



Surface Mount Antennas VHF, 220 or UHF & GPS

- UHF model available for 450 MHz Band and provides 26 dB active GPS gain
- VHF models operate on popular frequencies, including PTC 220 MHz with 26 dB GPS gain
- High efficiency whip is 9 inches max (23 cm) on 220 MHz or UHF band.

For VHF or UHF tracking applications, these dual band configurations combine GPS with VHF, UHF or PTC 220 MHz (Positive Train Control) into one neat package. This saves on space, looks and installation time without sacrificing performance. The desired frequency for VHF, UHF and 220 must be specified at time of order.

These antennas can be mounted to a vehicle's metal surface or any bulkhead through a 3/4" hole (19 mm). The antennas provide completely independent dual band operation. A loaded quarterwave whip keeps the VHF 220 whip down to a minimal size.

GPS performance is 26 dB LNA, with 5 dBi nominal antenna gain. The GPS circuitry has a low noise figure (2.0 dB max) with excellent filter characteristics. No interaction occurs between the bands.

The GPS cable/interface is 15 feet of RG-174 cable (4.5 meters) and SMB or SMA connector. The band models are outfitted with either a BNC or N connector and 15 feet of RG-58 (4.5 meters).

Model #	Description
SM-150/1575-1A2C-BLK-180	VHF Band & GPS
SM-220/1575-1A2C-BLK-180	220 MHz Band & GPS
SM-450/1575-1A2C-BLK-180	UHF Band & GPS
<u>Color options available for above models</u> WHT-White or BLK-Black	
MAG-450/1575-2C2C-BLK-120	UHF Band & GPS
Available in black only	
Please specify connectors required and frequency at time of order.	

Specifications

Frequency:	VHF Model 220 VHF Model UHF Model GPS, all Models	130-170 MHz, factory set 220-224 MHz, factory set 450-470 MHz, factory set 1575.42 +/- 2 MHz	Dimensions:	220 MHz Model UHF Model VHF Model	8 1/2" height (216 mm) 9" height (229 mm) 18" at lowest freq. (457 mm)
VHF or UHF gain:		Unity	Base Dimension:		1" H x 2 5/8" D (25mm x 67 mm)
VSWR:		2:1 max over range	Stud Mounting:		3/4" dia x 1/2" long (19 mm x 13 mm) for 3/16" thick (4.7 mm)
GPS Gain:		26 dB LNA 5 dBi nominal RHCP Antenna	surface		
Noise Figure:		2.0 dB max, 1.7 dB typical	Whip Material:		304 Stainless Steel
Nominal Impedance:		50 ohms	Cable Attachment:		Integral to device, bottom exit
Maximum Power:		30 Watts on VHF or UHF	GPS Connector:		SMA Plug (Male)
Amplifier Bias:		2.7 to 5 VDC	VHF/UHF Connector:		TNC Plug (Male) supplied loose for installation Other connectors available
Current:		20 mA max, 10 mA typical	Shock & Vibration:		EN 61373, IEEE 1478, MIL-810G
Cable:			Water		TIA-329.2-C
SM		GPS: RG-174 VHF/UHF: RG-58 Dual RG-174			
MAG					
Operating Temp:		-40° to +80° C			
Case Material:		Polycarbonate			