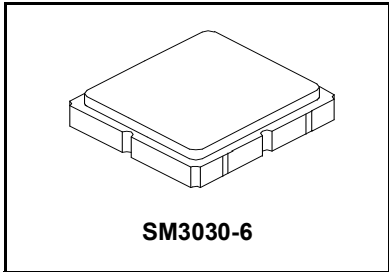


- Low-loss UHF SAW Filter
- Surface Mount 3.0 x 3.0 mm Package
- Complies with Directive 2002/95/EC (RoHS)

RoHS
Compliant

SF2134E

897.50 MHz
SAW Filter



Absolute Maximum Ratings

| Rating | Value | Units |
|--|-----------------|-------|
| Input Power Level | 5 | dBm |
| DC Voltage on any Non-ground Terminal | 3 | V |
| Operable Temperature Range | -45 to +105 | °C |
| Specification Temperature Range | -20 to +75 | °C |
| 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 |
|----------------------------------|-------|-------|-----|-------|-------|-------------------|
| Center Frequency | f_c | | | 897.5 | | MHz |
| Insertion Loss, 880 to 915 MHz | IL | | | 2.1 | 3.0 | dB |
| Amplitude Ripple, 880 to 915 MHz | | | | 1.0 | 2.0 | dB _{P-P} |
| Attenuation Referenced to 0 dB | | | | | | dB |
| DC to 860 MHz | | | 17 | 19 | | |
| 925 to 935 MHz | | | 5 | 12.4 | | |
| 935 to 960 MHz | | | 20 | 24 | | |
| 980 to 2000 MHz | | | 20 | 22 | | |
| VSWR, 880 to 915 MHz | | | | 2:1 | 2.6:1 | |
| Source Impedance | Z_s | | | 50 | | Ω |
| Load Impedance | Z_L | | | 50 | | Ω |

| | | | |
|--|---|------------------|--|
| Case Style | SM3030-6 3.0 x 3.0 mm Nominal Footprint | | |
| Lid Symbolization (Y=year, WW=week, S=shift) dot=pin 1 indicator | 674, <u>YWWS</u> | | |
| Standard Reel Quantity | Reel Size 7 Inch | 500 Pieces/Reel | |
| | Reel Size 13 Inch | 3000 Pieces/Reel | |

