

- Precision UHF SAW Filter
- 3.8 x 3.8 x 1.2 mm Surface-mount Case
- Differential 750 ohm In, 900 ohm Out
- Complies with Directive 2002/95/EC (RoHS)

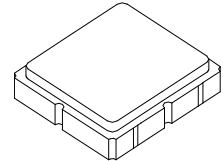


Absolute Maximum Ratings

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

SF2110D

**305.00 MHz
SAW Filter**



SM3838-8

Electrical Characteristics

| Characteristic | Sym | Notes | Min | Typ | Max | Units |
|---|-----|---------|---|-----|-----|-------------------|
| Center Frequency | fC | 1 | | 305 | | MHz |
| Insertion Loss | IL | | | 9 | 12 | dB |
| Amplitude Ripple, 300 to 310 MHz | | 1, 2 | | 0.7 | 2.0 | dB _{P-P} |
| Low Side Attenuation, 266 to 290 MHz | | | 35 | 45 | | dB |
| High Side Attenuation, 320 to 344 MHz | | | 35 | 50 | | |
| Delay Ripple, 300 to 310 MHz | | 1, 2, 3 | | 30 | 100 | ns _{P-P} |
| Group Delay in Passband | | | | | | 500 |
| Case Style | | 6 | SM3838-8 3.8 x 3.8 mm Nominal Footprint | | | |
| Lid Symbolization, Y=year, WW=week, S=shift | | | 608 YWWS | | | |

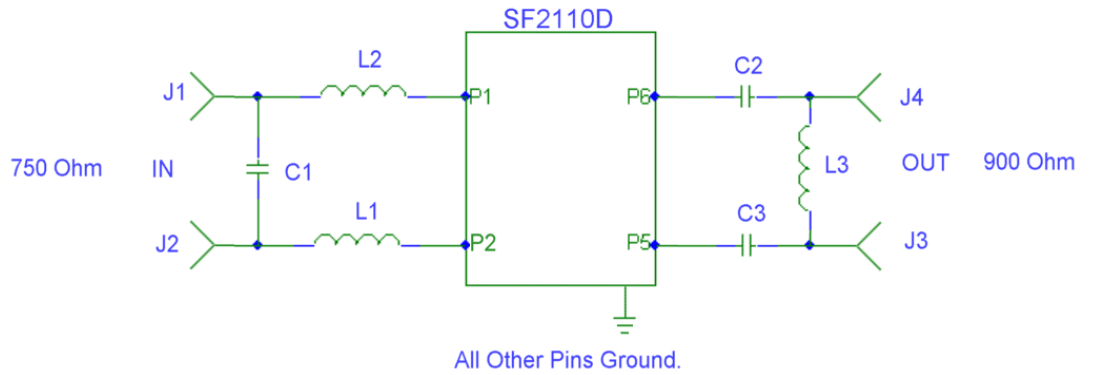


CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

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, f_c.
3. Rejection is measured as attenuation below the minimum IL point in the passband. Rejection in final user application is dependent on PCB layout and external impedance matching design. See Application Note No. 42 for details.
4. The design, manufacturing process, and specifications of this filter are subject to change.
5. Tape and Reel Standard Per ANSI / EIA 481.
6. US and international patents may apply.
7. Murata, stylized Murata logo, and Murata N.A., Inc. are registered trademarks of Murata Manufacturing Co., Ltd.

