



## Datasheet for the 9m Ka-band THA with Monopulse Tracking

### 1 Antenna Electrical Characteristics

Item	Description	
Frequency(GHz)	Tx:27.0-31.0	Rx:17.7-21.2
Gain (Mid-band, dBi)	$\geq 66.1$	$\geq 62.7$
Side Lobes	1 <sup>st</sup> sidelobe not higher than -14dB Other sidelobes compliant with ITU-R S.580-6.	
Antenna Noise Temperature (Diplexer Insertion loss less than 0.5dB )	150K (at 10° EL angel)	
Feed Type	Corrugated horn and TE <sub>21</sub> mode coupler	
VSWR for Corrugated Horn	$\leq 1.15$	$\leq 1.15$
Power Capability	1kW	/

### 2 Antenna Mechanical Characteristics

Item	Description
Antenna Type	Modified Cassegrain Antenna, El over Az geometry
Antenna Diameter (m)	9.0
Main Reflector Accuracy (mm)	$\leq 0.35$ rms
Subreflector Accuracy (mm)	$\leq 0.15$ rms
Mount Type	Az for Full-motion, EL for Limited-Motion (THA)
Driving Chain Mode	Dual-motor for azimuth axis Single motor for elevation axis
Drive range	Azimuth drive: $\pm 170^\circ$ continuous, gear and pinion Elevation drive: $0^\circ - 90^\circ$ continuous, ball screw jack drive.
Antenna Accessorial Parts and Interface	Enclosure with roller door
	Hot Dip galvanised
	Access ladder & platform, galvanised
	Lightning Arresting Rods
	Lightning Arrestor down-conductors



Item	Description
	Foundation HW

### 3 Antenna Servo Control and Tracking Characteristics

Item	Description
Travel maximum velocity	AZ Axis Drive Rates up to 0.5°/s; EL Axis Drive Rates up to 0.1°/s.
Autotrack method	Monopulse Tracking
Antenna Operation Mode	Monopulse tracking, Step tracking, Programmed Tracking; Stand-by, Manual Driving; Position Preset

### 4 Antenna Environmental Conditions and Other Features

Item	Description	Remark
Ambient Temperature	-40°C~+55°C (Outdoor) 0°C~+30°C (indoor)	
Relative Humidity	0%~100%	
Rain	Rate up to 50mm/h	
Anti-wind Capability	Steady wind: 45km/h, gust:72km/h	Normal Operation
	Steady wind: 72km/h, gust: 97km/h	Degraded Operation
	gust wind:180km/h	Survival in any position
	gust wind:200km/h	Survival in stow at peak
Others	Packing (sea freight)	
	Feed Rain Blower	
	Redundant air-conditioner for hub	
	24 months warranty	

5 Antenna Photo



**Fig.1 Photo of 9m THA**