# GD1813

CHELTON

VHF/UHF Whip Antenna

The GD1813 VHF/UHF Whip Antenna is a high performance, broadband Joint Tactical Radio System (JTRS) whip antenna designed for specific use over the frequency band 30 MHz to 512 MHz. It is designed primarily for use on tanks and other military vehicles.

The GD1813 employs a spring mounted whip element, primarily for use at VHF, together with a parasitically excited sleeve monopole, for operation over the UHF band. Decoupling techniques are incorporated to avoid deleterious interaction and preserve high performance throughout all operating bands.

A frequency dependent matching network is fitted to ensure acceptable low band VSWR with minimum loss of gain. The antenna comprises a spring loaded detachable whip and a pressure moulded GRP mast secured permanently to a round aluminium base which has four mounting holes. The assembly is foam filled to provide increased structural stability and prevent the ingress of moisture
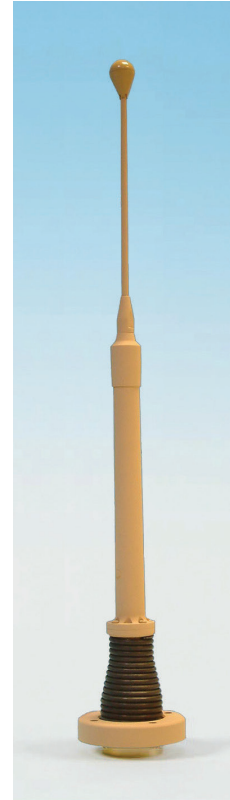

ELECTRICAL

Frequency	30 MHz - 88 MHz	
	118 MHz - 174 MHz	
	225 MHz - 512 MHz	
Gain	-14 dBi to -6 dBi	30 MHz - 88 MHz
	-4 dBi average	118 MHz - 174 MHz
	0 dBi average	225 MHz - 512 MHz
	See profile overleaf	
Radiation	Nominally omnidirectional in azimuth	
Power Rating	50 W CW	
Impedance	50 ohm nominal	
VSWR	≤ 2.5:1	30 MHz - 88 MHz
	≤ 2.5:1	118 MHz - 174 MHz
	≤ 2.25:1	225 MHz - 512 MHz
Polarisation	Predominantly vertical when mounted vertically	
Connector	BNC Female	

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Gain of GD1813
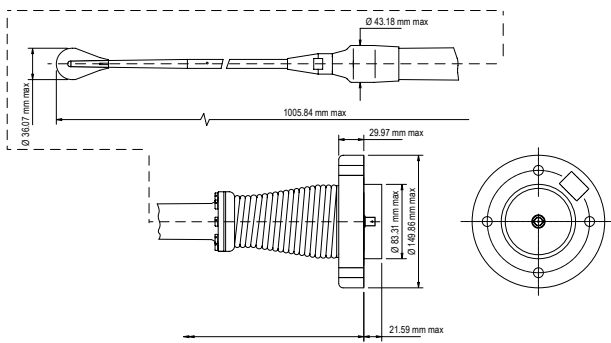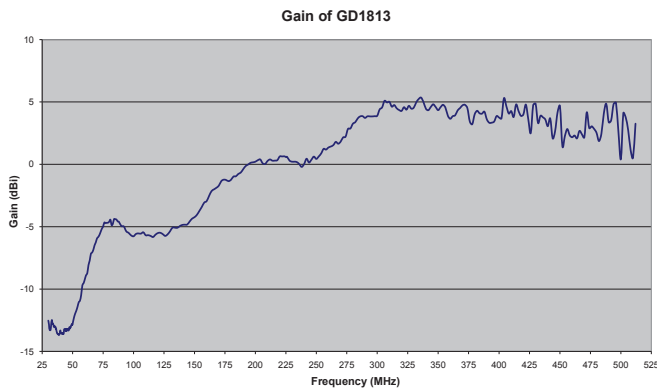
MECHANICAL

Height	1006 mm (maximum)
Weight	3.6 kg (maximum)
Mounting	4 holes fixed location

ENVIRONMENTAL SPECIFICATION

High Temperature	MIL-STD-810E, Method 501.3, Procedures I and II
	+71°C
Low Temperature	MIL-STD-810E, Method 502.3, Procedures I and II
	-40°C
Vibration	MIL-STD-810E, Method 514.4, Category 8
Rain	MIL-STD-810E, Method 506.3, Procedure I
	Normal operation when exposed to driving rain
Humidity	MIL-STD-810E, Method 507.3, Procedure I
Sand and Dust	MIL-STD-810E, Method 510.3, Procedures I and II