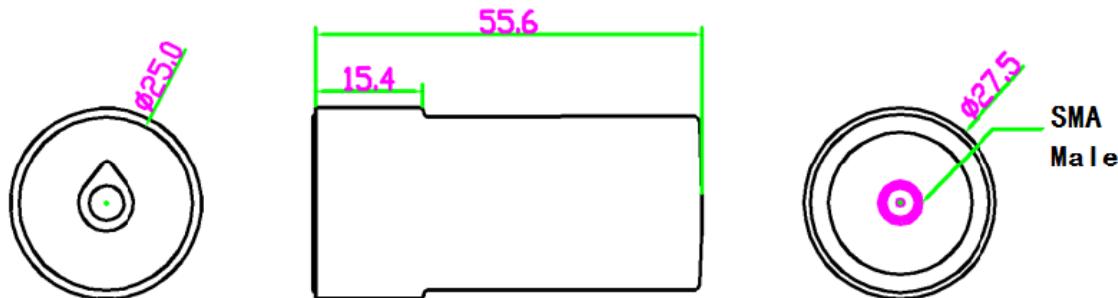
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## Environmental Specification

Parameter	Specification
Operating Temperature	-40°C to +85°C
Storage Temperature	-40°C to +85°C
IP Rating	IP67
UL Rating	UL-94 V0
RoHS Compliance	Yes
PB Free	Yes
MSL	1
ESD Sensitive	Yes
Relative Humidity	Up to 95%
Vibration	10 ~ 55 Hz with 1.5 mm amplitude 2 hrs

