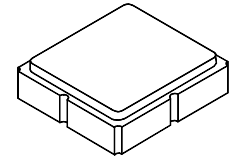


SF2177E

**1472 MHz
SAW Filter**



SM3030-8

- **Low-loss UHF SAW Filter**
- **Complies with Directive 2002/95/EC (RoHS)**



Characteristics:

Single-ended source impedance : $Z_S = 50 \Omega$

Balanced load impedance : $Z_L = 100 \Omega$

Maximum Rating

| Rating | Value | Units |
|---|------------|-------|
| Input Power Level | +10 | dBm |
| DC Voltage on any Non-ground Terminal | 3 | V |
| Operating Temperature Range | -40 to +85 | °C |
| Tape and Reel Storage Temperature Range | -40 to +85 | °C |
| Component Storage Temperature Range | -50 to +95 | °C |

| Characteristic | Sym | Notes | Min | Typ | Max | Units |
|--------------------------------------|-------|-------|-----|------|-----|-------------------|
| Center Frequency | f_C | | | 1472 | | MHz |
| Insertion Loss, 1452 to 1492 MHz | IL | | | 3.2 | 4.5 | dB |
| Amplitude Ripple, 1452 to 1492 MHz | | | | 1.0 | 2.0 | |
| Group Delay Ripple, 1452 to 1492 MHz | | | | 8 | 40 | ns _{p-p} |
| Input Return Loss, 1452 to 1492 MHz | | | 6.5 | 8.0 | | dB |
| Output Return Loss, 1452 to 1492 MHz | | | 8.8 | 10.5 | | |
| Attenuation, 0 dB Reference: | | | | | | dB |
| 880 to 915 MHz | | | 50 | 54 | | |
| 1410 MHz | | | 30 | 35 | | |
| 1530 to 1570 MHz | | | 15 | 29 | | |
| 1575 MHz | | | 30 | 38 | | |
| 1710 to 1785 MHz | | | 35 | 40 | | |
| 1920 to 1980 MHz | | | 35 | 37.5 | | |
| 2400 to 2500 MHz | | | 26 | 31.5 | | |

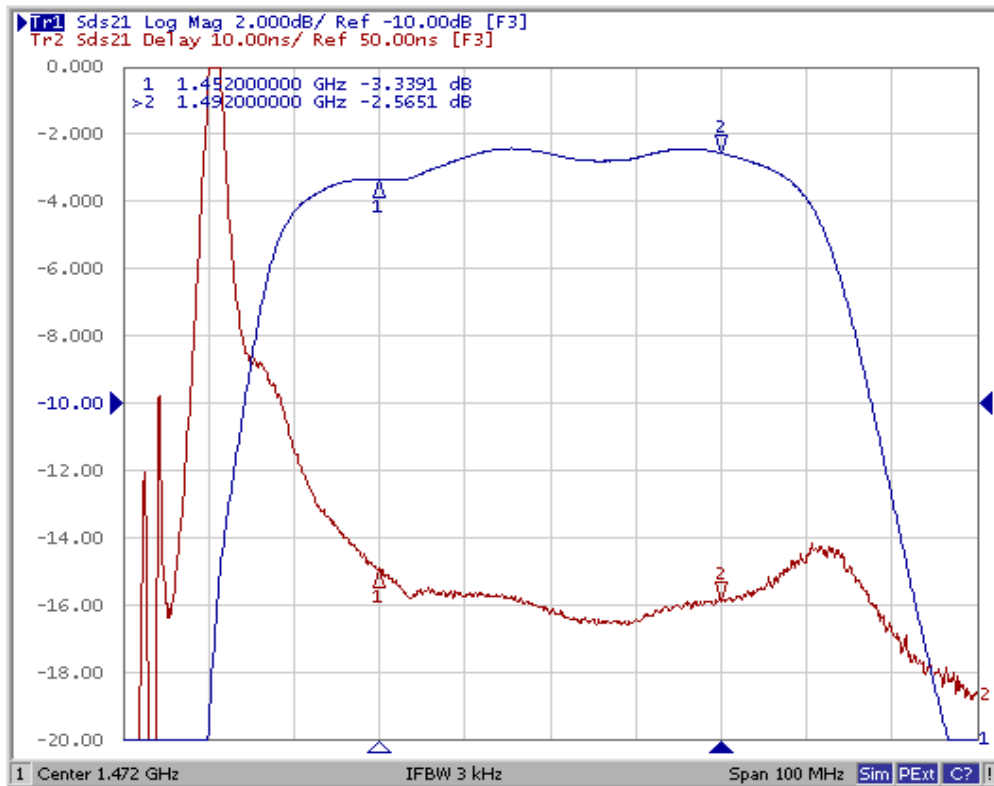
| | | |
|--|---|------------------|
| Case Style | SM3030-8 3.0 x 3.0 mm Nominal Footprint | |
| Lid Symbolization, Y=year, WW=week, S=shift, dot=pin 1 indicator | 866, YWWS | |
| Standard Reel Quantity | Reel Size 7 inch | 500 Pieces/Reel |
| | Reel Size 13 inch | 3000 Pieces/Reel |