Electrical Connections

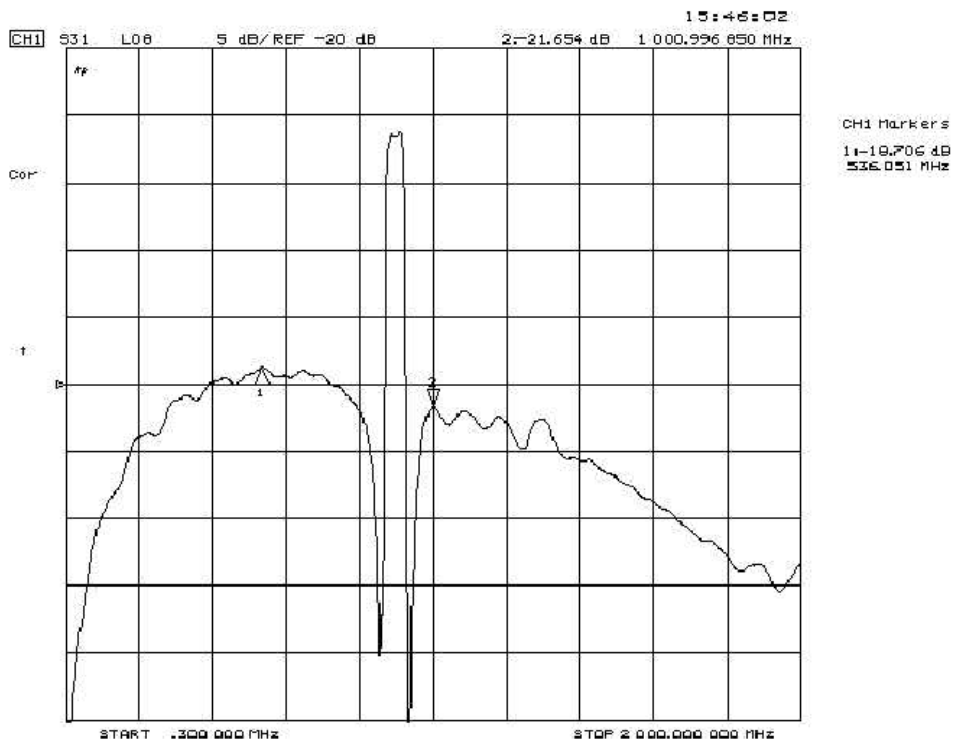
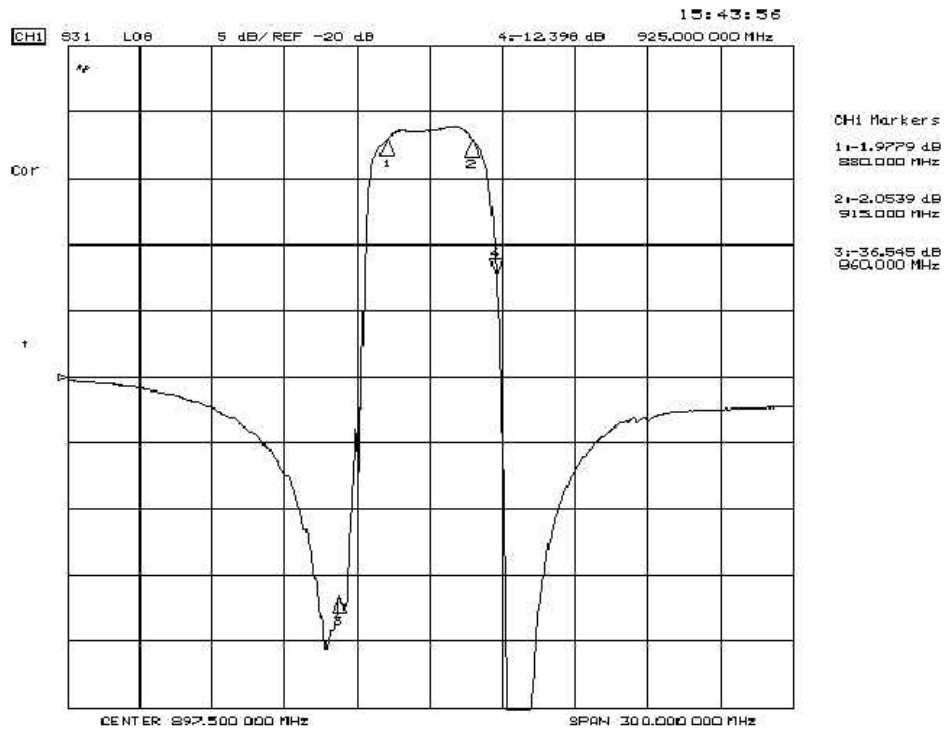
| Connection | Terminals |
|-------------|------------|
| Input | 2 |
| Output | 5 |
| Case Ground | All others |

CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

NOTES:

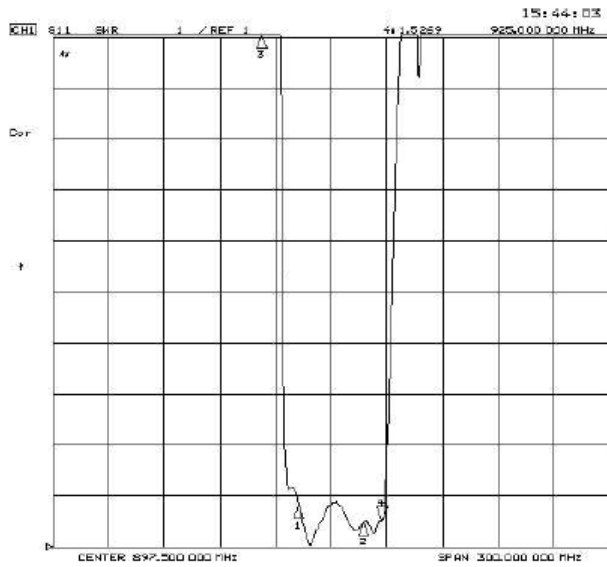
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

