ALLISCOM

A & P Series

GPS Antenna

Data Sheet



Model No. **A & P Series**

Feature
- Low Noise Figure < 1.5dB
- Waterproof Housing
- Roof Mounting

Benefit
- Low Profile
- High Performance
- Concealable
- Screw Mounting
- Resistant to harsh outdoor environment

Description Allis Communications P/A Series GPS Active External Antenna is a Bottom Feed Antenna for roof-mount application, designed for vehicles and outdoor devices. And Cable lengths, types and connectors are fully customizable.

1. Electrical Specifications

1.1 Patch Antenna

Frequency	1575.42 ± 3 MHz
VSWR	1.5 max.
Bandwidth	20MHz min. at -10dB
Axial Ratio	3dB typical
Impedance	50Ω
Peak Gain	4dBic min. at 0° (7cm x 7cm ground plane)
Gain Coverage	≥ -4dBic at –90° ≤ θ ≤ 90°(over 75% volume)
Power Handling	1 watt
Polarization	RHCP

1.2 Amplifier Module

A Series

Type	Model No.	Amplifier Gain without cable	Noise Figure	Output VSWR	Filtering	DC Voltage	DC Current
A	A312B	12dB typical	1.5dB typical	2.0 max.	At ±40MHz 9dB At ±75MHz 20dB At ±100MHz 28dB	DC 2.7V to 3.6V	6±2mA
	A512B	12dB typical	1.5dB typical			DC 4.5V to 6.0V	5±2mA
	A812B	12dB typical	1.5dB typical			DC 2.7V to 6.0V	4.5±2.5mA
B	A320B	20dB typical	1.5dB typical			DC 2.7V to 3.6V	6±2mA
	A520B	20dB typical	1.5dB typical			DC 4.5V to 6.0V	5±2mA
	A820B	20dB typical	1.5dB typical			DC 2.7V to 6.0V	3.5±2mA
C	A327B	27dB typical	1.5dB typical			DC 2.7V to 3.6V	6±2mA
	A527B	27dB typical	1.5dB typical			DC 4.5V to 6.0V	9±3mA
	A827B	27dB typical	1.5dB typical			DC 2.7V to 6.0V	8.5±4.5mA
	A827A	27dB typical	1.5dB typical			DC 3.0V to 5.5V	22±3mA
	A827D	27dB typical	1.5dB typical	2.0 max.	--	DC 3.0V to 5.5V	20±3mA

P Series

Type	Model No.	Amplifier Gain without cable	Noise Figure	Output VSWR	Filtering	DC Voltage	DC Current
D	P827A	27dB typical	1.5dB typical	2.0 max.	At ±40MHz 9 dB At ±75MHz 20 dB At ±100MHz 28dB	DC 3V to 5.5V	22±3mA
	ACCP1	27dB typical	1.5dB typical			DC 3V to 5.5V	22±3mA

∗ Specifications subject to change without notice.

1.3 Gain Pattern

Test Equipment：NSI Spherical near-field measurement system

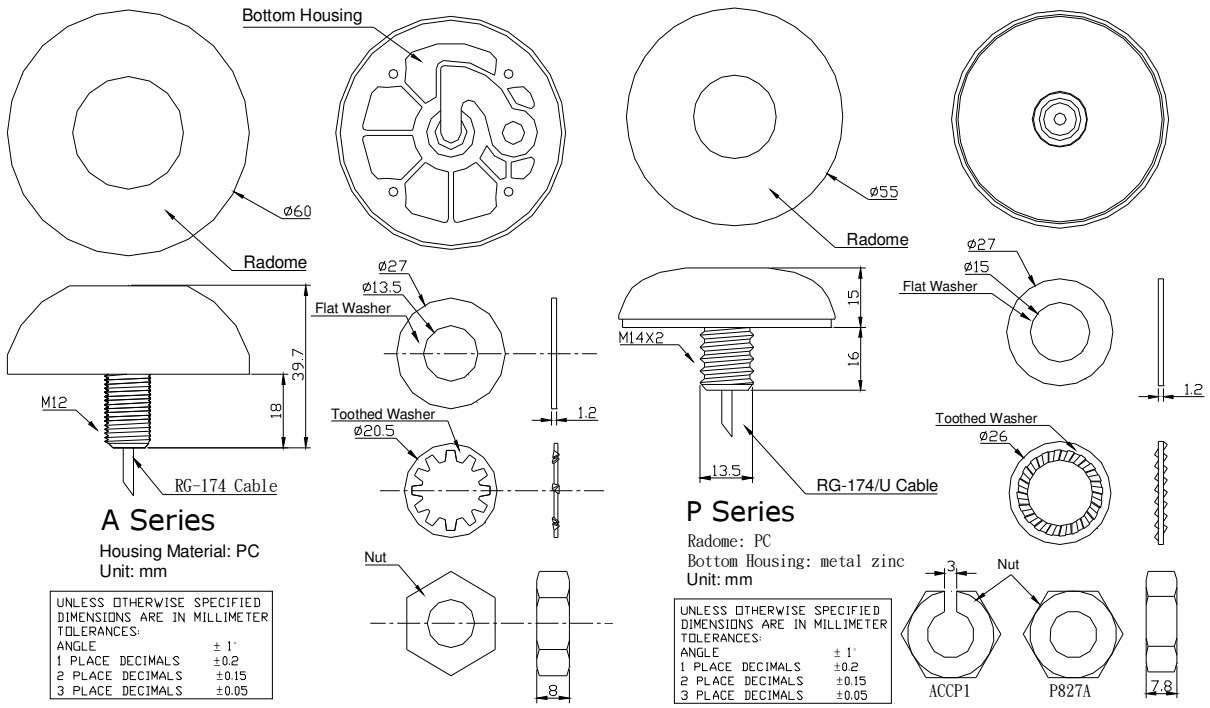
Type.	Peak Gain (at 0°)	Axial Ratio (at 0°)	Cable Length
A	6dB	3dB	Cable: 5m RG174 / Loss≒6dB
B	15.2dB	2dB	
C	22.7dB	2dB	
D	23.8dB	3dB	

