

# Circular Polarized Ku-Band Antennas

Antenna Size	1.2M	1.8M	2.4M
<b>Electrical Performance</b>			
Operating Frequency (Ghz)			
Receive	10.95 - 12.75	10.95 - 12.75	10.95 - 12.75
Transmit	13.75 - 14.50	13.75 - 14.50	13.75 - 14.50
Polarization, Circular	LH & RH	LH & RH	LH & RH
Midband Gain (+/- .3 dB)			
Receive@12.0Ghz	41.8 dBi	45.3 dBi	47.4 dBi
Transmit@14.3Ghz	43.3 dBi	46.8 dBi	48.9 dBi
3db Beamwidth			
Receive@12.0Ghz	1.5°	1.0°	0.71°
Transmit@14.3Ghz	1.2°	0.8°	0.59°
Sidelobe Envelope (Tx, co-Pol dBi)			
100λ/D ≤ θ ≤ 20°	29-25 Log dBi	29-25 Log dBi	29-25 Log dBi
20° < θ ≤ 26.3°	-3.5 dBi	-3.5 dBi	-3.5 dBi
26.3° < θ ≤ 48°	32-25 Log dBi	32-25 Log dBi	32-25 Log dBi
48° < θ < 180	-10 dBi (typical)	-10 dBi (typical)	-10 dBi (typical)
Antenna Cross Polarization (within 1 dB B/W)	Tx: 25dB; Rx: 22dB	Tx: 25dB; Rx: 22dB	Tx: 25dB; Rx: 22dB
Noise Temperature			
10°	48K	43K	55K
20°	35K	28K	46K
30°	29K	23K	45K
VSWR	1.3 Max	1.3 Max	1.3 Max
Isolation	Tx: >90 dB; Rx: >25 dB	Tx: >90 dB; Rx: >25 dB	Tx: >90 dB; Rx: >25 dB
Feed Interface	Tx: WR75; Rx: WR75	Tx: WR75; Rx: WR75	Tx: WR75; Rx: WR75

## Mechanical Performance

Reflector Material	Glass Fiber Reinforced Polyester		
Antenna Optics	Two-Piece Offset Feed, Prime Focus		
Mount Type	Elevation Over Azimuth	Elevation Over Azimuth	Elevation Over Azimuth
Elevation Adjustment Range	8°-90° Continous Fine Adjustment	10°-90° Continous Fine Adjustment	10°-90° Continuous Fine Adjustment
Azimuth Adjustment Range	360° Continuous ± 5° Fine Adjustment	360° Continuous ± 5° Fine Adjustment	360° Continuous ± 12° Fine Adjustment
Mast Pipe Interface (Diameter)	73-76mm (2.88-3.00 in)	114 mm(4.5 in)	168mm (6.63 in)

## Environmental Performance

Wind Loading			
Operational	45mph (72km/h)	50mph (80km/h)	50mph (80km/h)
Survival	125mph (200km/h)	125mph (200km/h)	125mph (200km/h)
Temperature	-50°C to +80°C		
Humidity	0 to 100% (Condensing)		
Atmosphere	Standard Hardware meets 500 Hrs SST Requirements (ASTM B-117) Marine Option has AISI 316 stainless steel hardware		
Solar Radiation	360 BTU/h/ft <sup>2</sup>		
Shock and Vibration	As Encountered during Shipping and Handling		

- ISO 9001:2008 Certificate of Registration

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