Filter Amplitude Response

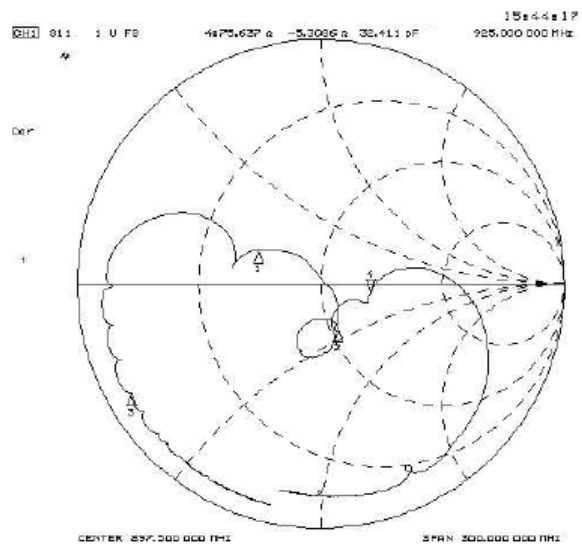


Filter Input and Output Impedance

S11

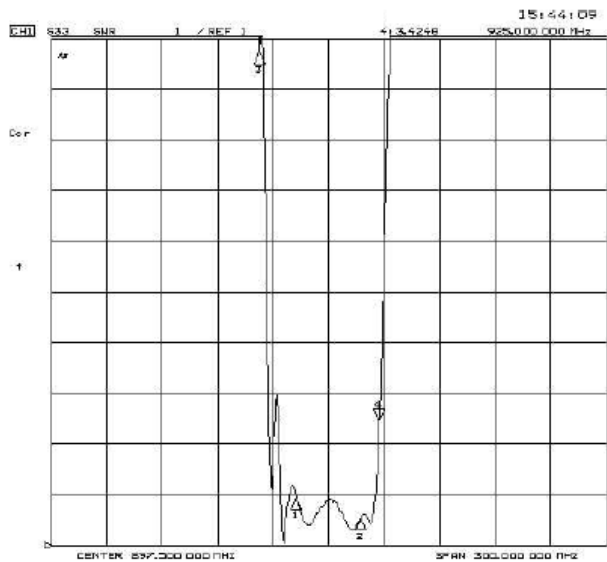


CHI Markers
 1: 1.0122
 900,000 MHz
 2: 1.0056
 915,000 MHz
 3: 18.521
 900,000 MHz

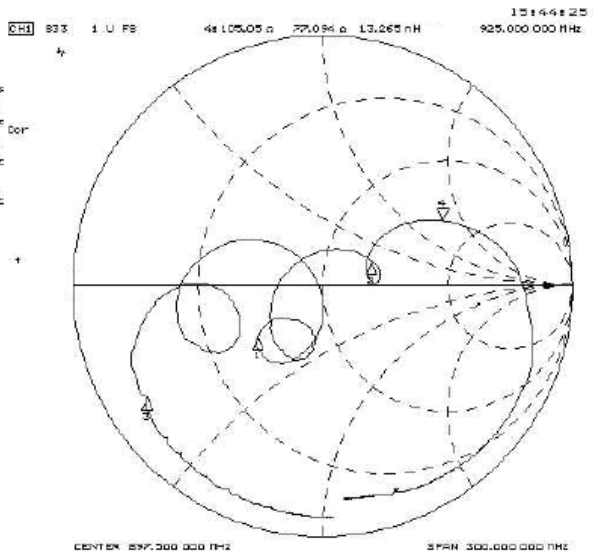


CHI Markers
 1: 29.904 a
 38.674 a
 900,000 MHz
 2: 52.000 a
 -30.472 a
 915,000 MHz
 3: 2.0000 a
 -13.334 a
 900,000 MHz

S22



CHI Markers
 1: 1.9047
 880,000 MHz
 2: 1.5632
 915,000 MHz
 3: 10.762
 900,000 MHz