I. Differential Matching



SF2110D Demo

PCB: 400-1724-001 4 port

J1-J4: 500-1279-001 SMACONN

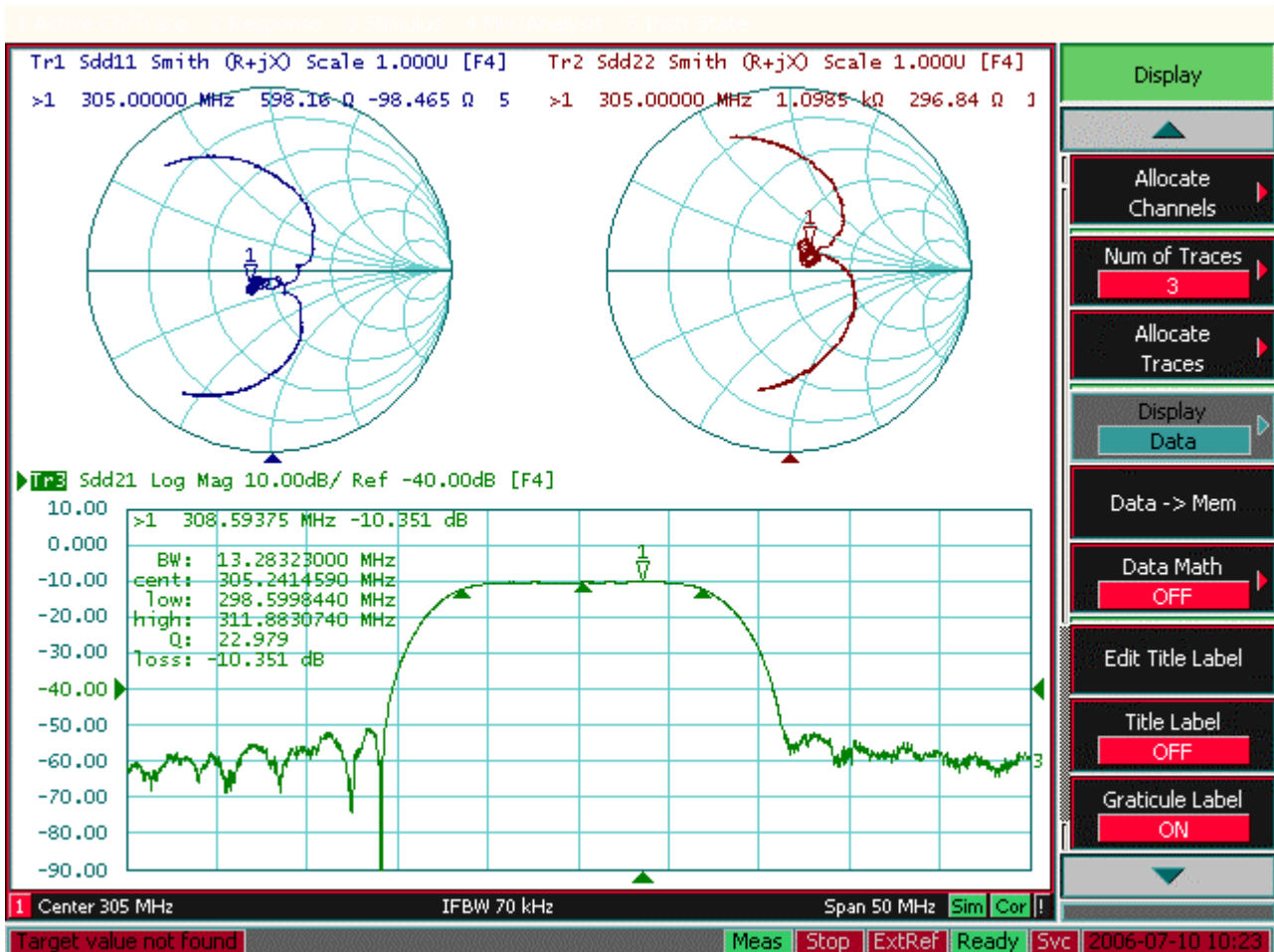
L1-L2: 500-1282-470 47nH 0402

