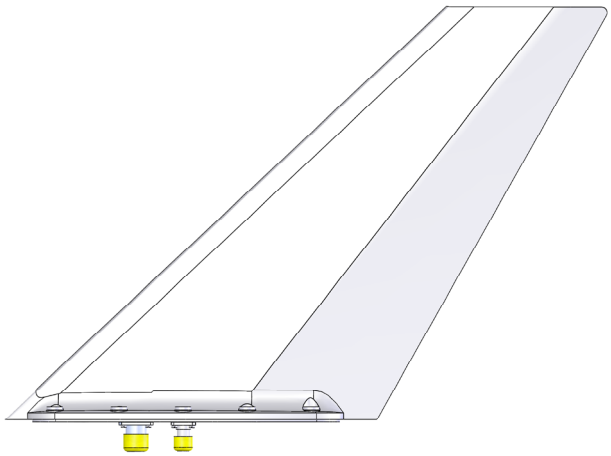
20-200-20

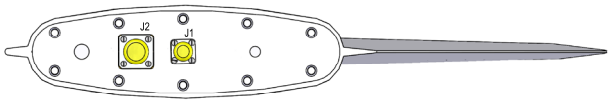
CHELTON

Dual band high efficiency blade antenna with VHF and L-Band

Key features:

- **High efficiency blade**
- **VHF and L-Band**
- **Lightning protection**





The 20-200-20 is a high efficiency blade antenna dedicated to the frequency bands 118 MHz to 156 MHz and 960 MHz to 1220 MHz.

The antenna is designed for general airborne application.

The antenna comprises two independent radiating elements, each served by a dedicated terminal.

The VHF Section utilises a broadband fan radiator, passively matched. The matching network includes dc grounding of the radiating element for lightning protection.

The L-band frequencies are served by a co-phased folded monopole couplet.

Printed circuit transmission line techniques are incorporated to reduce coupling into the VHF section and thereby avoid excitation of the main radiating element, and resultant corruption of the radiation pattern.

The radiating elements, together with all feed and matching circuitry are accommodated on a common pcb.

ELECTRICAL

Frequency Range	118-156 MHz (VHF) 960-1220 MHz (L-Band)
RF Power	
118-156 MHz	25 W cw max
960-1220 MHz	1.5 kW peak
Polarisation	Vertical
Radiation	Omnidirectional in azimuth
Impedance	50 ohm (nominal)
VSWR (Return Loss)	118 MHz to 156 MHz ≤ 2.5:1 960 MHz to 1220 MHz ≤ 2.0:1 1000 MHz to 1100 MHz ≤ 1.8:1
Average Gain	118 MHz to 156 MHz 1.5 dBi 960 MHz to 1220 MHz +1 dBi

MECHANICAL

Height	311.2 mm (12.25”)
Width	72.4 mm (2.85”)
Length	276.9 mm (10.9”) 450.9 mm (17.75”) with rake
Max Weight	1.5 kg (3.3 lbs)
Connectors	
L-Band	N Female
VHF	TNC Female
Mounting	8 holes fixed location

ENVIRONMENTAL

Operational Temperature	
Continuous:	-55°C to +70°C
Intermittent:	+85°C
Vibration	MIL-STD 810D, Method 514.3, Procedure 1 MIL-T-5422F(AS)
Salt Fog	MIL-STD-810D, Method 509.2, Procedure I
Waterproofness	RTCA DO-160B, Section 10, Catergory R
Fluid Contamination	BS3G100 Part 2, Section 3
Magnetic Effect	RTCA DO-160B, Section 15, Class Z

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