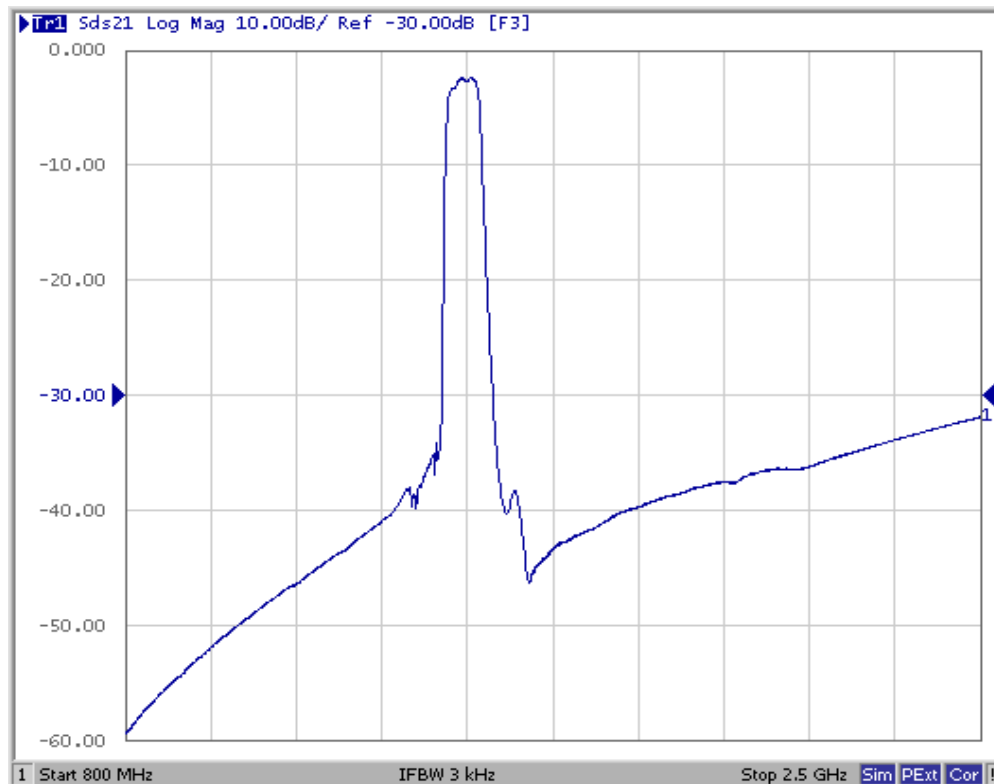
NOTES:

1. US and international patents may apply.
2. Murata, stylized Murata logo, and Murata N.A., Inc. are registered trademarks of Murata Manufacturing Co., Ltd.
3. Electrostatic Sensitive Device. Observe precautions for handling.

