

## Overview

Southwest Antennas Part # 1080-114 is a small, weatherproof bandpass filter designed to be installed in-line when additional RF filtering is required to improve system performance. 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 bandpass filter is housed inside a rugged G10 fiberglass housing, with RF connectors on both ends of the product.

Part # 1080-114 features a band pass frequency range of 1.78 - 1.85 GHz and a very low <1.1 dBa insertion loss.

Southwest Antennas bandpass filters can be utilized to help eliminate interference by rejecting out-of-band noise from other co-located radios operating outside of the filter's 1.78 - 1.85 GHz operational bandpass range, providing increased performance for radio systems and attached antennas.

## Features:

- Stand-alone filter module with RF connectors
- <1.1 dBa Insertion loss
- 15 dB return loss
- 10W peak power handling
- Small size and lightweight design
- Can be quickly added to existing systems to help improve performance
- 1.78 - 1.85 GHz operational frequency range
  - Ideal for federal and military use in the licensed 1,780 - 1,850 MHz band
- SMA(m) non-rotating and SMA(f) RF connectors

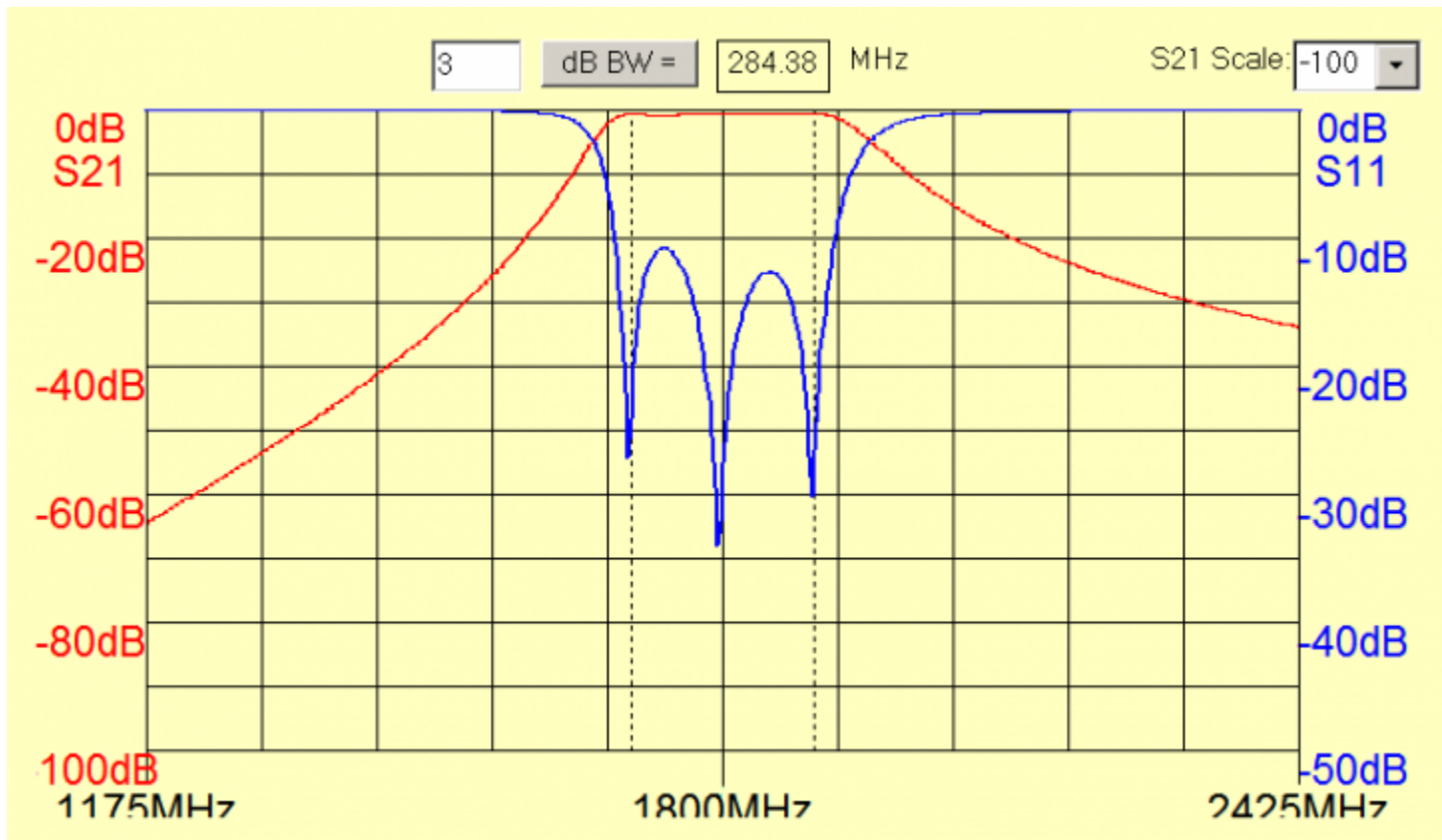


## Applications:

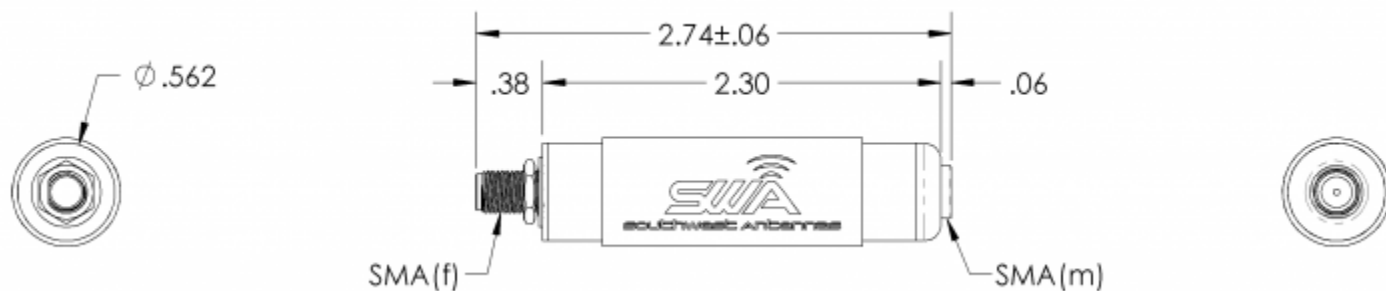
- Tactical radio systems
- Vehicle mounted radios
- Federal government radio systems
- Military tactical radio relay
- Law enforcement video surveillance and border security applications
- Fixed site / point-to-point communication infrastructure
- Unmanned aerial vehicles
- Unmanned ground vehicles

### Filter Specifications

| Parameter                    | Value                                | Units       | Tolerance                             |
|------------------------------|--------------------------------------|-------------|---------------------------------------|
| <b>Filter Type</b>           | 3mm 3-Pole Bandpass Filter (ceramic) |             |                                       |
| <b>Filter Frequency Band</b> | L Band                               |             |                                       |
| <b>Filter Impedance</b>      | 50                                   | Ohms        |                                       |
| <b>Filter Min Frequency</b>  | 1.78 / 1,780                         | GHz / MHz   |                                       |
| <b>Filter Max Frequency</b>  | 1.85 / 1,850                         | GHz / MHz   |                                       |
| <b>Insertion Loss</b>        | <1.1                                 | dBa         |                                       |
| <b>Return Loss</b>           | 15                                   | dB          | Over 100% of BW                       |
| <b>Rejection 1</b>           | -50                                  | dBc         | DC to 780 MHz                         |
| <b>Rejection 2</b>           | -30                                  | dBc         | Min @ 1,480 MHz                       |
| <b>Rejection 3</b>           | -10                                  | dBc         | Min @ 1,680 MHz                       |
| <b>Rejection 4</b>           | -10                                  | dBc         | Min @ 1,950 MHz                       |
| <b>Rejection 5</b>           | -25                                  | dBc         | Min @ 2,150 MHz                       |
| <b>Rejection 6</b>           | -35                                  | dBc         | Min @ 2,350 MHz                       |
| <b>Filter Power CW</b>       | 8                                    | Watts       |                                       |
| <b>Filter Power Peak</b>     | 10                                   | Watts       |                                       |
| <b>Operating Temp</b>        | -40 to +85                           | C           |                                       |
| <b>Product Length</b>        | 2.74 / 69.60                         | inches / mm | ±.06" (including RF connector length) |
| <b>Product Diameter</b>      | 0.56 / 14.27                         | inches / mm |                                       |
| <b>Product Weight</b>        | 0.8 / 23.1                           | oz / grams  |                                       |
| <b>RF Connectors</b>         | SMA(m) Non-Rotating to SMA(f)        |             |                                       |



Filter Response Plot



### Engineering Drawing

All dimensions are in inches