## Product Dimension



Unit : mm

## GNSS - External Helical Antenna



AECC0502GB

## Request Samples

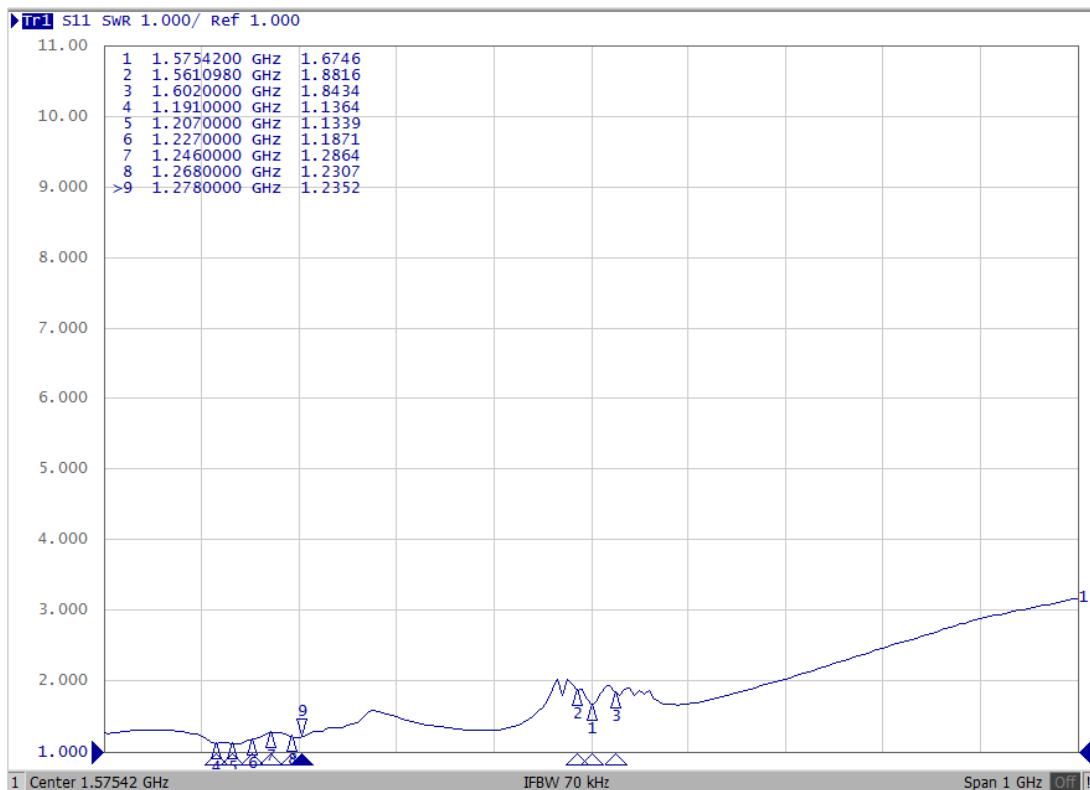


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## Test Measurement - VSWR



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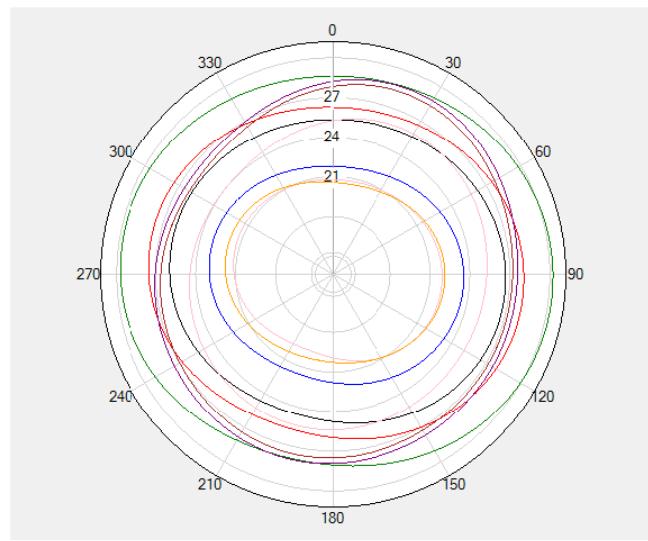
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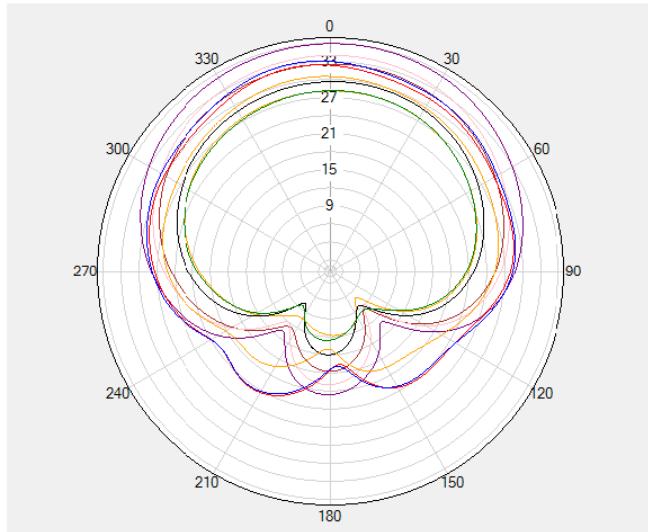
## Radiation Characteristics

### 2D Pattern

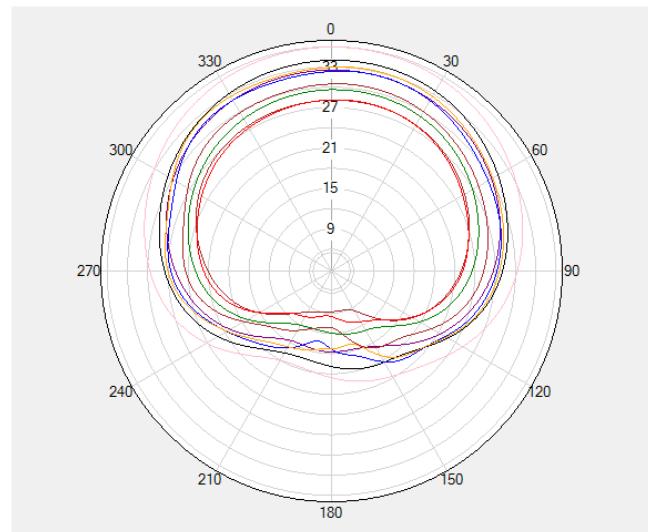
XY - Plane



XZ - Plane



YZ - Plane



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## Packaging Information

Number of Antenna/ Carton : 72 pcs

Dimension of the Carton : 560 x 300 x 240 mm

Weight of 1 pc of Antenna : 35 g

Weight of the Carton : 3 kg

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