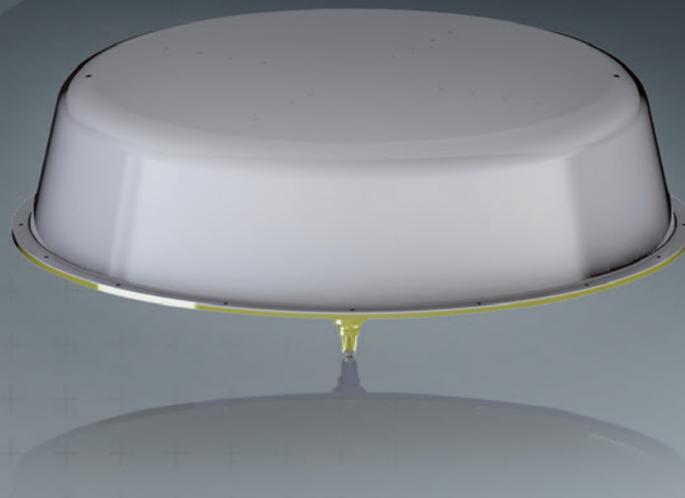




ANTENNAS FOR HIGH POWER APPLICATIONS

Wideband Transmit Airborne Antenna



SOLUTION FOR

- Air-to-ground high power emission applications

MAIN FEATURES

Technical performance

- Hemispherical radiation pattern for full ground coverage
- Circular polarization
- Wideband, low dispersion

Design

- Compact, low profile spiral antenna over metamaterial ground plane and high temperature ferrite loading
- High power tapered coaxial balun
- Low weight, robust honeycomb radome
- Compliant to the airborne environment

Surface treatment

- Surtec 650 according to MIL-C 5541E class 3
- Polyurethane paint (Blue grey RAL 7031)

Repeatability

- Stiff and robust mechanical design
- Precision machined
- High reliability coaxial connector

Delivered documents

- Typical performance data (TYMEDA™)
- Measured return loss data

PRODUCT CONFIGURATION

Equipment

- Mounting flange
- Low drag protective radome

Related services

- Calibration and maintenance
- Customization

■ Included □ Optional

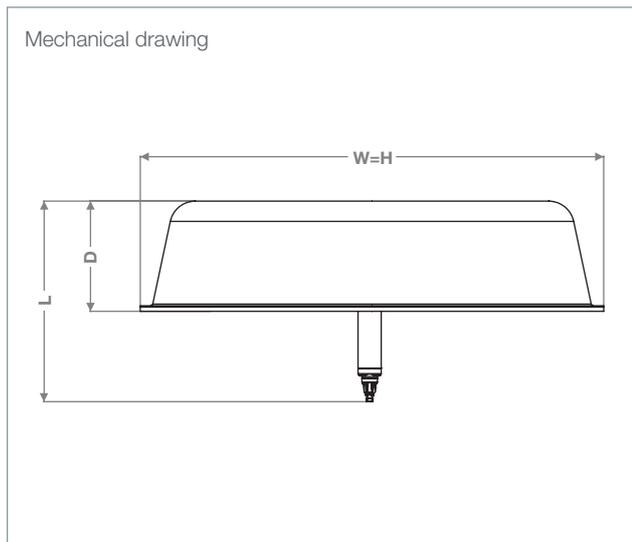
Electrical characteristics

| | |
|----------------------------|---|
| Part number | SATX100 |
| Type of antenna | Low profile spiral antenna over metamaterial ground plane |
| Frequency range | 0.1 – 4 GHz |
| Polarization | Circular (RHCP) |
| Gain | > 0 dBi [0.1 – 0.2] GHz > 4 dBi [0.2 – 0.7] GHz > 7 dBi [0.7 – 4] GHz |
| VSWR | < 4.4 [0.1 – 0.2] GHz < 1.9 [0.2 – 4] GHz |
| Return loss | < -4 dB [0.1 – 0.2] GHz < -10 dB [0.2 – 4] GHz |
| Power handling (CW) | 1 kW |

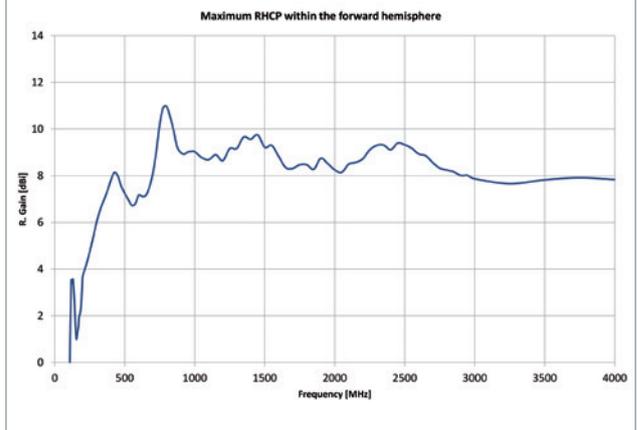
Mechanical characteristics

| | |
|-------------------------|--|
| Part number | SATX100 |
| Dimensions | |
| W = H | 1080 |
| L | 471 |
| D | 259 |
| Weight (approx.) | 61 Kg |
| RF connector | N-type Female ⁽¹⁾ |
| Materials | Aluminum, ultem, high temperature ferrite, composite honeycomb, fiberglass |
| Treatment | Surtec 650 ⁽²⁾ |
| Color | Blue grey RAL 7031Matt |
| Interface | Fixture plate |

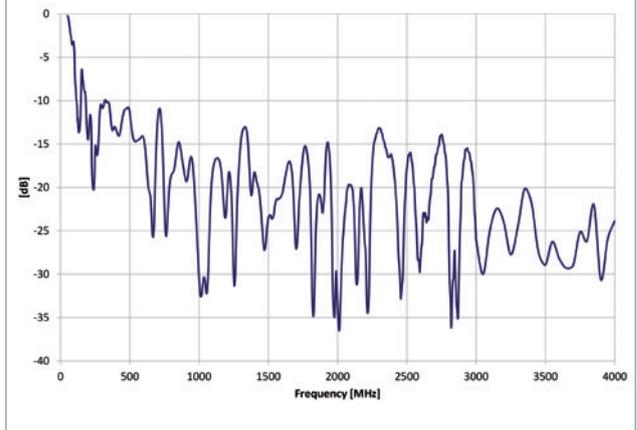
(1) Southwest 312-04SF
(2) According to MIL-C-5541E Class 3



SATX100 realized gain



SATX100 return loss



SATX100 during radiation pattern testing in the MVG SG64 system