L3: 500-1282-560 56nH 0402

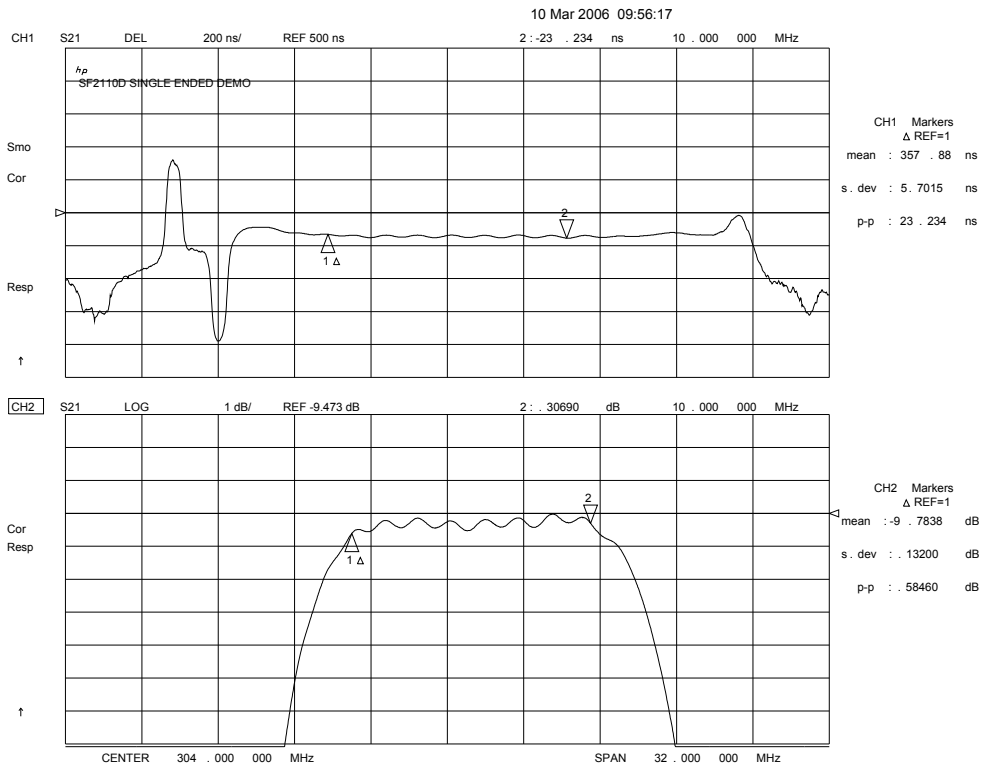
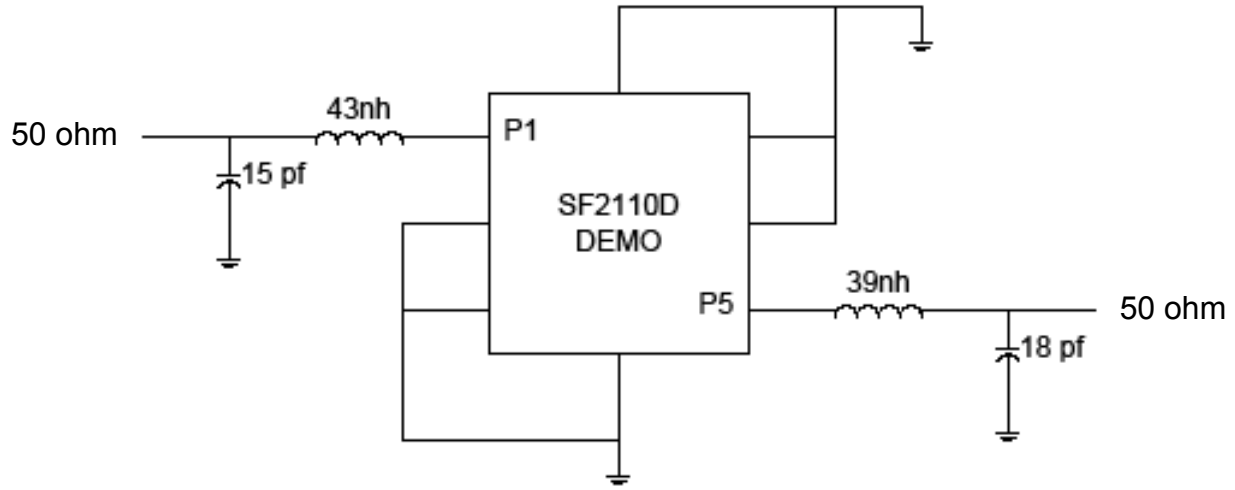
C1: 501-0857-047 4.7pF 0402

