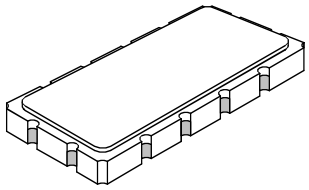
# SF2063A

# 156 MHz SAW Filter

- ***Excellent Size-to-Performance Ratio***
- ***Hermetic 13.3 x 6.5 mm Surface-mount Case***
- ***Complies with Directive 2002/95/EC (RoHS)***



**SMP-53**

**Absolute Maximum Ratings**

| Rating | Value | Units |
|---|---|---|
| Maximum Incident Power in Passband | +10 | dBm |
| Maximum DC Voltage Between any Two Terminals | 30 | VDC |
| Storage Temperature Range in Tape and Reel | -40 to +85 | °C |
| Suitable for Lead-free Soldering - Maximum Soldering Profile | 260°C for 30 s | |

**Electrical Characteristics**

| Characteristic | Sym | Notes | Min | Typ | Max | Units |
|---|---|---|---|---|---|---|
| Nominal Center Frequency | $f_C$ | 1 | | 156.00 | | MHz |
| Insertion Loss at $f_C$ | IL | | | 15.5 | 18 | dB |
| Amplitude Ripple | | | | 1.1 | 2.0 | $dB_{P-P}$ |
| 1.5 dB Bandwidth | $BW_{1.5}$ | | 9.4 | 10 | | MHz |
| Rejection Referenced to IL | | | | | | |
| 50 to 149 MHz | | | 39 | 45 | | dB |
| 165 to 500 MHz | | | 39 | 45 | | |
| Operating Temperature Range | $T_A$ | | -40 | | +85 | °C |

| | |
|---|---|
| Impedance Matching to 50Ω Unbalanced | External L-C |
| Case Style | SMP-53 13.3 x 6.5 mm Nominal Footprint |
| Lid Symbolization (YY = year, WW = week) | RFM SF2063A YYWW |

**Electrical Connections**

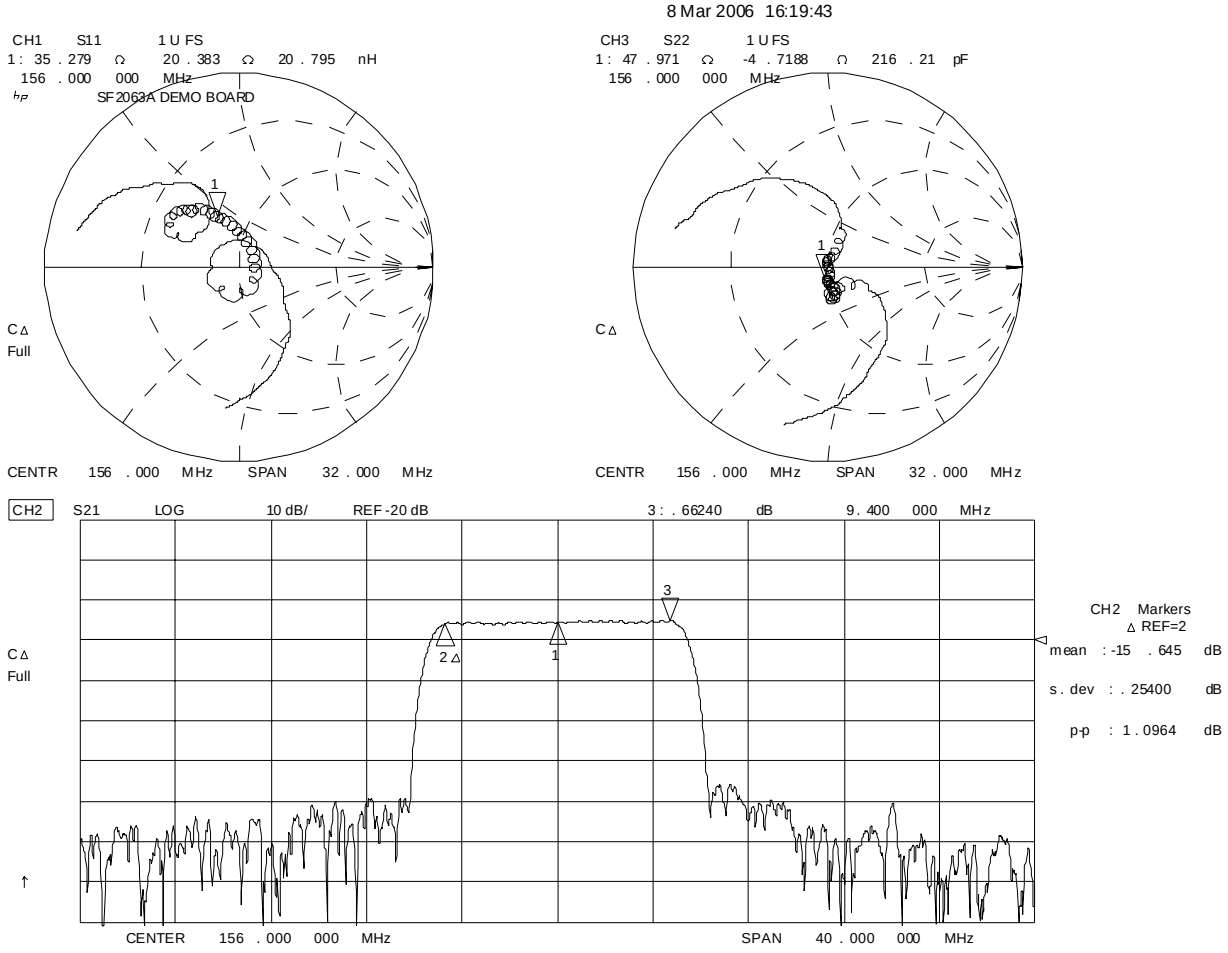
| Connection | Terminals |
|---|---|
| Port 1 Hot | 11 |
| Port 1 Gnd Return | 12 |
| Port 2 Hot | 5 |
| Port 2 Gnd Return | 6 |
| Case Ground | All others |

**CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

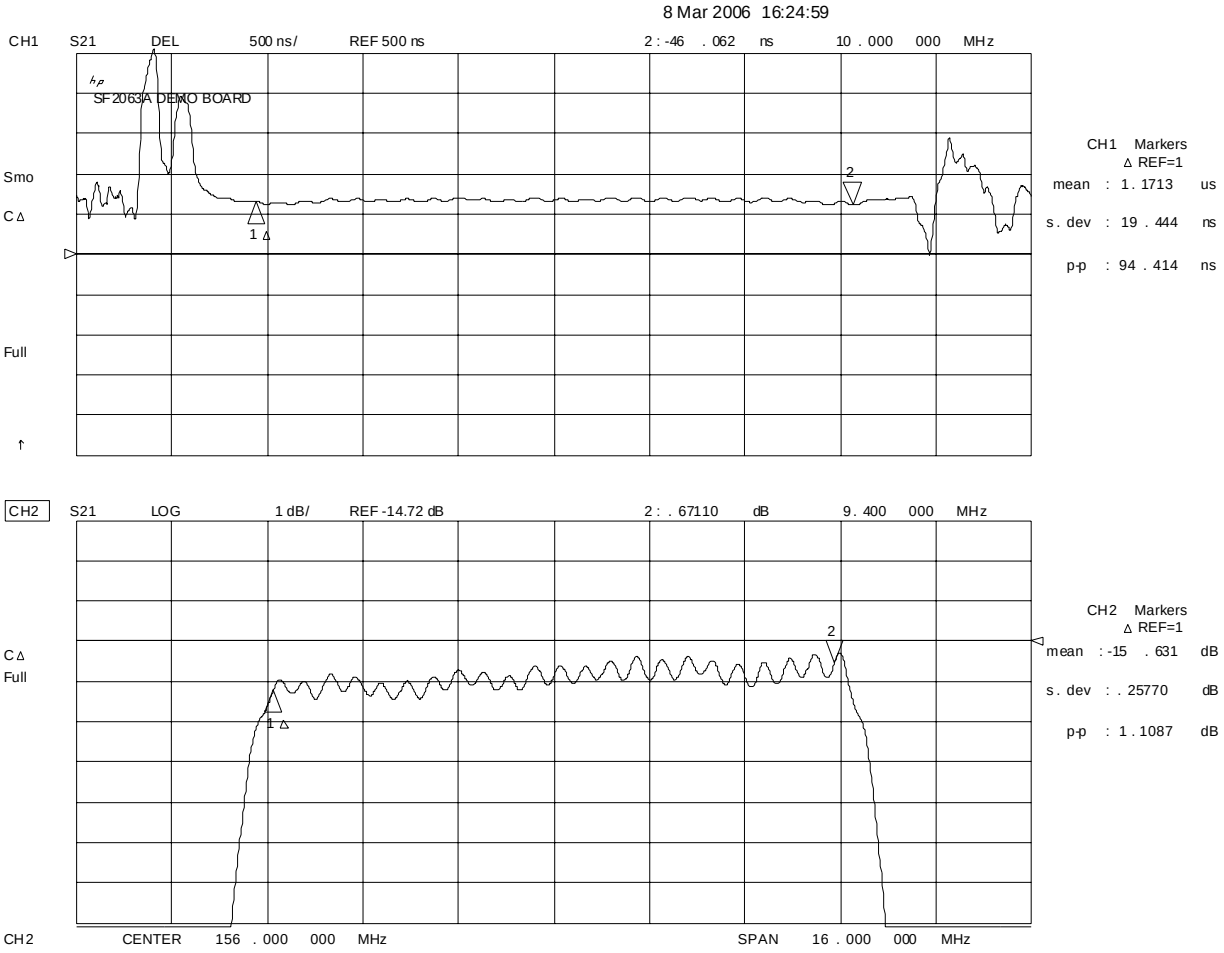
**Notes:**

1. Unless noted otherwise, all specifications apply over the operating temperature range with filter soldered to the specified demonstration board with impedance matching to 50 Ω and measured with 50 Ω network analyzer.
2. Unless noted otherwise, all frequency specifications are referenced to the nominal center frequency, fc.
3. The design, manufacturing process, and specifications of this filter are subject to change.
4. US and international patents may apply.

