

# 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                  |

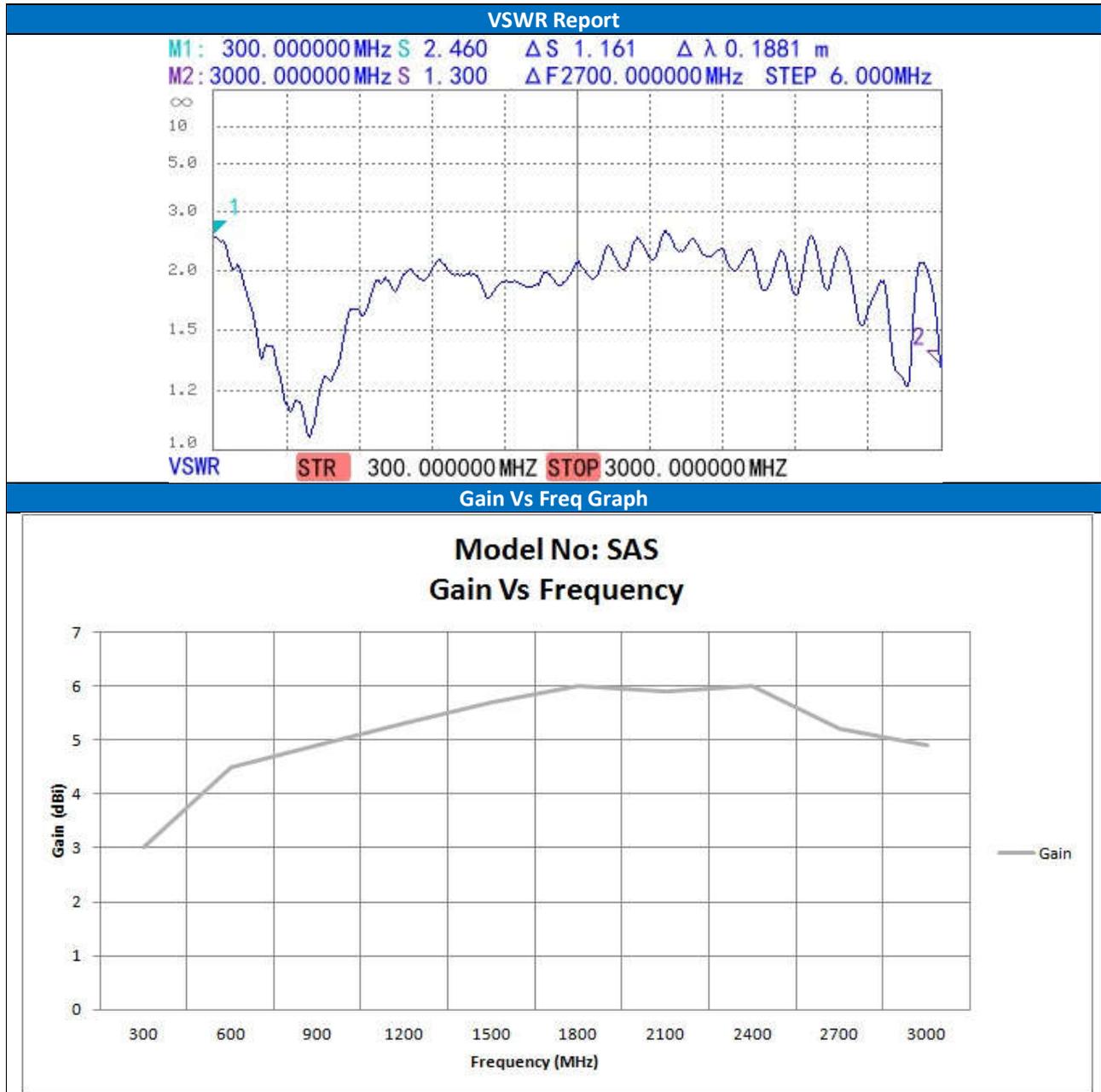
Note: All information contained in the datasheet is subject to change without any prior notice.

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## Antenna Report:



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