DB30512-M

VHF/UHF Dual-Band Vehicle Antenna
30-88MHz, 225-512MHz with optional L1 or L1/L2 GPS

General

Tactical dual-band whip antenna, designed to be installed on armed forces vehicles, for connection to a VHF radio 30-88MHz and a UHF radio in the band 225-512MHz.

The antenna is designed as a monopole in the VHF band, with performance similar to an end-fed VHF-only antenna. The UHF part is an elevated high gain dipole which reduces distortion of the radiation patterns that could be caused by the environment of a vehicle.

The antenna is available with single or duel feed in the VHF/UHF bands. Optional L1 or L1/L2 GPS is also available. See option table overleaf for details.

Electrical Specification

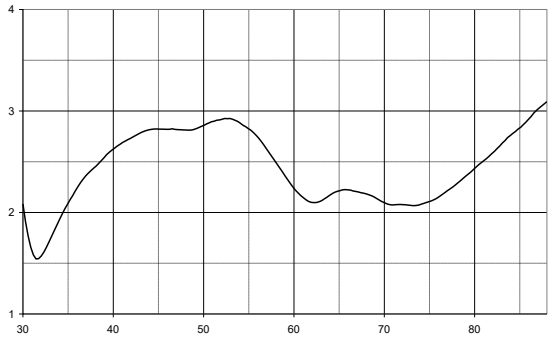
	VHF	UHF	L1 GPS (option)	L1/L2 GPS (option)
Frequency	30-88 MHz	225-512 MHz	1575.42 ± 1.023 MHz	L1 - 1575.42 ± 10 MHz L2 - 1227.60 ± 10 MHz
V.S.W.R.	3.5 : 1	3.5 : 1	Supply voltage: 3V ± 0.5V Pre-amplifier: 27dB Noise Figure: 2dB Supply Current: < 35mA	Supply voltage: 2.7-5.5V Pre-amplifier: 26.5dB @ 5V Noise Figure: 2.5dB Supply Current: < 60mA
Average Gain	-4 to 0 dB rel. l/4	0 dBi ± 2		
Power	100 watts CW	50 watts CW		
Connector (Default)	BNC female (see option table)	TNC female (see option table)	SMA female	SMA female
EMP	Integrated			
Polarization	Vertical		RHCP	RHCP
Directivity	Omni-directional			
Isolation VHF-UHF	See Plot			

Mechanical & Environmental Specification

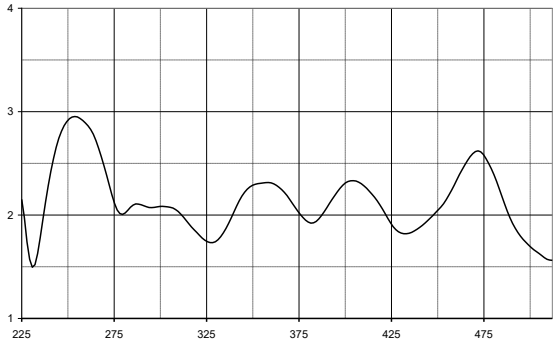
Dimensions	Height Top diameter	2.35 m 8 mm
Mass	Total Base Lower whip Upper whip	3.4 kg 2.1 kg 1.1 kg 0.2 kg
Color	Base Whips	Black Green or sand
Temperature range operation	-40°C / +70°C	
Salt fog	96 hours	
Shocks	25 shocks at 40 km/h	
Wind rating	160 km/h	

Options Table

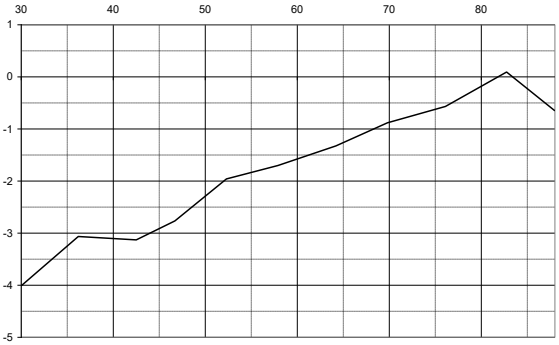
Description	Part Number	VHF Connector	UHF Connector	GPS Connector
Dual-Band 30-88 MHz 225-512 MHz Dual Feed	DB30512-MDF	BNC Female	N Female (BNC & TNC option)	N/A
Dual-Band 30-88 MHz 225-512 MHz Dual Feed, L1 GPS	DB30512-MDF-L1	BNC Female	N Female (BNC & TNC option)	SMA Female
Dual-Band 30-88 MHz 225-512 MHz Dual Feed, L1/L2 GPS	DB30512-MDF-L2	BNC Female	N Female (BNC & TNC option)	SMA Female
Dual-Band 30-88 MHz 225-512 MHz Single Feed	DB30512-MSF	BNC Female (BNC & N option)		N/A
Dual-Band 30-88 MHz 225-512 MHz Single Feed, L1 GPS	DB30512-MSF-L1	BNC Female (BNC & N option)		SMA Female
Dual-Band 30-88 MHz 225-512 MHz Single Feed, L1/L2 GPS	DB30512-MSF-L2	BNC Female (BNC & N option)		SMA Female



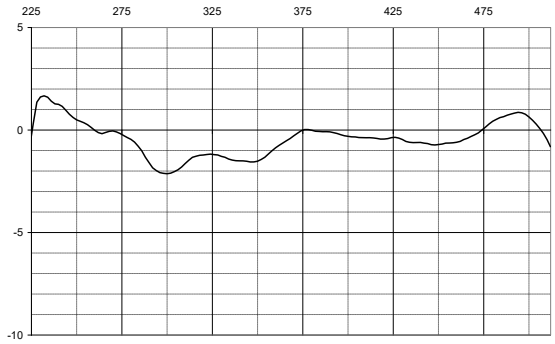
Typical VHF SWR on a shelter



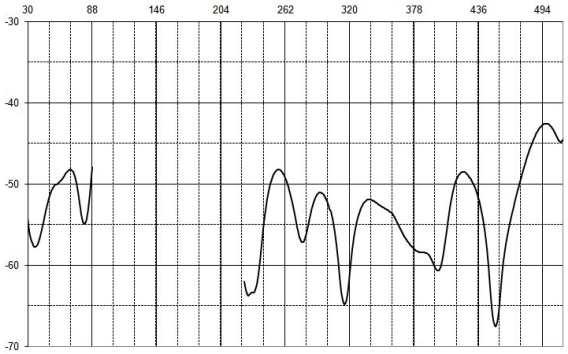
Typical UHF SWR on a shelter



Typical VHF gain in dB rel. λ/4 whips



Typical UHF gain in dBi



Typical isolation between VHF/UHF ports