



# GeosSat Microwave

- High G/T, Excellent Sidelobe Performance
- Hot-dipped Galvanized All Steel Parts
- Ring-focus Antenna, KA Band
- Aluminum Reflector



## 4.5 Meter KA Band Earth Station Antenna

Model: GA45MKATXRX

### ELECTRICAL SPECIFICATION

Item	Specification	
	Ka-Band	
	Receive	Transmit
Operation Frequency, GHz	17.7–21.2	27.5–31
Gain, Mid-band, dBi	56.7	60
Polarization	Linear/Circular	
XPD (on Axis), dB	35	35
XPD (across 1dB Beam width),dB	33	33
Axial Ratio(Circular-Polarized), 2-port Feed	1.2	
VSWR	1.3	1.3
Antenna Noise Temperature		
20°Elevation	101°K	
-3dB Beam width, Mid-band	0.22°	0.18°
TX. Power Capability, W	100	
Feed Interface	WR-42	WR-28
Feed Insertion Loss	0.6	0.4.
Isolation, TX to Rx,dB	90	
First Side lobe	-14	-14
90% Peaks under Following Envelop	29-25log $\theta(1^\circ \leq \theta < 20^\circ)$	29-25log $\theta(1^\circ \leq \theta < 20^\circ)$

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## MECHANICAL SPECIFICATION

Item	Specification
Antenna Diameter	4.5m
Antenna Type	Cassegrain
Mount Type	El. over AZ.
Surface Accuracy (RMS)	≤ 0.35mm
Antenna Pointing Range and speed	
Azimuth	0°~360°, ±10°(Continuous)
Elevation	0°~90° (Continuous)
Polarization	360° (Continuous)
Drive Mode	Manual or Motorized

## ENVIRONMENTAL SPECIFICATION

Item	Specification
Operational Wind	72 km/h Gusting to 97 km/h
Survival Wind	216 km/h
Temperature	-40°C~+60°C
Relative Humidity	100%
Seismic (Survival)	0.3g(H), 0.15g(V)
Solar Radiation	1135Kcal/ h/ m <sup>2</sup>
Ice Loading	13mm Operational; 25mm Survival

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