

SMART ELECTRONICS COMMUNICATION

Delhi, INDIA

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CAVITY BACKED DUAL ARM ARCHIMEDEAN SPIRAL ANTENNA

Model No: SAS

Frequency: 300-3000 MHz

Gain: 3-6 dBi

DESIGN FEATURES: The cavity backed dual arm Archimedean spiral antenna use 6063T6 ultra corrosion resistant architectural anodized aluminium alloy and designed to provide wideband directional transmission/reception of radio signals from 300-3000 MHz bands. Both left hand circular polarization (LHCP) and right hand circular polarization (RHCP) are available. The cavity backed dual arm Archimedean spiral antenna is a frequency independent antenna and this spiral antenna is weather protected suitable for outdoors use in applications requiring circularly polarized RF radiations. The SAS (300-3000 MHz) uses extended coaxial stubs technique to provide constant 3+ dBi gain over entire 300-3000 MHz frequency band while maintaining the wider beam-width. This cavity backed spiral antenna is highly suitable for transmission, reception, monitoring, scanning, ECM, surveillance, signal intelligence (SIGINT), direction finding (DF), telemetry and airborne applications due to its ultra-broad band design feature.



CONSTRUCTIONS: The spiral antenna is sealed in an aluminium cavity and is highly immune to noise. Matching circuit of spiral antenna is housed inside the main body of the antenna. A special mounting hardware is used to mount the spiral antenna on vertical pole having outer diameter of 38-50mm (1.5"-2"). Spiral antenna N-Female termination is fixed on the antenna body for easy connectivity. It is light weight, broadband and rugged spiral antennas, supplied with Fiberglass cover to protect the antenna from environment.

ELECTRICAL SPECIFICATIONS:

| | |
|----------------------------|-------------------------|
| Frequency Range | 300-3000 MHz |
| Gain | 3-6 dBi |
| Bandwidth | Entire Band |
| Polarization | Circular – LHCP or RHCP |
| Input Impedance | 50 Ohms |
| Radiation Pattern | Directional |
| Horizontal Beam-width | 60°-80° Degrees |
| Vertical Beam-width | 60°-70° Degrees |
| VSWR | ≤2.5 : 1 |
| RF Power Handling Capacity | 150 Watts |
| Input Termination | N-Female |

MECHANICAL SPECIFICATIONS:

| | |
|--------------------------------|----------------------------------|
| Material | 6063T6 Aluminium Alloy |
| Gross Weight | 5 Kg |
| Diameter (approx.) | 550 mm (21.6" inches) |
| Height (approx.) | 250 mm (10" inches) |
| Wind Rating | 180 Km/Hr. |
| Radiating Elements Material | Copper |
| Maximum Mounting Pipe Diameter | 50 mm (2" inches) |
| Front Enclosure Material | Fiberglass |
| Shipping Size (approx.) | 630 x 380 mm (24.8 x 15" inches) |

ENVIRONMENTAL SPECIFICATIONS:

| | |
|-----------------------|------------------------------|
| Operating Temperature | (-)30 to +60 Degrees Celsius |
| Storage Temperature | (-)40 to +70 Degrees Celsius |
| Humidity | 0 to 95% RH |

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

Antenna Report:

