

Preliminary

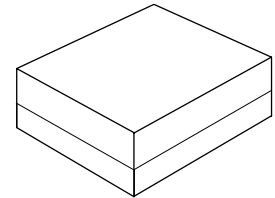


- RF Filter Designed for Front End GPS Applications
- Single-ended Input, Balanced Output
- Excellent Rejection
- 1.45 x 1.15 mm Surface-Mount Case
- Complies with Directive 2002/95/EC (RoHS)



SF1186K-2

**1575.42 MHz
SAW Filter**



SM1411-5

Absolute Maximum Ratings

| Rating | Value | Units |
|--|-----------------|-------|
| Maximum Incident Power in Passband | +10 | dBm |
| Maximum DC Voltage On any Non-ground Terminal | 3 | VDC |
| Operating Temperature Range | -40 to +85 | °C |
| Storage Temperature Range in Tape and Reel | -40 to +85 | °C |
| Maximum Soldering Temperature Profile (5 cycles maximum) | 265 °C for 10 s | |

Electrical Characteristics

| Characteristic | Sym | Notes | Min | Typ | Max | Units |
|--|------------|-------|----------|------|-----|-------------------|
| Center Frequency | f_C | | 1575.42 | | | MHz |
| Insertion Loss, 1574.42 to 1576.42 MHz | IL_{MAX} | | | 1.7 | 2.3 | dB |
| Amplitude Ripple, 1574.42 to 1576.42 MHz | | | | 0.3 | 1.0 | dB _{P-P} |
| Rejection Referenced to IL_{MAX} | | | | | | dB |
| 100 to 960 MHz | | | 40 | 46 | | |
| 960 to 1425 MHz | | | 35 | 46 | | |
| 1425 to 1475 MHz | | | 30 | 51 | | |
| 1475 to 1515 MHz | | | 20 | 30 | | |
| 1515 to 1525 MHz | | | 17 | 30 | | |
| 1625 to 1635 MHz | | | 12 | 22.5 | | |
| 1635 to 1675 MHz | | | 20 | 25 | | |
| 1675 to 1750 MHz | | | 30 | 35 | | |
| 1750 to 1805 MHz | | | 35 | 42 | | |
| 1805 to 1980 MHz | | | 40 | 47 | | |
| 1980 to 2400 MHz | | | 35 | 40 | | |
| 2400 to 3155 MHz | | | 40 | 52 | | |
| 3155 to 6000 MHz | | | 35 | 52 | | |
| VSWR, 1574.42 to 1576.42 MHz | | | | 1.3 | 1.8 | |
| Terminating Source impedance | Z_S | | | 50 | | Ω |
| Terminating Balanced Load impedance | Z_L | | | 100 | | Ω |
| Case Style | | | SM1411-5 | | | |
| Lid Symbolization (V = week character) | | | 1V | | | |