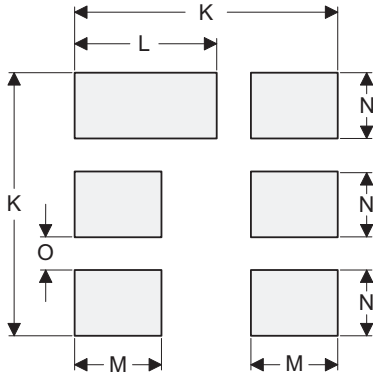
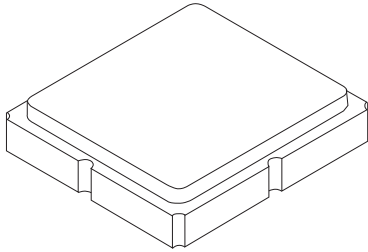


CHI Markers
 1: 27.462 a
 -12.297 a
 900,000 MHz
 2: 70.044 a
 14.714 a
 915,000 MHz
 3: 5.0000 a
 -34.316 a
 900,000 MHz

SM3030-6 Case

6-Terminal Ceramic Surface-Mount Case

3.0 X 3.0 mm Nominal Footprint



PCB Footprint Top View

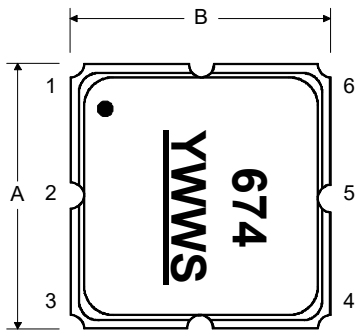
Case and PCB Footprint Dimensions

| 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 | 1.12 | 1.25 | 1.38 | 0.044 | 0.049 | 0.054 |
| D | 0.77 | 0.90 | 1.03 | 0.030 | 0.035 | 0.040 |
| E | 2.67 | 2.80 | 2.93 | 0.105 | 0.110 | 0.115 |
| F | 1.47 | 1.60 | 1.73 | 0.058 | 0.063 | 0.068 |
| G | 0.72 | 0.85 | 0.98 | 0.028 | 0.033 | 0.038 |
| H | 1.37 | 1.50 | 1.63 | 0.054 | 0.059 | 0.064 |
| I | 0.47 | 0.60 | 0.73 | 0.019 | 0.024 | 0.029 |
| J | 1.17 | 1.30 | 1.43 | 0.046 | 0.051 | 0.056 |
| K | | 3.20 | | | 0.126 | |
| L | | 1.70 | | | 0.067 | |
| M | | 1.05 | | | 0.041 | |
| N | | 0.81 | | | 0.032 | |
| O | | 0.38 | | | 0.015 | |

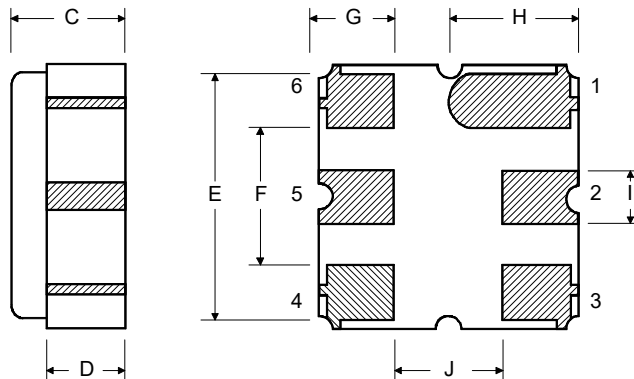
Case Materials

| Materials | |
|--------------------|--|
| Solder Pad Plating | 0.3 to 1.0 μ m Gold over 1.27 to 8.89 μ m Nickel |
| Lid Plating | 2.0 to 3.0 μ m Nickel |
| Body | Al ₂ O ₃ Ceramic |
| Pb Free | |

Top View



Bottom View



Recommended Reflow Profile

1. Preheating shall be fixed at 150~180°C for 60~90 seconds.
2. Ascending time to preheating temperature 150°C shall be 30 seconds min.
3. Heating shall be fixed at 220°C for 50~80 seconds and at 260°C +0/-5°C peak (10 seconds).
4. Time: 5 times maximum.

