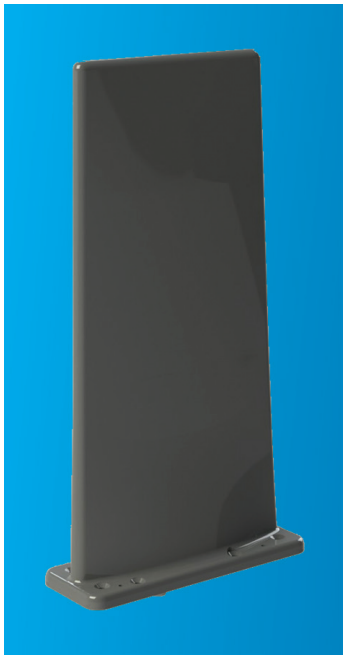
# 9-33-26

CHELTON

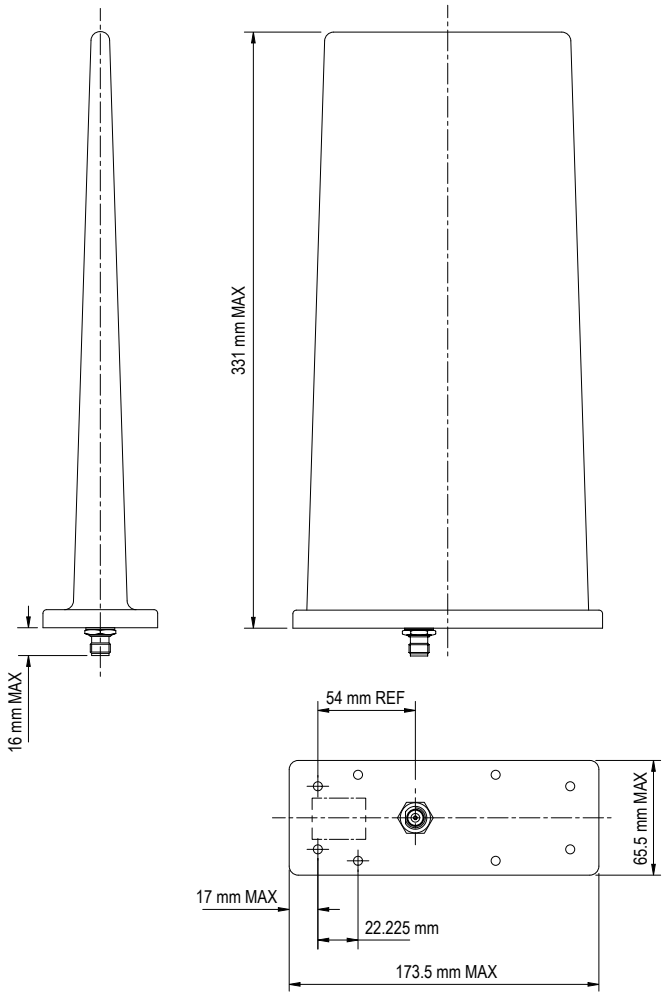
## V/UHF Broadband Antenna



**The 9-33-26 is a combined VHF/UHF broadband antenna designed to provide communications over the frequency range 30 MHz to 512 MHz, and intended for use in general airborne applications.**

The **9-33-26** is configured as a broadband fan monopole incorporating a frequency dependent matching network to ensure acceptable VSWR at lower frequencies, while preserving optimum gain performance at higher frequencies. A susceptance compensation network is included for gain enhancement at lower frequencies.

The **9-33-26** comprises a pressure moulded composite radome within which is housed the electrical assembly. This is enclosed at the base by an aluminium alloy baseplate which supports the single RF connector.



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### ELECTRICAL

| | |
|---|---|
| **Frequency** | 30 MHz - 512 MHz |
| **Gain** | Gain dBi / Frequency MHz<br>≥-25 / 30<br>≥-15 / 88<br>>-4* / 118 - 174<br>> 0* / 225 - 512<br>*average |
| **Power Rating** | Rating / Frequency MHz<br>25 W CW max / 30 - 174<br>45 W CW max / 225 - 400 |
| **Impedance** | 50 ohm nominal |
| **VSWR** | < 2.5:1 |
| **Radiation Pattern** | Essentially omni-directional in azimuth |
| **Polarisation** | Predominantly vertical when mounted vertically |
| **Connectors** | TNC Type Female |

### MECHANICAL

| | |
|---|---|
| **Dimensions (LxWxH)** | 331 x 66 x 173.5 mm max |
| **Weight** | 1 kg |
| **Aerodynamic Loads** | 3500 kgf/m$^2$ (5 psi) (minimum ultimate) |
| **Aerodynamic Drag** | 19N (1.95 kgf) at 250 knots EAS and 457.2 m |
| **Mounting Configuration** | 8 holes fixed location |

### ENVIRONMENTAL

| | |
|---|---|
| **High Temperature** | MIL-STD-810E, Method 501.3, Procedures I and II<br>Continuos Operation: +55°C<br>Intermittent Operation: +71°C<br>Storage: +85°C |
| **Low Temperature** | MIL-STD-810E, Method 502.3, Procedures I and II<br>Operation: -54°C<br>Storage: -57°C |
| **Altitude** | MIL-STD-810E, Method 500.3, Procedures I and II<br>Operational: -15,240 m<br>Storage: - -15,240 m |
| **Acceleration** | MIL-STD-810E, Method 513.4, Procedure I 13.5 g all axes |
| **Temperature Shock** | MIL-STD-810E, Method 503.3 |
| **Vibration** | MIL-STD-810E, Method 514.4. Procedures I, Category 4<br>0.01 g$^2$/Hz IS to 2000 Hz,<br>L1=0, 6 g$^2$/Hz at 68 Hz |
| **Shock** | MIL-STD-810E, Method 516.4, Procedures I and V<br>Functional: 20 g, 11 ms, sawtooth<br>Crash Hazard: 40 g, 11 ms, sawtooth |
| **Rain** | MIL-STD-810E, Method 506.3, Procedure I Normal operation when exposed to blowing rain |
| **Humidity** | MIL-STD-810E, Method 507.3, Procedure III 95% relative humidity at 60°C |
| **Salt Fog** | MIL-STD-810E, Method 509.3, Procedure I 48 hours exposure to 5% salt solution |
| **Magnetic Effect** | RTCA DO-160D, Section 15, Category Z Less than 1° deflection at 300 mm |



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