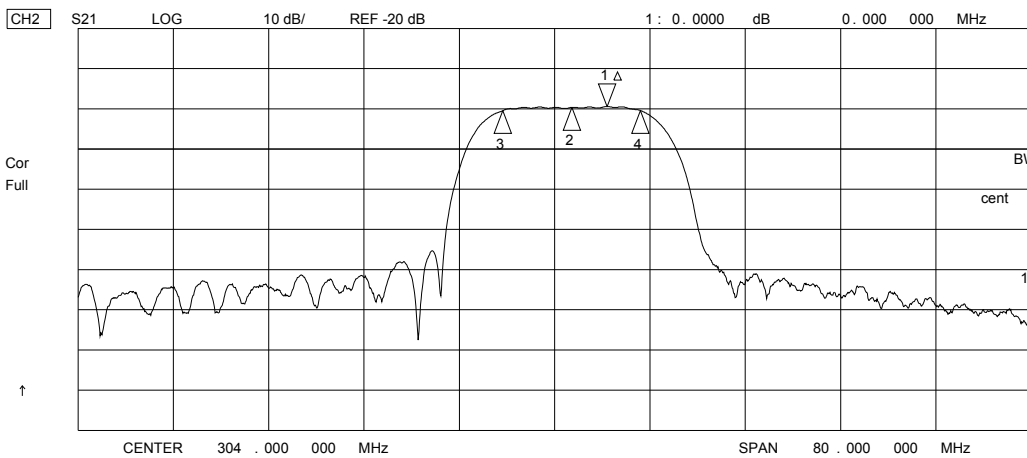
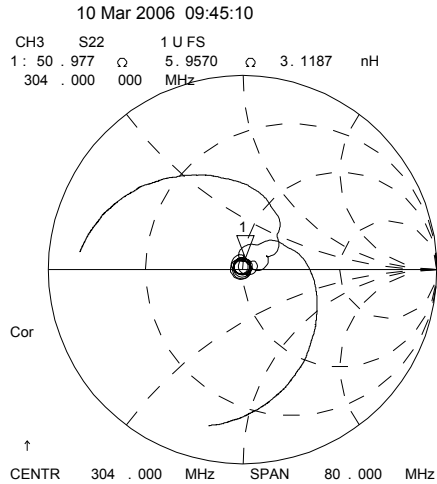
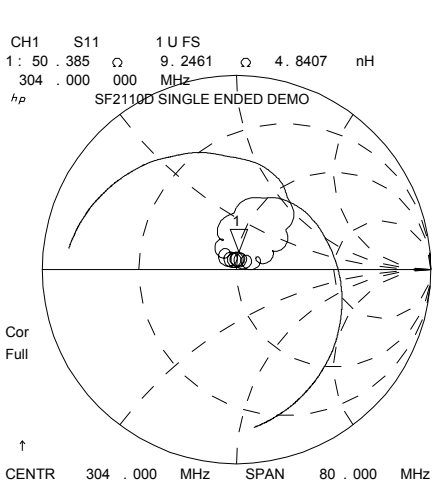
C2: 501-0857-180 18pF 0402

