

SA-1.8T C/Ku Communication Antenna

Description

SA-1.8T C/Ku antenna with aperture 1.8M, it is of the single off-set type design. Main reflector is made of alloy high grade aluminum. It possesses the characteristics of robustness, strong wind resistance and easy installation. It was type approved by AsiaSat, APT, China Broadcast Satellite, SinoSat, China Orient Satellite in early 1999.



Technical Specifications

Electrical	Ku-Rx	Ku-Tx
Freq(GHz)	*10.95~12.75	*14.00~14.50
Gain(dBi)	45.6	46.7
Efficiency (%)	65.4	64.8
VSWR	1.25 : 1	1.25 : 1
Beamwidth(-3dB)	0.90-	0.76-
Polarization	Two port linear、manual adjustment	
Noise temperature	2 Port Feed	
10- elevation	45K	
20- elevation	38K	
Power handling capacity		1000W
Feed insertion loss	0.20dB	0.20dB
Tx-Rx isolation	85dB	
Cross polarization isolation	35dB(on axis)	35dB(on axis)
Sidelobe properties	29-25LOG(θ) dBi	1- $\leq \theta \leq 20$ -
	-3.5 dBi	20- $< \theta \leq 26.3$ -
	32-25LOG(θ) dBi	26.3- $< \theta \leq 48$ -
	-10(Average) dBi	$\theta > 48$ -

Mechanical Specifications

Properties	Index	Note
Azimuth travel	$\pm 90^\circ$	Interval adjustment
Elevation travel	$5^\circ \sim 90^\circ$	Interval adjustment
Net weight	80公斤	
Surface accuracy	0.5mm	

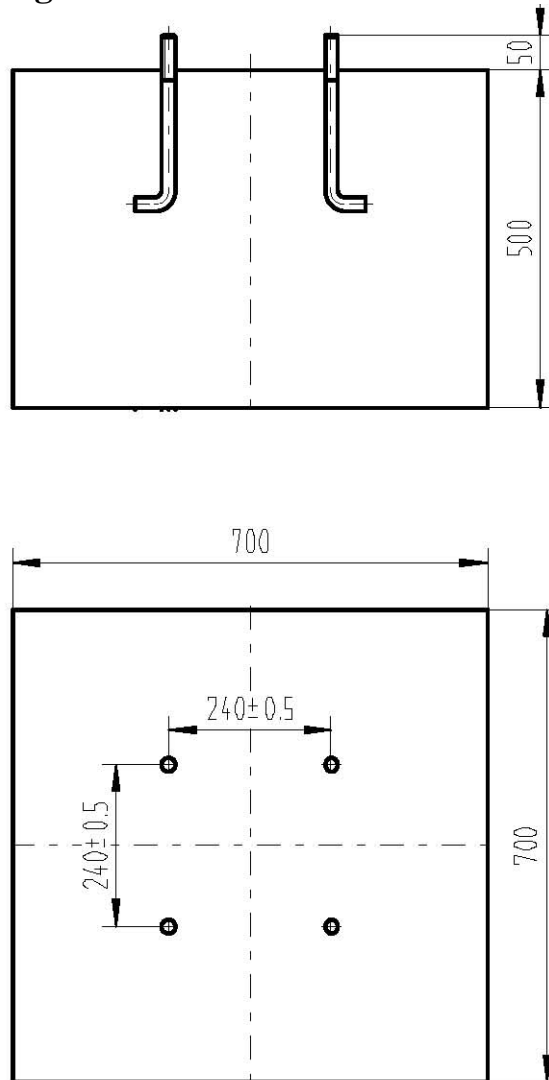
Environmental Specifications

Properties	Index	Note
Operation wind speed	20m/s	Normal
	27m/s	Slight effect on accuracy
Survival wind speed	56m/s	Lock and skyward position
Temperature	$-40^\circ \sim 60^\circ\text{C}$	
Relative humidity	0%~100%	
Rain fall	100mm/hr	
Seismic(survival)	8 degrees	
Closing ice	13mm	

System components

1. Reflector and support structure.....1 set
2. Two port feed Linear(circular)system1 set
3. Hub and feed horn(linear feed adjustment components).....1 set
4. Transmit reject filter.....1 set
5. AZ—EL system type pedestal1 set
6. Azimuth manual adjustment component system.....1 set
7. Operation/maintenance manual.....1 set
8. Foundation hardware kit and foundation drawing.....1 set
9. This appendix is part of the antenna sales contract。

Foundation Drawing



技术要求

1. 基础设计载荷 垂直力 300kg
水平力 400kg
2. 基础抗倾覆力矩 600kg·m
3. 基础下采用三合土夯实
4. 基础混凝土一次浇灌而成
5. 基础地面周围用三合土夯实，漏出地面高度150
5. 地脚螺栓4根(M20×250)

Foundation technical requirements;

1. Foundation weight load capacity ; a) pressure/vertical force 300kgs b) horizontal force 400kgs
2. Roll moment 600kg* m
3. Soil below foundation should be solidly leveled and strengthen.
4. Foundation concrete should be poured and finished in one continuous iteration.
5. Soil surrounding the foundation area should be solidly leveled and strengthen.
6. Foundation bolts are 4 pieces of (M20xM250)
7. Surface of the foundation is higher than the ground by 100-200mm.