



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 (1.9 cm). 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 m) 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 m)

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
MAG-450/1575-2C2C-BLK-120	UHF Band & GPS

Please specify connectors required and frequency at time of order.

SM's available in Black or White. MAG available in Black only

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:
Gain (all models):	Unity		220 MHz Model UHF Model VHF Model
VSWR:	2:1 max over range		8 1/2" height (21.6 cm) 9" height (22.9 cm) 18" at lowest freq. (45.7 cm)
GPS Gain:	26 dB LNA 5 dBi nominal RHCP Antenna		Base Dimension:
Noise Figure:	2.0 dB max, 1.7 dB typical		1" H x 2 5/8" D (2.5cm x 6.7 cm)
Nominal Impedance:	50 Ohm		Stud Mounting:
Maximum Power:	30 Watts on VHF or UHF		3/4" dia x 1/2" long (1.9 cm x 1.3 cm) for 3/16" thick (4.7 mm) surface 304 Stainless Steel
Amplifier Bias:	2.7 to 5 VDC		Whip Material:
Current:	20 mA max, 10 mA typical		Cable Attachment:
Cable:	SM		GPS Connector:
	MAG	GPS: RG-174 VHF/UHF: RG-58 Dual RG-174	VHF/UHF Connector:
Operating Temp:	-40° to +80° C		Integral to device, bottom exit SMA Plug (Male) TNC Plug (Male) supplied loose for installation
Case Material:	Polycarbonate		Other connectors available EN 61373, IEEE 1478, MIL-810G, TIA-326.2-C
			Shock & Vibration:
			EN 61373, IEEE 1478, MIL-810G, TIA-326.2-C
			Water Ingress:
			IPx5