

# Type 9-33-26

V/UHF Broadband Antenna  
30 MHz - 512 MHz

9-33-26-DS Issue 1

**COBHAM**

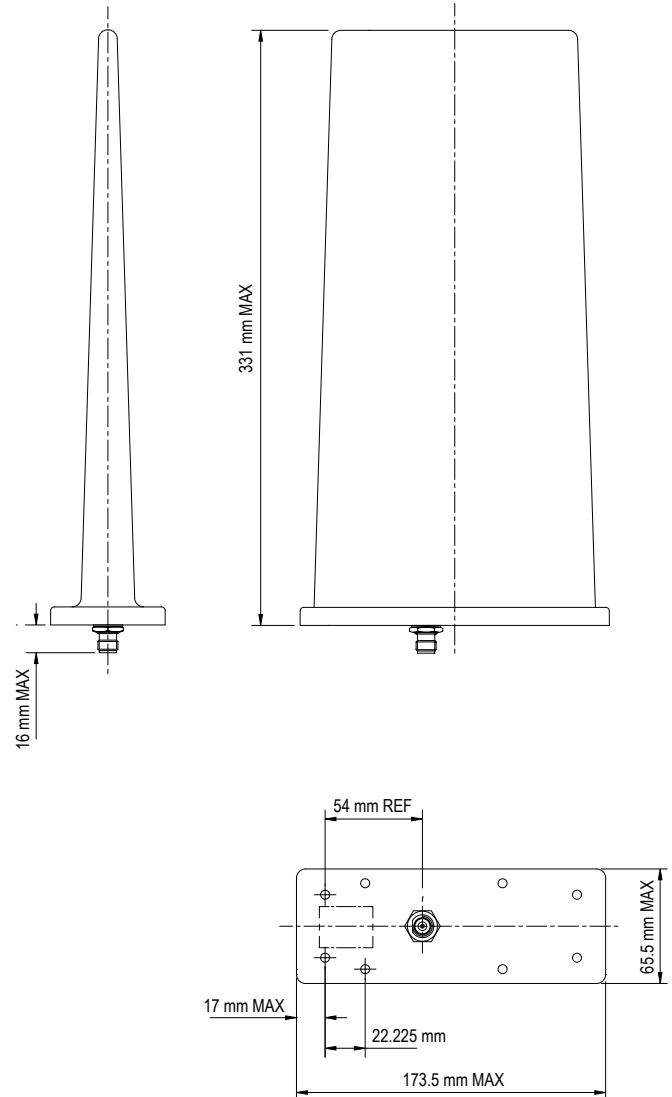
The most important thing we build is trust



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 Specification

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

## Mechanical Specification

Dimensions (mm)	331 x 66 x 173.5 max
Weight	1 kg
Aerodynamic Loads	3500 kgf/m <sup>2</sup> (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 Specification

High Temperature	MIL-STD-810E, Method 501.3, Procedures I and II Continuous Operational: +55°C Intermittent Operational: +71°C Storage: +85°C
Low Temperature	MIL-STD-810E, Method 502.3, Procedures I and II Operational: -54°C Storage: -57°C
Altitude	MIL-STD-810E, Method 500.3, Procedures I and II Operational: 15,240 m Storage: 15,240 m
Temperature Shock	MIL-STD-810E, Method 503.3
Vibration	MIL-STD-810E, Method 514.4, Procedure I, Category 4 0.01 g <sup>2</sup> /Hz 15 to 2000 Hz L1 = 0.6 g <sup>2</sup> /Hz at 68 Hz
Shock	MIL-STD-810E, Method 516.4, Procedures I and V Functional: 20 g, 11 ms, sawtooth 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
Acceleration	MIL-STD-810E, Method 513.4, Procedure I 13.5 g all axes
Magnetic Effect	RTCA DO-160D, Section 15, Category Z Less than 1° deflection at 300 mm

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