

Datasheet for the 4.5m Ka-band LMA

1. Antenna Photo



Fig.1 Photo of 4.5m Limit Motion Antenna

2. Antenna Electrical Characteristics

Item	Description	
Frequency(GHz)	Tx:19 -20.2GHz;	Rx:28.8 - 30GHz
Gain (dBi, mid-band)	≥56.1dBi	≥59.4 dBi
Side Lobes	1 st sidelobe not higher than -14dB Other sidelobes compliant with ITU-R S.580-6	
Antenna Noise Temperature	150K at 10°	
Feed	2-port LP Feed	
Feed Isolation	Tx/Rx: ≥85dB	

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Item	Description	
VSWR	≤1.30	≤1.30
Cross-polarization Isolation (dB)	>35dB in 1dB Contour	
Power Handling	1kW	

3. Antenna Mechanical Characteristics

Item	Description
Antenna Type	Ring-focus Antenna, El over Az geometry
Antenna Diameter (m)	4.5
Main Reflector Accuracy (mm)	≤0.35 rms
Subreflector Accuracy (mm)	≤0.15 rms
Mount Type	Limit Motion
Driving Chain Mode	Single-motor for azimuth or elevation axis
Drive range	Azimuth Drive: 2 sections, 65° continuous in each section, AC motor Elevation Drive: 1° - 90°continuous, jack drive, AC motor
Hot Dip Galvanise for all mild steels Lighting Arresting Rod Lighting Arrestor Down-conductors Foundation HW Hub Enclosure with door Feed Rain Blower	

4. Antenna Servo Control and Tracking Characteristics

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Item	Description
Travel rate	Azimuth or Elevation Axis Drive: 0.01°/s-0.05°/s;
Tracking Mode	Step-track
Power Consumption of Equipment	Antenna Driving Unit 1kW/380V, 0.5kW/220V
	Feed Rain Blower:750W(Optional)

5. Antenna Environmental conditions

Item	Description	Remark
Temperature	-40°~+55°C (Outdoor) +10°~+40°C (Indoor)	
Relative Humidity	0%~100%	
Rain	100mm/h	
Anti-wind Capability	Steady wind: 72km/h, gust: 90km/h	Normal Operation
	Steady wind: 72km/h, gust: 97km/h	Operation with Degraded Performance
	Survival Wind:110km/h	In any position
	Survival Wind:200km/h	Antenna stow towards the sky
Design Life	≥15 years	
Availability	≥99.9%	
Warranty	12-month	