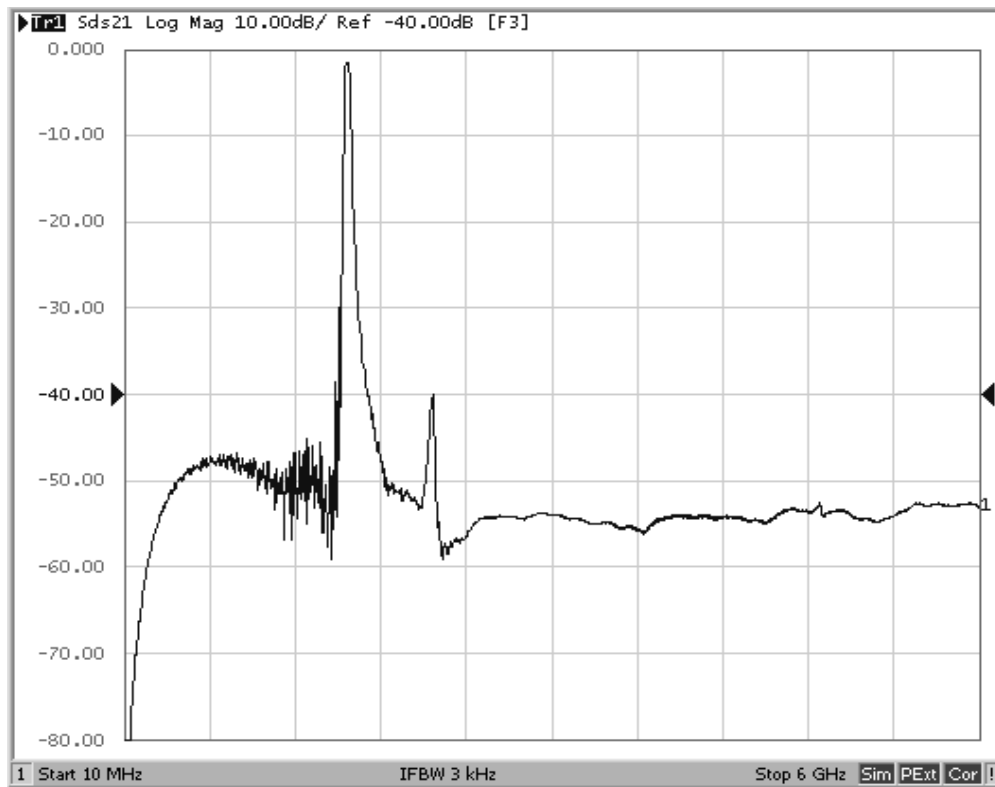
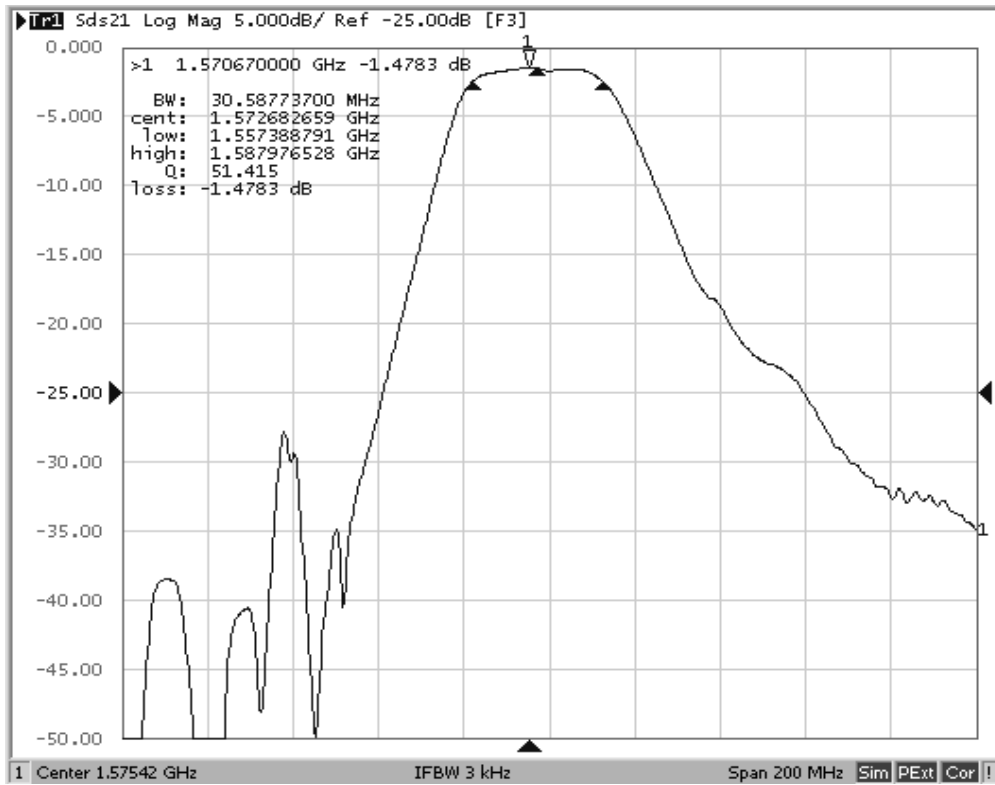


CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

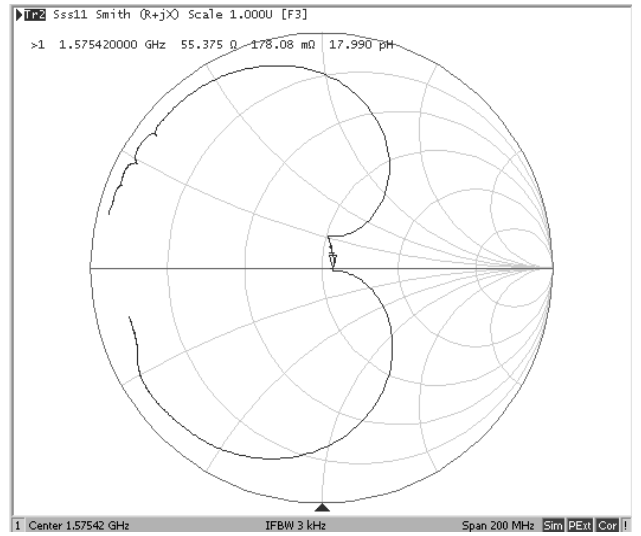
Notes:

1. US and international patents may apply.
2. RFM, stylized RFM logo, and RF Monolithics, Inc. are registered trademarks of RF Monolithics, Inc.

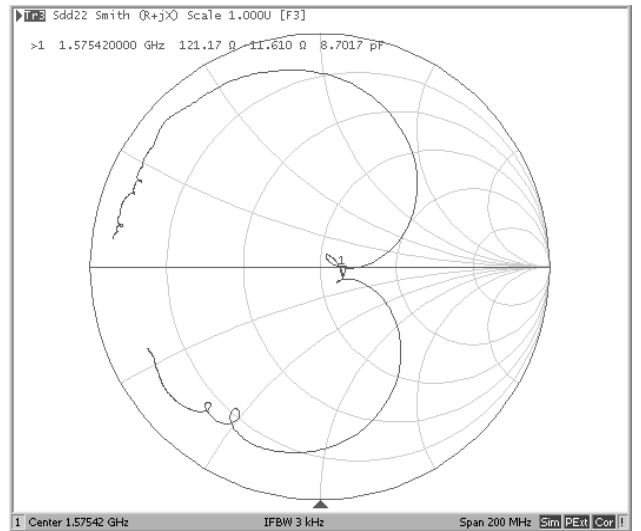
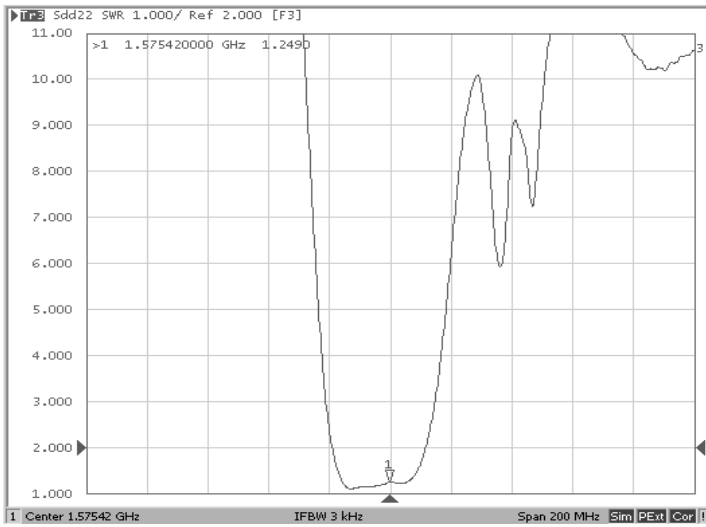
Frequency Response Plots



