

Wideband Dual-Polarization Horn Antenna 2GHz–18GHz



Note: Photo is for illustration purposes only. Please refer to the outline drawing.

Product Description

RCDLPHA2G18B is a wideband dual-polarization horn antenna with a frequency range of 2 to 18GHz.

The antenna's gain is 12dB. The VSWR is 2.5:1.

The antenna connectors are SMA-Female.

Features

- Wideband Dual Polarization Horn Antenna
- Compact Size
- Coaxial Interface

Typical Applications

- Wireless Infrastructure
- Military and Aerospace Applications
- Test Instrumentation
- Radar Systems
- 5G Wireless Communications
- Microwave Radio Systems
- TR Modules
- Research and Development
- Cellular Base Stations

Electrical Specifications ($T_A=+25^{\circ}\text{C}$)

Parameter	Min	Typ	Max	Units
Frequency Range		2 - 18		GHz
Antenna Gain		12		dB
VSWR			2.5	: 1
E-Plane 3 dB Beamwidth, 12GHz		20		°
H-Plane 3 dB Beamwidth, 12GHz		16		°
Sidelobe Levels		15		dB
Polarization		Dual Linear Polarization		
Cross Polarization		20		dB
Impedance		50		Ω
Weight		2.646 Max.		lbs
Connectors		SMA-Female		

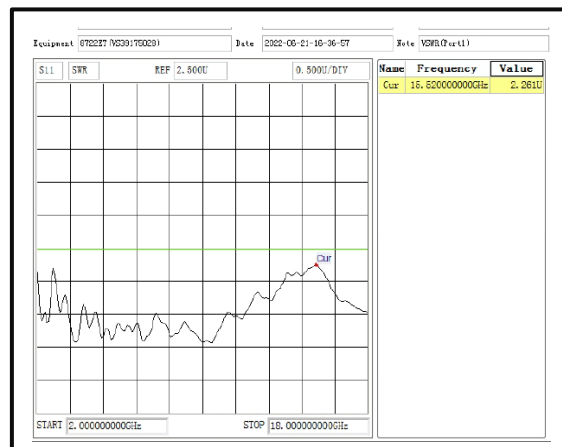
Environmental Specifications and Test Standards

Parameter	Description
Operational Temperature	-40°C to +85°C (Case Temperature)
Storage Temperature	-50°C to +105°C
Thermal Shock	-40°C → +85°C (5 Cycles / 10 hours)
**Random Vibration	MIL-STD-202G Table 214-I, Test Condition Letter C 1.5 Hours Per Axis
High Temperature Burn In	Temperature +85°C for 72 Hours
Shock	1. Weight >20g, 50g half sine wave for 11ms, Speed variation 3.44m/s 2. Weight <=20g, 100g Half sine wave for 6ms, Speed variation 3.75m/s 3. Total 18 times (6 directions, 3 repetitions per direction).
Altitude	Standard: 30,000 Ft (Epoxy Sealed Controlled Environment) Optional: Hermetically Sealed (60,000 ft. 1.0 PSI min)
Hermetically Sealed (Optional)	MIL-STD-883 (For Hermetically Sealed Units)

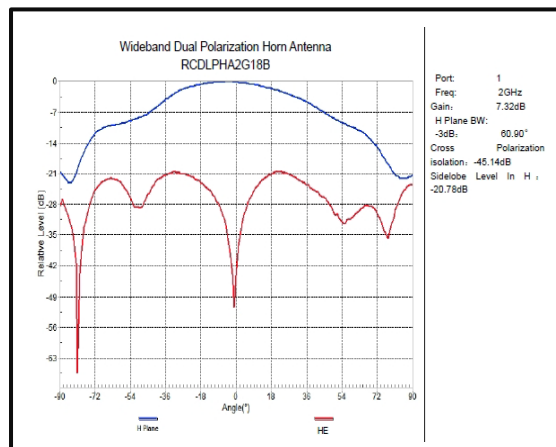
**For vibration testing details please see additional information section.