C3: 501-0857-220 22pF 0402



II. Single-ended Matching

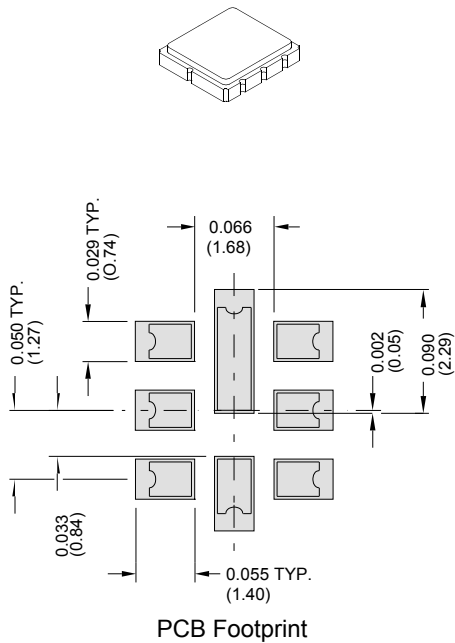




SM3838-8 Case

8-Terminal Ceramic Surface-Mount Case

3.8 X 3.8 mm Nominal Footprint



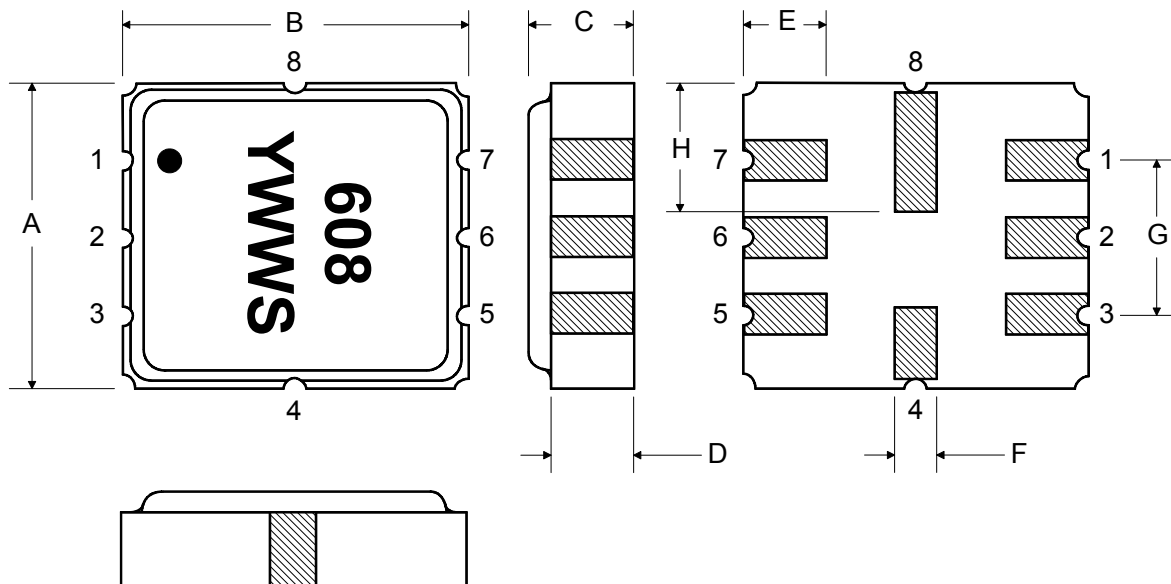
| Case Dimensions | | | | | | |
|-----------------|------|------|------|--------|-------|-------|
| Dimension | mm | | | Inches | | |
| | Min | Nom | Max | Min | Nom | Max |
| A | 3.6 | 3.8 | 4.0 | 0.142 | 0.150 | 0.157 |
| B | 3.6 | 3.8 | 4.0 | 0.142 | 0.150 | 0.157 |
| C | 1.05 | 1.20 | 1.35 | 0.041 | 0.047 | 0.053 |
| D | 0.95 | 1.10 | 1.25 | 0.037 | 0.043 | 0.049 |
| E | 0.90 | 1.00 | 1.10 | 0.035 | 0.040 | 0.043 |
| F | 0.50 | 0.60 | 0.70 | 0.020 | 0.024 | 0.028 |
| G | 2.39 | 2.54 | 2.69 | 0.090 | 0.100 | 0.110 |
| H | 1.40 | 1.75 | 2.05 | 0.055 | 0.069 | 0.080 |

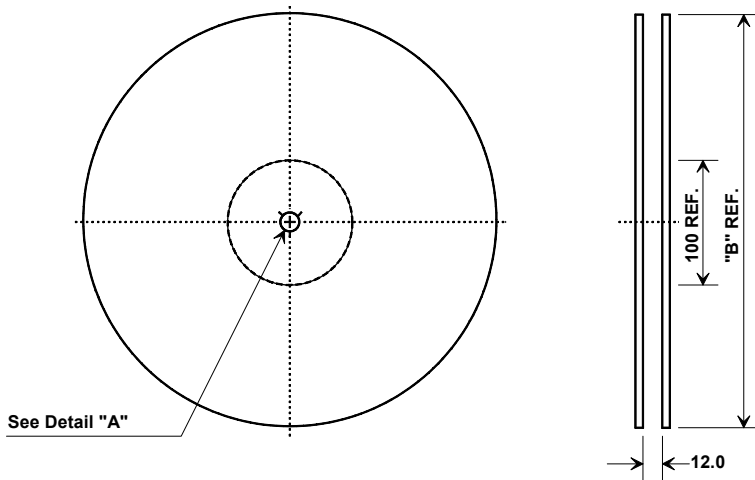
| Electrical Connections | | |
|------------------------|---------------------|------------------|
| | Connection | Terminals |
| Port 1 | Differential Input | 1, 2 |
| Port 2 | Differential Output | 5, 6 |
| | Ground | All Others |
| Single-ended Operation | | Return is Ground |
| Differential Operation | | Return is Hot |
| Dot Indicates Pin 1 | | |

| 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 | |

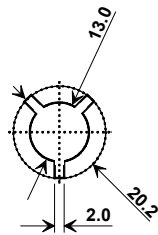
TOP VIEW

BOTTOM VIEW





| "B" | | Quantity Per Reel |
|--------|-------------|-------------------|
| Inches | millimeters | |
| 7 | 178 | 500 |
| 13 | 330 | 3000 |



COMPONENT ORIENTATION and DIMENSIONS

| Carrier Tape Dimensions | |
|-------------------------|---------|
| Ao | 4.25 mm |
| Bo | 4.25 mm |
| Ko | 1.6 mm |
| Pitch | 8.0 mm |
| W | 12.0 mm |

