

Overview

Southwest Antennas Part # 1080-157 is a small, weatherproof GPS L1 frequency (1,575 MHz \pm 10 MHz) notch filter, with pass bands from DC - 1,400 MHz and 1,750 - 2,600 MHz.

This filter is designed to help eliminate out-of-band TX noise power from disrupting GPS signal reception. Since GPS antennas must pick up a relatively weak signal from a satellite (often -130 dBm on the earth's surface), it can easily be disrupted by much more powerful co-located transmitting antennas.

By utilizing this filter on the RF chain for co-located transmitting antennas, their signal is attenuated by -30 dBa from 1,565 to 1,585 MHz, giving nearby GPS antennas a cleaner frequency band in which to receive satellite location and timing data.

This product is ideal for tactical radio systems, fixed site infrastructure, unmanned systems, or other communication networks that are operating in congested, high-interference RF environments. The ceramic notch filter is housed inside a rugged G10 fiberglass housing, with RF connectors on both ends of the product.

Features:

- Stand-alone filter module with RF connectors
- GPS L1 notch filter:
 - -30 dBa @ 1,575 MHz \pm 10 MHz
- Pass bands:
 - 0.6 dBa insertion loss from DC - 1,400 MHz
 - 1.0 dBa insertion loss from 1,750 - 2,600 MHz
- 10W peak power handling
- Small size and lightweight design
- Can be quickly added to existing systems to help improve performance
- RP-TNC(m) non-rotating and RP-TNC(f) RF connectors