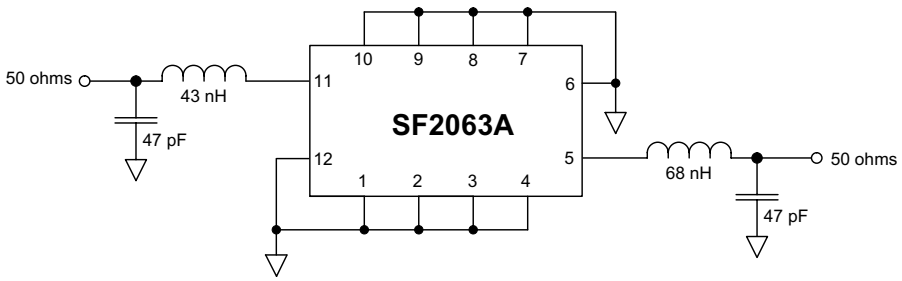
# SF2063A $S_{11}$, $S_{22}$ and Amplitude Response



# SF2063A Passband Group Delay and Amplitude Ripple

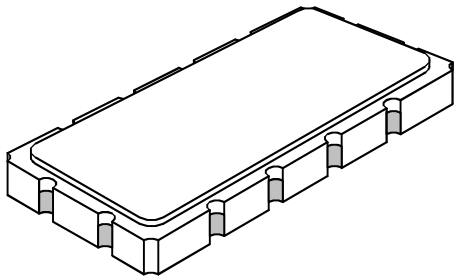



## SF2063A Matching Components



# SMP-53 Case

## 12-Terminal Ceramic Surface-Mount Case
## 13.3 x 6.5 mm Nominal Footprint



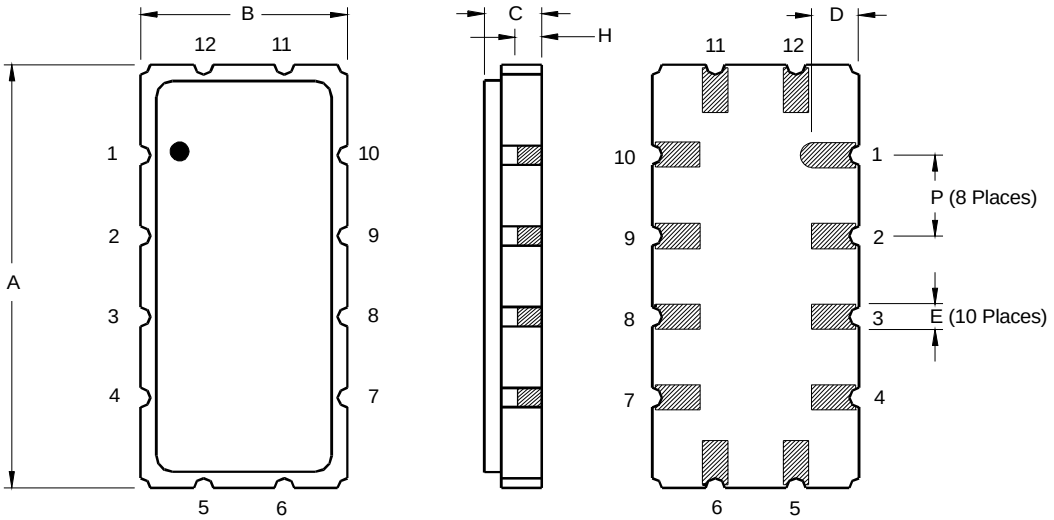
### Case Dimensions

| Dimension | mm | | | Inches | | |
|---|---|---|---|---|---|---|
| | Min | Nom | Max | Min | Nom | Max |
| A | 13.08 | 13.31 | 13.60 | 0.515 | 0.524 | 0.535 |
| B | 6.27 | 6.50 | 6.80 | 0.247 | 0.256 | 0.268 |
| C | | 1.91 | 2.00 | | 0.075 | 0.079 |
| D | | 1.50 | | | 0.059 | |
| E | | 0.79 | | | 0.031 | |
| H | | 1.0 | | | 0.039 | |
| P | | 2.54 | | | 0.100 | |

### Electrical Connections

| Connection | | Terminals |
|---|---|---|
| Port 1 | Input or Return | 11 |
| | Return or Input | 12 |
| Port 2 | Output or Return | 5 |
| | Return or Output | 6 |
| Ground | | All others |
| Single-ended Operation | | Return is ground |
| Differential Operation | | Return is hot |

| Materials | |
|---|---|
| Solder Pad Plating | 0.3 to 1.0 µm Gold over 1.27 to 8.89 µm Nickel |
| Lid Plating | 2.0 to 3.0 µm Nickel |
| Body | $Al_2O_3$ Ceramic |
| Pb Free | |




TOP VIEW

BOTTOM VIEW