ANYWAVES

SPACE ANTENNA MAKERS

QUALITY SYSTEM CERTIFICATION DNV ISO 9001 AS/EN/JISQ 9100



DATA DOWNLINK ANTENNAS

High-Gain Dual Polarized X-Band Antenna

This High-Gain X-Band Dual-Circularly-Polarized Antenna is our latest antenna generation for Data Downlink. It is a high quality and very compact antenna solution (1U).

Thanks to its dual-circular-polarization, the data rate can be doubled compared to the High-gain X-band antenna (P.18). This is specifically suitable for compact platforms that need high-data rate payload telemetry, such as Earth Observation missions.

NB: compatible with ANYWAVES Test Cap for High-Gain X-Bands Antennas.

Single or Dual-Polarization | Tx | G > 16 dBi | Very Low Profile | Size < 1U

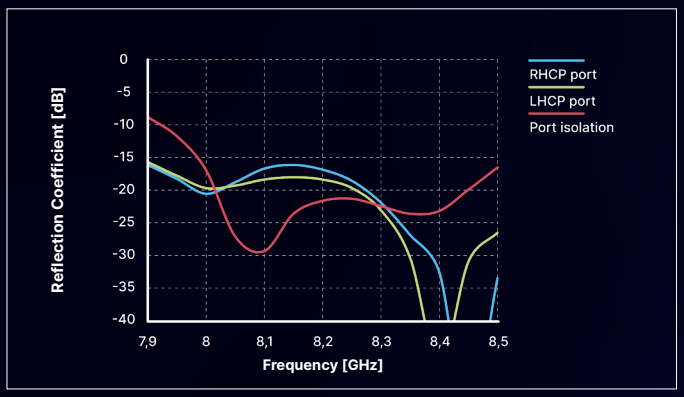
Benefits

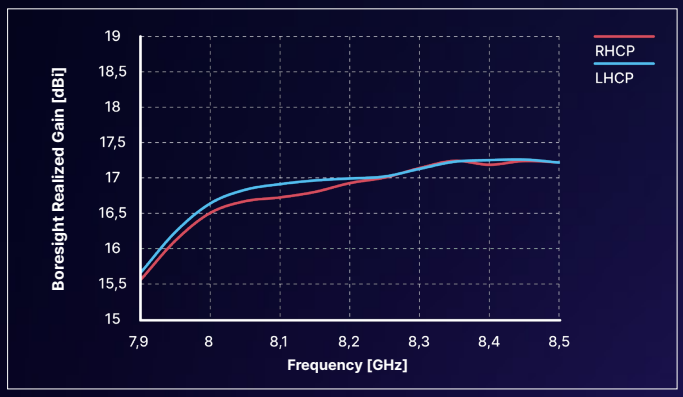
- High data-rate payload telemetry
- High cross polar discrimination
- Acceptance Tests (RF, Mechanical, Thermal) included:
  - Return loss
  - Z-axis random vibration
  - Thermal cycling
- Simultaneous dual circular polarization to double data throughput
- ITAR Free
- Rugged for harsh space environments
- ESD Free

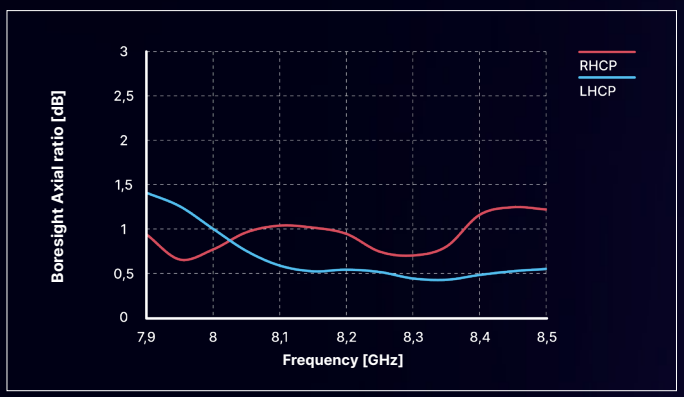
HIGH-GAIN DUAL-POLARIZED X-BAND ANTENNA

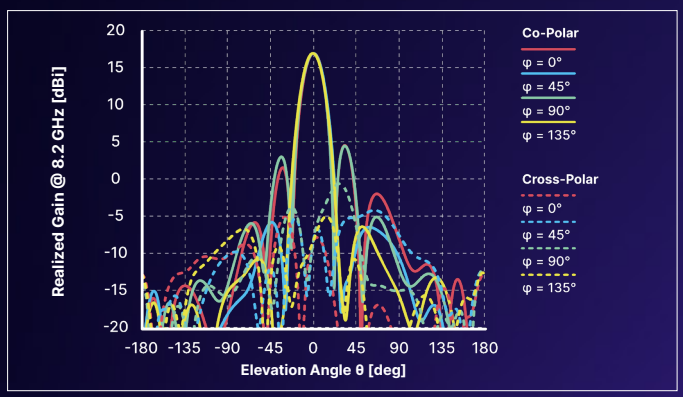
Typical Measured Performance

Single or Dual-Polarization | Tx | G > 16 dBi | Very Low Profile | Size < 1U









Typical Performance

Frequency Bands	**8.025 GHz to 8.4 GHz**
Bandwidth	375 MHz
Polarization	Right Hand Circular Polarization
Reflection Coefficient	RHCP port < -15 dB LHCP port < -15 dB Isolation < -20 dB
Half Power Beam Width	~20° (±10°)
Power Handling	20 W (Either 1×20 W or 2×10 W Continious Wave)
Realized Gain	@ boresight > 16.5 dBi
Cross Polar Discrimination	> 24 dB
Axial Ratio	@ boresight < 1 dB

Physical Characteristics

Envelope Size Without Connectors	L 100 x W 100 x H 9.15 mm^3
Envelope Size With Connectors	L 100 x W 100 x H 10.5 mm^3
Mass Without Connectors	127g ± 5%
Qualification Temperature	-120°C / +120°C
Protective Radome	PEEK coated with SG121FD white paint (on Flight Models only) resistant to thermal and radiation environments and preventing electrostatic discharges
Connectors	Coaxial SMP male (50Ω) / Coaxial SMA female (50Ω)
Mechanical Interface	4 x M2.5 (unthreaded hole)
Acceptance Tests on Flight Models	- Radio Frequency - Mechanical - Thermal
Acceptance Tests on Engineering Models	Radio Frequency Only

Disclaimer: facts and figures herein are for information only and do not represent any warranty of any kind.