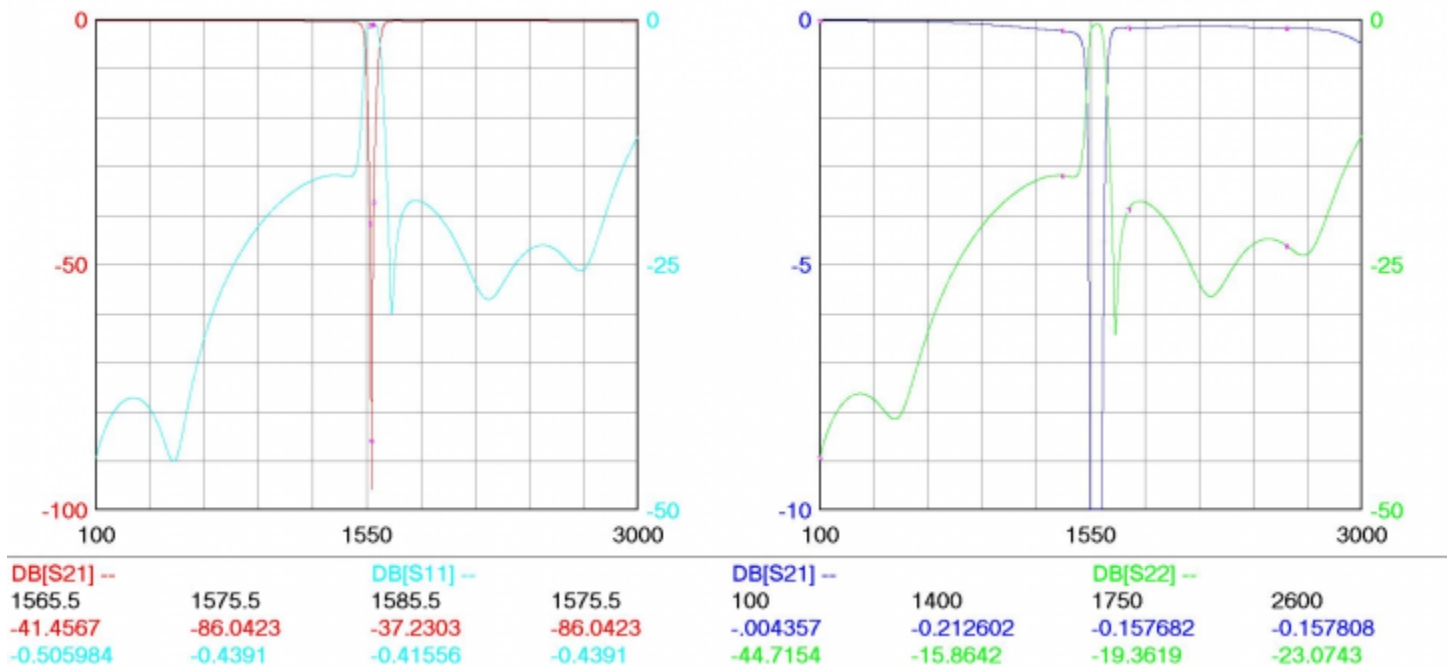


Applications:

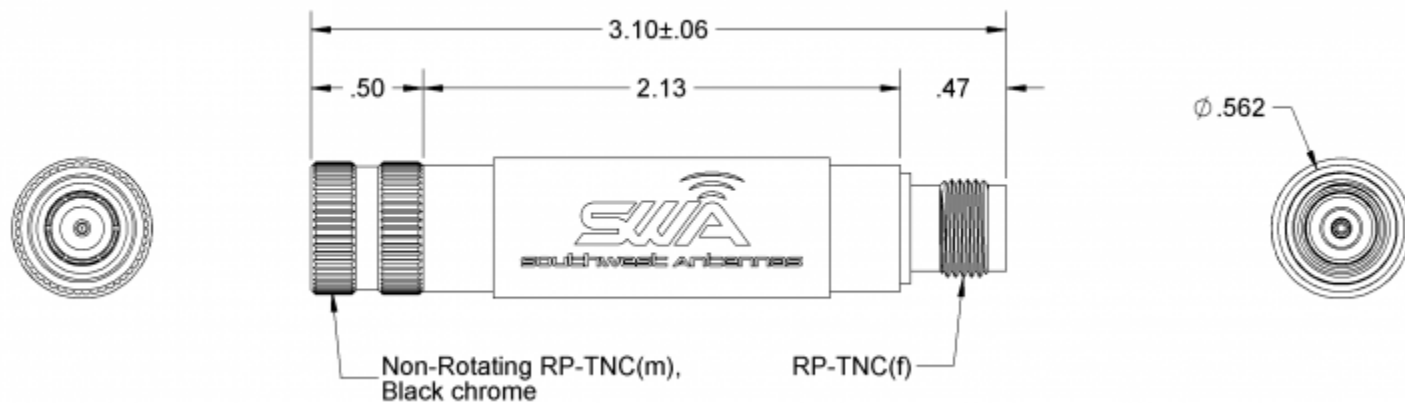
- Tactical radio systems
- Vehicle mounted radios
- DOD / military radio systems
- Federal government radio systems
- Surveillance systems and border security applications
- Fixed site communication infrastructure
- Unmanned aerial vehicles
- Unmanned ground vehicles

Filter Specifications

Parameter	Value	Units	Tolerance
Filter Type	3mm GPS Notch Filter (ceramic)		
Fo	1.575 / 1,575	GHz / MHz	
Filter Frequency Band	L Band		
Filter Impedance	50	Ohms	
Insertion Loss	0.6 dBa max over DC to 1400 MHz, 1.0 dBa max over 1,750 - 2,600 MHz		
Rejection 1	-30 dBa min @ Fo ±10 MHz		
Filter Power CW	8	Watts	
Filter Power Peak	10	Watts	
Operating Temp	-40 to +85	C	
Product Length	3.10 / 78.74	inches / mm	±.06" (including RF connector length)
Product Diameter	0.56 / 14.27	inches / mm	
Product Weight	1.1 / 31.8	oz / grams	
RF Connectors	RP-TNC(m) Non-Rotating to RP-TNC(f)		



Filter Response Plot



Engineering Drawing

All dimensions are in inches