Typical Performance Plots

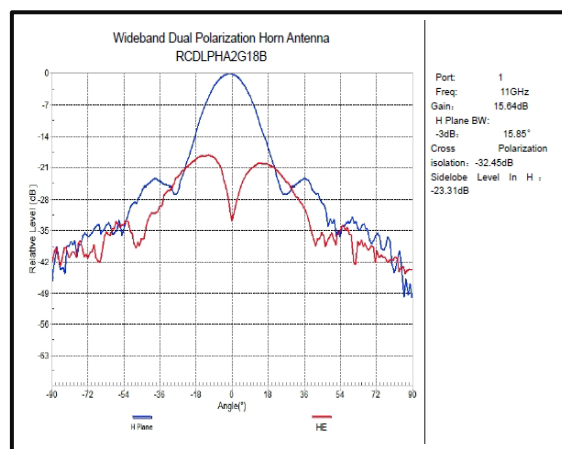
VSWR



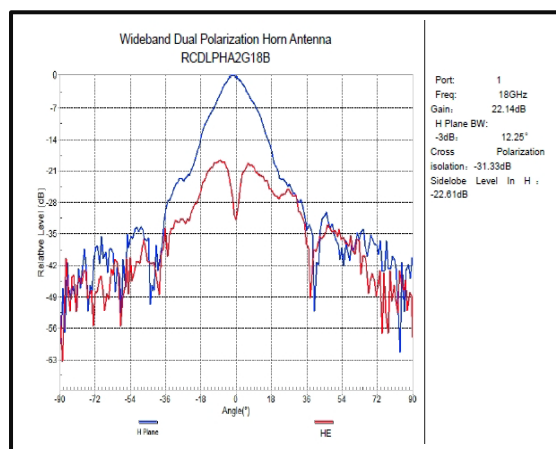
Pattern



Pattern

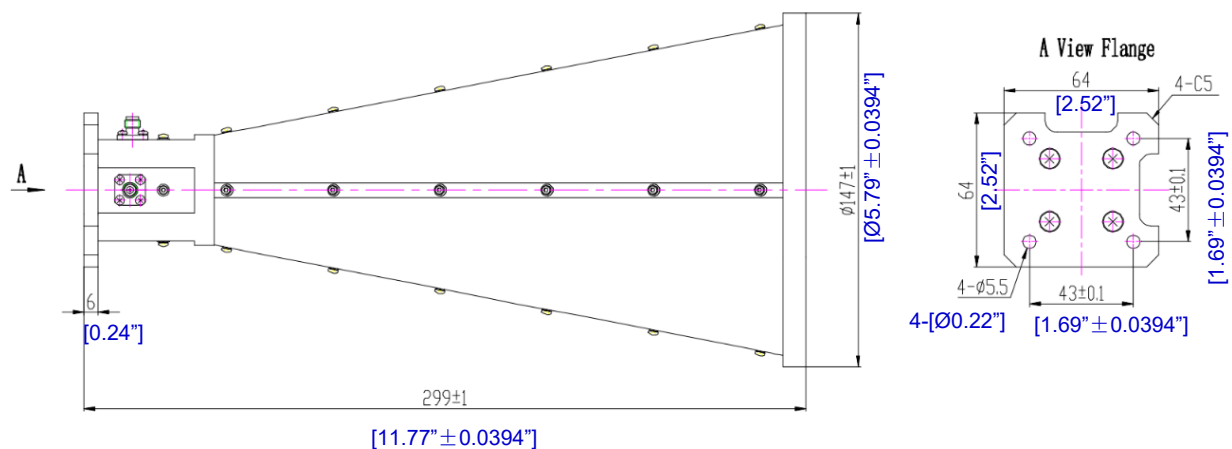


Pattern



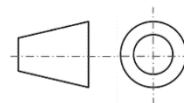
Note: Small signal VNA measurements include attenuators to protect equipment

Outline Drawing



Notes:

1. Package Material: Aluminum.
2. All dimensions are in millimeters [inches].



Additional Information

Documentation

Webpage

ESD Policy

https://rflambda.com/pdf/rflambda_esd_control.pdf

Connector Torque Specifications

https://www.rflambda.com/pdf/Torque_Specifications.pdf

Random Vibration Test Standard

https://www.rflambda.com/pdf/rflambda_random_vibration_MIL-STD-202G.pdf

Ordering Information

Part Number	Modification	Description
RCDLPHA2G18B	Connector SMA-Female	2GHz-18GHz Horn Antenna

Important Notice

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