50 ohm Input VSWR and S_{11} Plots



100 ohm Balanced Output VSWR and S_{22} Plots



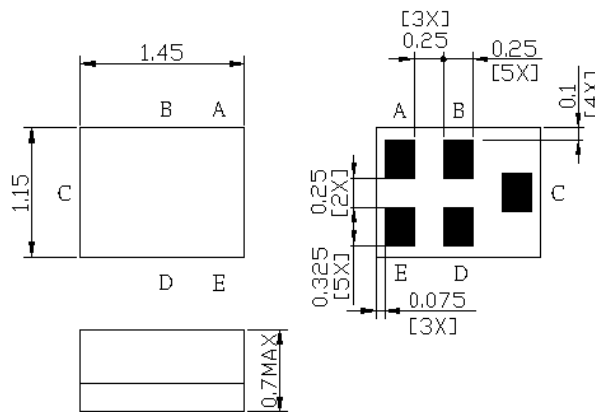
SM1411-5 Case

5-Terminal Surface-Mount Case 1.45 X 1.15- mm Nominal Footprint

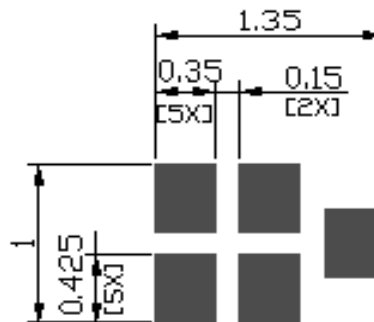
Electrical Connections

| Connection | Terminals |
|------------|-----------|
| Input | C |
| Output | A, E |
| Ground | B, D |

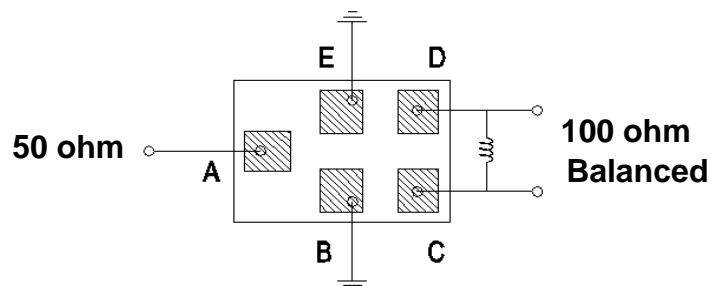
Package Dimensions



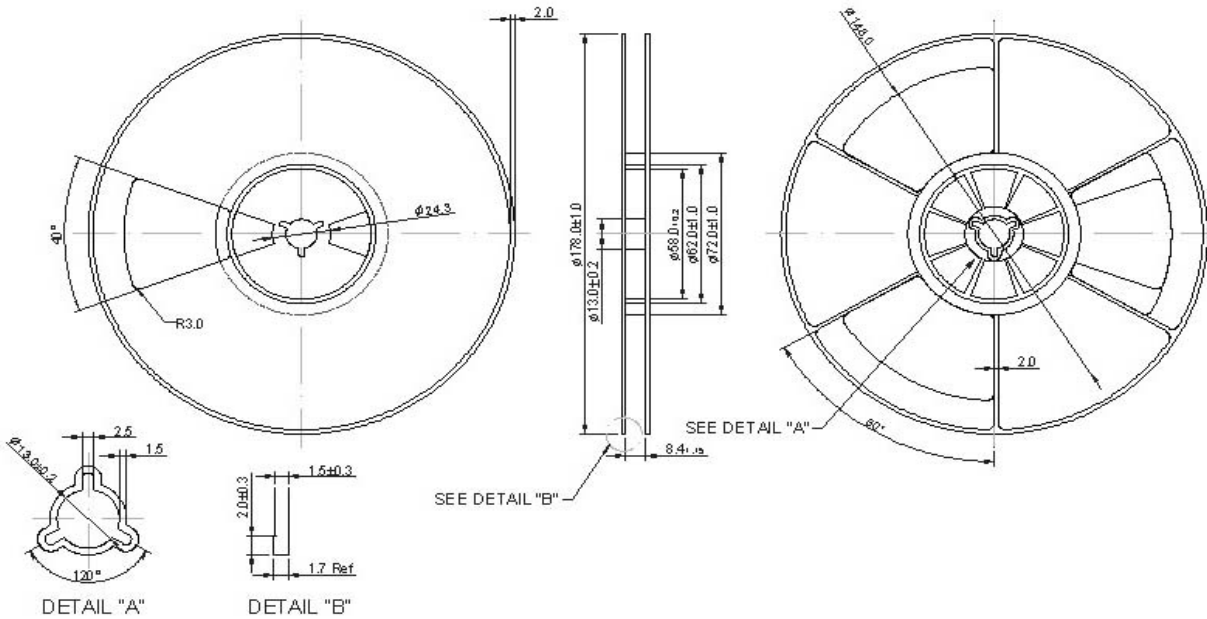
Circuit Board Footprint



Test Circuit



Reel Dimensions - 7 inch Reel, 3000 Filters



Tape Dimensions

