



ANTENNA EXPERTS

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Model # SAT-225-400R

225 – 400 MHz.

10 dBic. Gain

SATCOM CIRCULAR POLARIZED HELICAL ANTENNA

DESIGN FEATURES: The SAT-225-400R is single mode UHF SATCOM antenna which is ideal for SATCOM On-The-Move (SOTM) operation. The SATCOM antenna can be used for communicating with satellites low on the horizon. SAT-225-400R can be used with most tactical Multi-Band, Multi-Mode Receivers (MBMMR), as well as all airborne and ground transceivers. This high-gain antenna use Circular Polarization Antenna Technology - which delivers better penetration through obstruction and interference. This commercial grade antenna provides superior performance as compare to significantly larger and more expensive products. Our SAT-225-400R helical antennas are smaller than conventional yagi antenna. SAT-225-400R SATCOM antenna features of a single port high angle (RHCP) and low angle antenna system that is suitable for installation on vehicular, shipboard and ground shelter applications. No diplexer or switching is required.

CONSTRUCTIONS: The SAT-225-400R RHCP helical antennas utilizes right hand circular polarization to minimize the effects of multipath interference. The Right Hand Circular Polarized Helical Antenna is light weight, broadband and rugged helical antenna, supplied with fiberglass radome to protect the antenna from severe environmental conditions. Cylindrical enclosure is used for low wind loading and for minimal effect of ice formation on the helical antenna operation as well as providing an aesthetically pleasing appearance. The SAT-225-400 Helical Antenna is supplied with a specially designed mounting arrangement for steering the antenna in both planes, over 360 Degrees in Azimuth and 90 Degrees in Elevation for terrestrial and satellite links. The Antenna is highly suitable for SATCOM – Satellite high angle coverage and low angle air-to-air or ground-to-air communications.

ARRAY FORMATION: For higher gain requirement, the Helical antenna can be supplied in DUAL stacked or QUAD stacked arrays with suitable power splitter/combiner cable harness. Copper

ELECTRICAL SPECIFICATIONS:

Frequency Range	225 -400 MHz.
Gain	10 dBic. Typical
Bandwidth	Entire Band
Polarization	Circular - RHCP
Input Impedance	50 Ohms.
Radiation Pattern	Directional
Horizontal Beam-width –Half Power Points	50 Degrees.
Vertical Beam-width –Half Power Points	50 Degrees.
Front to Back Ratio	16 dB.
VSWR – Better than	2.5:1
RF Power Handling Capacity	500 Watts.
Input Termination	N-Female

MECHANICAL SPECIFICATIONS:

Mounting Hardware	Stainless Steel
Weight	14 Kgs.
Wind Rating	200 Km/Hr.
Overall Length	1300 mm
Shipping Length	1400 mm
Radiating Materials	Copper
Enclosure Materials	Fiber Glass
Enclosure diameter	260 mm
Mast Diameter	52 mm
Reflector Materials	6061T6 Aluminum Alloy
Reflector Size	400 x 400 mm

ENVIRONMENTAL SPECIFICATIONS:

Operating Temperature	(-) 30 to +70 Degrees Celsius
Storage Temperature	(-) 40 to +80 Degrees Celsius
Humidity	0 to 100% RH

Note: All information contained in the datasheet is subject to change without any prior notice.