Filter Passband Amplitude and Group Delay Plots



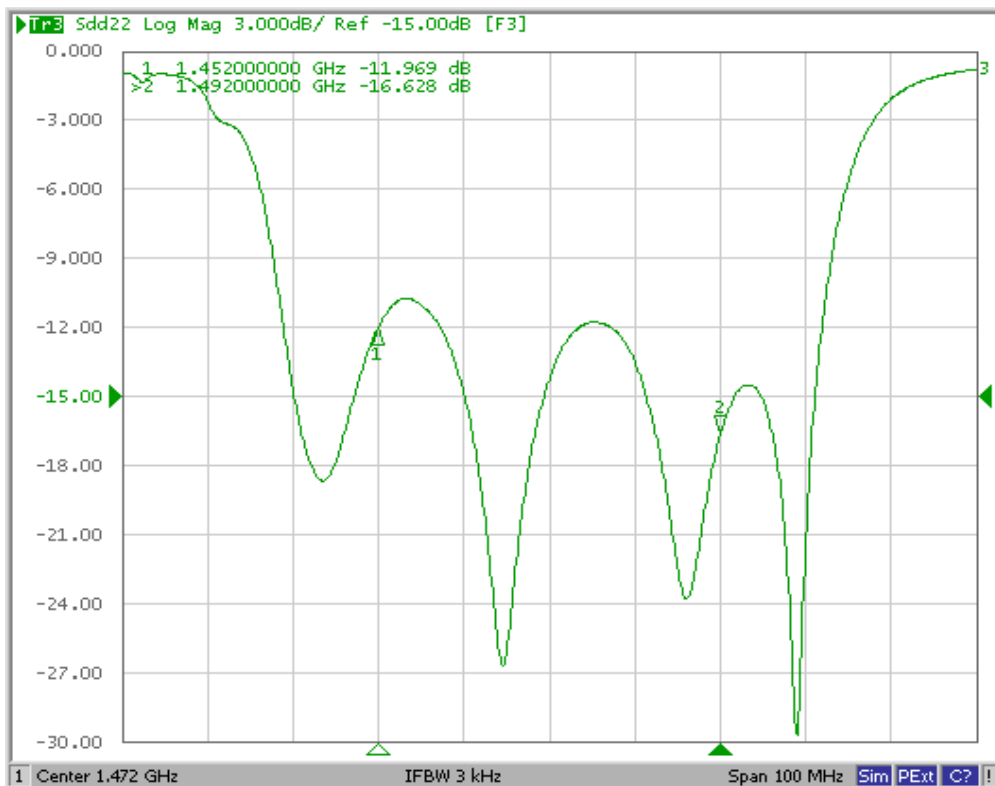
Filter Broadband Plot



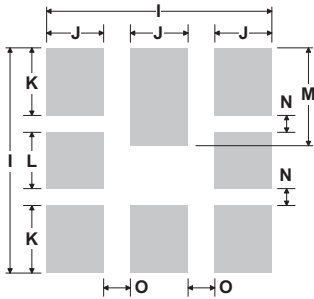
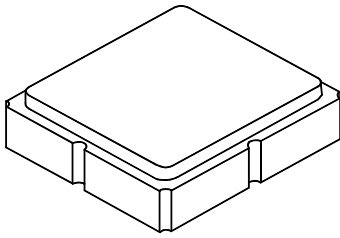
Filter Input Return Loss



