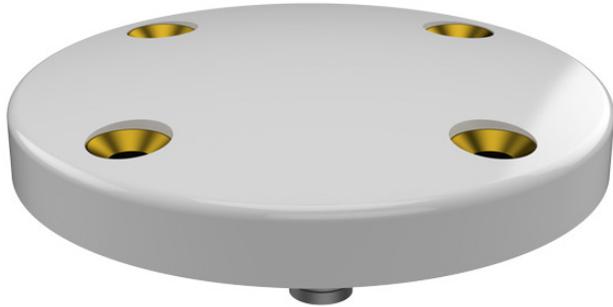


# 20-27 & 20-27EC

L1 & L2 Low Profile GPS Antenna with PTFE cover



- **L1 and L2 coverage**
- **Low profile**
- **PTFE (Teflon) gives excellent de-icing performance**

The 20-27 and 20-27EC Series GPS antennas are designed to provide operation at both the L1 and L2 frequencies. They are of low profile construction and are supplied with a high performance PTFE (Teflon) cover.

The antennas are designed for use on greater than 300 mm diameter metallic groundplanes. For all other groundplanes use type 20-27F Series.

A circular aluminium alloy baseplate forms the platform onto which is attached the antenna radiating elements and radome. The radome surface is PTFE (Teflon) giving excellent de-icing performance.

# CHELTON

## ELECTRICAL

<b>Frequency Range</b>	L1: 1565-1585 L2: 1217-1238			
<b>Polarisation</b>	Right Hand Circular Polarised <2 dB axial ratio on boresight			
<b>Impedance</b>	50 ohm (nominal)			
<b>VSWR (Return Loss)</b>	1.8:1 (≥ 10.9 dB)			
<b>Power Survival</b>	Capable of withstanding signals of 200 V/m CW, 50 kHz to 40 GHz without sustaining damage			
<b>Gain coverage</b>	L1		L2	
0=<θ<=360	Centre band	Band edge	Centre band	Band edge
0=<θ<=75	-0.5	-3.0	+0.0	-2.0
75<θ<=80	-2.5	-5.5	-2.0	-4.0
80<θ<=85	-4.5	-7.5	-4.5	-6.5
85<θ<=90	-6.5	-10.0	-7.0	-10.0

## ENVIRONMENTAL

<b>Temperature</b>	Operational: -55°C +100°C Intermittent: -55°C +135°C
<b>Altitude</b>	100,000 ft
<b>Humidity</b>	MIL-STD-810D, Method 507.2, Procedure III (modified), for sealed equipment.
<b>Vibration</b>	Sine: In accordance with MIL-E-5400T, Figure 2 (Sheet 3), Curve III-b Method 514.3, Procedure I Random: MIL-STD-810D, Method 514.3, Procedure I, Category 5 Gunfire: MIL-STD-810D, Method 519.3
<b>Shock</b>	MIL-STD-810D
<b>Salt Atmosphere</b>	MIL-STD-810D, Method 509.2, Procedure I
<b>Immersion</b>	MIL-STD-810D, Method 512.2, Procedure I
<b>Acoustic Noise</b>	MIL-STD-810D, Method 515.3, Procedure II, Category C
<b>Sand and Dust</b>	MIL-STD-810B, Method 510, Procedure 1. DEF STAN 07-55, Section 4/1, Test D1.
<b>Acceleration</b>	MIL-STD-810E, Method 513.4, Section 2, Procedure 1
<b>Fungus</b>	BS 3G.100, Part 2, Section 3:3.3
<b>Rain</b>	MIL-STD-810D Method 506.2, Procedure I
<b>Explosive Atmosphere</b>	MIL-STD-810B, Method 511, Procedure I
<b>Lightning</b>	RTCA/DO-160E, Section 23, Paragraph 23.6.2.1, Waveform Figure 23-1 +270 kV and -250 kV
<b>EMC</b>	MIL-STD-461A Notice 3 and MIL-STD-462

## MECHANICAL

<b>Height</b>	14.4 mm (0.56")
<b>Width</b>	88.9 mm (3.5")
<b>Length</b>	88.9 mm (3.5")
<b>Max Weight</b>	0.25 kg (0.55 lbs)
<b>Connectors</b>	TNC Female
<b>Mounting</b>	4 holes fixed location