2. Mechanical Specification

2.1 Mechanical Data

Item	Specification	
	A Series	P Series
Weight (Without Cable)	65 grams max.	105 grams max.
Size	60mm Dia. x 40 mm	55mm Dia. x 31 mm
Mounting	Thread Permanent Mount	
Housing Color	Black or White	
Waterproof	IP56	

2.2 Dimension



UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN MILLIMETER
TOLERANCES:
ANGLE ± 1°
1 PLACE DECIMALS ±0.2
2 PLACE DECIMALS ±0.15
3 PLACE DECIMALS ±0.05

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DIMENSIONS ARE IN MILLIMETER
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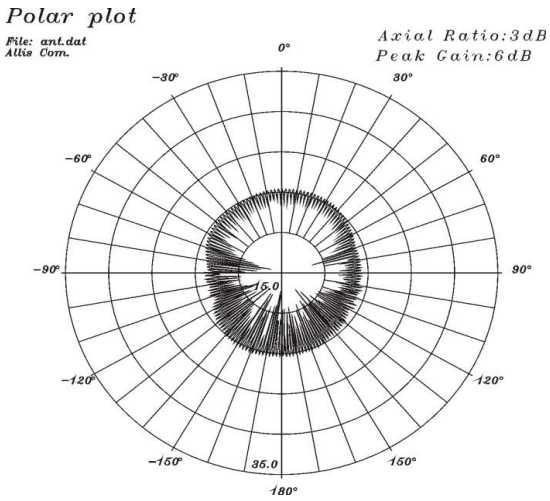
3. Appendix: Gain Patterns

Test Equipment: NSI Spherical near-field measurement system

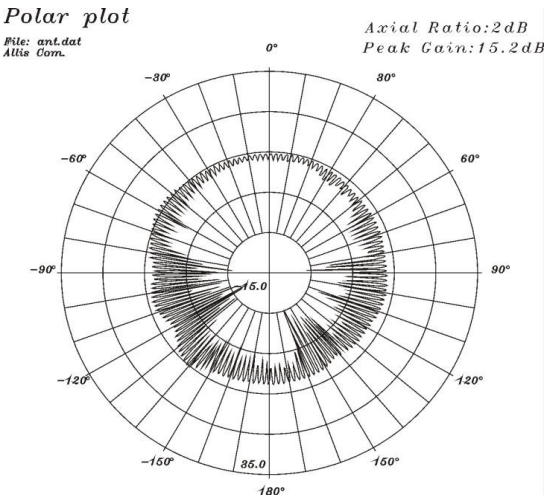
- **Type A**

Cable length: 5m
Cable loss ≒6dB



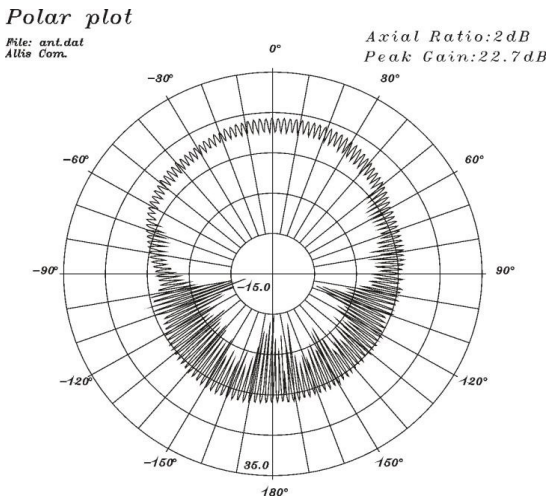
- **Type B**

Cable length: 5m
Cable loss ≒6dB



- **Type C**

Cable length: 5m
Cable loss ≒6dB



- **Type D**

Cable length: 5m
Cable loss ≒6dB