Filter Output Return Loss



8-Terminal Ceramic Surface-Mount Case 3.0 X 3.0 mm Nominal Footprint



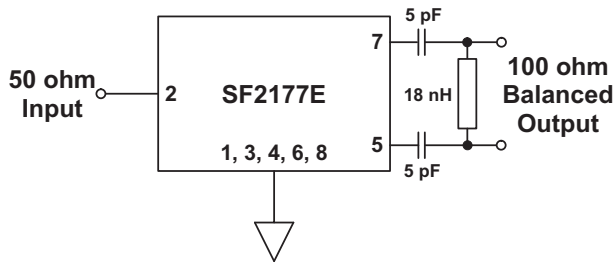
PCB Footprint Top View

Case and PCB Footprint Dimensions

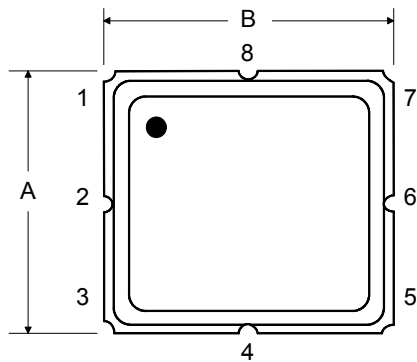
| Dimension | mm | | | Inches | | |
|-----------|------|------|------|--------|-------|-------|
| | Min | Nom | Max | Min | Nom | Max |
| A | 2.87 | 3.00 | 3.13 | 0.113 | 0.118 | 0.123 |
| B | 2.87 | 3.00 | 3.13 | 0.113 | 0.118 | 0.123 |
| C | - | - | 1.10 | - | - | 0.043 |
| D | 0.79 | 0.92 | 1.05 | 0.031 | 0.036 | 0.041 |
| E | 0.62 | 0.75 | 0.88 | 0.024 | 0.029 | 0.034 |
| F | 0.47 | 0.60 | 0.73 | 0.018 | 0.024 | 0.029 |
| G | 0.47 | 0.60 | 0.73 | 0.018 | 0.024 | 0.029 |
| H | 1.07 | 1.20 | 1.33 | 0.042 | 0.047 | 0.052 |
| I | | 3.19 | | | 0.126 | |
| J | | 0.81 | | | 0.032 | |
| K | | 0.96 | | | 0.038 | |
| L | | 0.81 | | | 0.032 | |
| M | | 1.39 | | | 0.055 | |
| N | | 0.23 | | | 0.009 | |
| O | | 0.38 | | | 0.015 | |

Case Materials

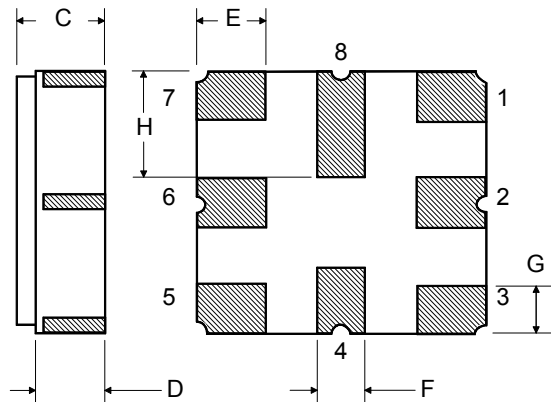
| Materials | |
|--------------------|--|
| Solder Pad Plating | 0.3 to 1.0 μm Gold over 1.27 to 8.89 μm Nickel |
| Lid Plating | 2.0 to 3.0 μm Nickel |
| Body | Al_2O_3 Ceramic |
| | Pb Free |



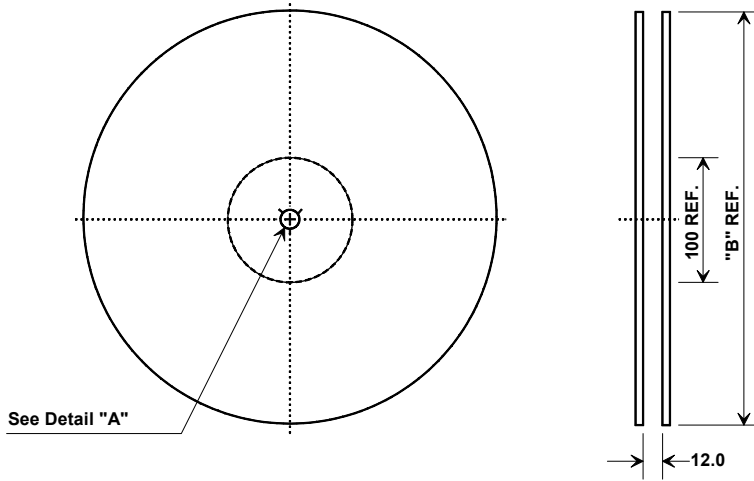
TOP VIEW



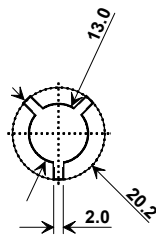
BOTTOM VIEW



Tape and Reel Specifications



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



| Carrier Tape Dimensions | |
|-------------------------|---------|
| Ao | 3.35 mm |
| Bo | 3.35 mm |
| Ko | 1.4 mm |
| Pitch | 8.0 mm |
| W | 12.0 mm |

COMPONENT ORIENTATION and DIMENSIONS

