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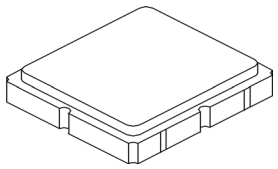
Discontinued

RoHS Compliance
This component is compliant with RoHS directive.
This component was always RoHS compliant from the first date of manufacture.

# SF2391E

## 897.5 MHz SAW Filter



SM3030-6

- ***Low-loss 897.5 MHz SAW Filter***
- ***Designed for 50 ohm Source/Load***

### Absolute Maximum Ratings

| Rating | Value | Units |
|---|---|---|
| Input Power Level | +20 | dBm |
| Input Power Level (Duration 24h, 55°C) | +22 | dBm |
| DC Voltage on any Non-ground Terminal | 3 | V |
| Operable Temperature Range | -30 to +105 | °C |
| Specification Temperature Range | -30 to +105 | °C |
| Storage Temperature Range in Tape and Reel | -30 to +85 | °C |

### Electrical Characteristics

| Characteristic | | | Sym | Notes | Min | Typ | Max | Units |
|---|---|---|---|---|---|---|---|---|
| Center Frequency | | | $f_C$ | | | 897.5 | | MHz |
| Insertion Loss, 880 to 915 MHz | | | IL | | | 2.5 | 3.5 | dB |
| Amplitude Ripple (p-p), 880 to 915 MHz | | | | | | 1.3 | 2.0 | dBp-p |
| Attenuation (Reference level from 0dB) | | | | | | | | dB |
| 10 to 738 | MHz | | | | 35 | 43 | | |
| 738 to 773 | MHz | | | | 35 | 46 | | |
| 773 to 860 | MHz | | | | 20 | 32 | | |
| 925 to 927 | MHz | +25°C to +105°C | | | 25 | 30 | | |
| | | -30°C to +105°C | | | 16 | 30 | | |
| 927 to 930 | MHz | | | | 25 | 30 | | |
| 930 to 960 | MHz | | | | 25 | 27 | | |
| 960 to 1000 | MHz | | | | 25 | 33 | | |
| 1000 to 2035 | MHz | | | | 25 | 33 | | |
| 2035 to 2500 | MHz | | | | 25 | 34 | | |
| 2500 to 3000 | MHz | | | | 25 | 33 | | |
| 3000 to 3500 | MHz | | | | 20 | 33 | | |
| Temperature Coefficient of Frequency | | | | | | -36 | | ppm/k |

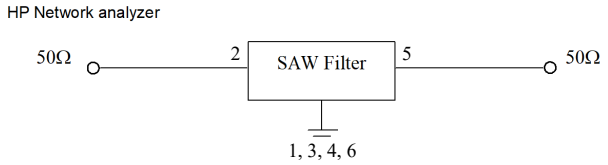
| | |
|---|---|
| Case Style | SMD 3.0 x 3.0 mm Nominal Footprint |
| Lid Symbolization (Y=year, WW=week, S=shift) dot=pin 1 indicator | 6Y, YWWS |

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

**NOTES:**

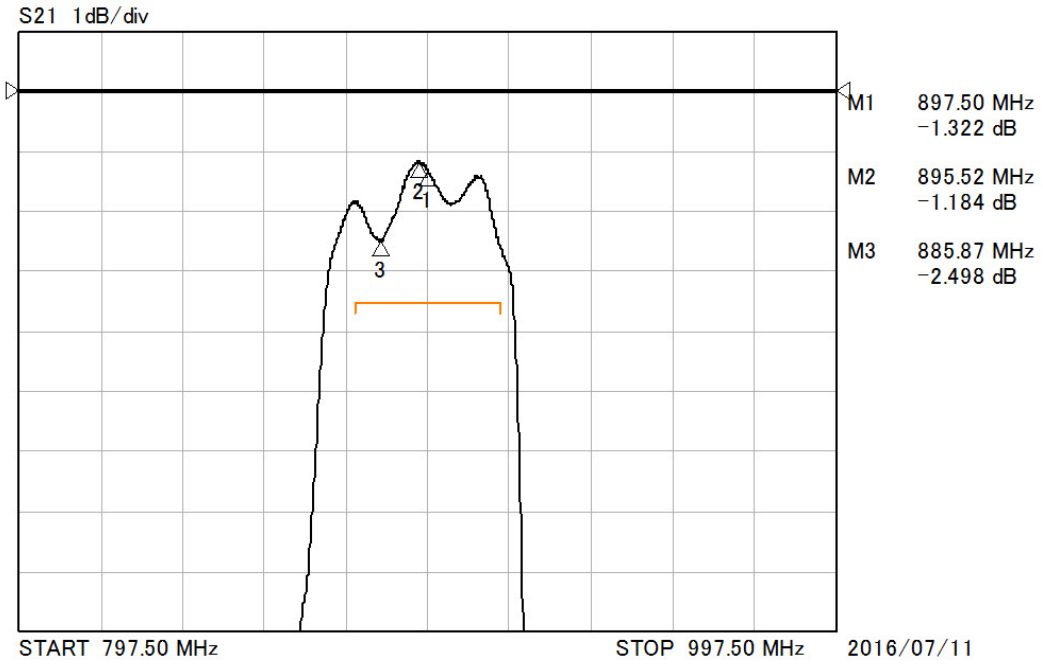
1. Unless noted otherwise, all specifications apply over the operating temperature range with filter soldered to the specified demonstration board with impedance matching to 50 Ω and measured with 50 Ω network analyzer.
2. Unless noted otherwise, all frequency specifications are referenced to the nominal center frequency, fc.
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. "LRIP" or "L" after the part number indicates "low rate initial production" and "ENG" or "E" indicates "engineering prototypes."
5. The design, manufacturing process, and specifications of this filter are subject to change.
6. Either Port 1 or Port 2 may be used for either input or output in the design. However, impedances and impedance matching may vary between Port 1 and Port 2, so that the filter must always be installed in one direction per the circuit design.
7. US and international patents may apply.
8. Murata, stylized Murata logo, and Murata N.A., Inc. are registered trademarks of Murata Manufacturing Co., Ltd.

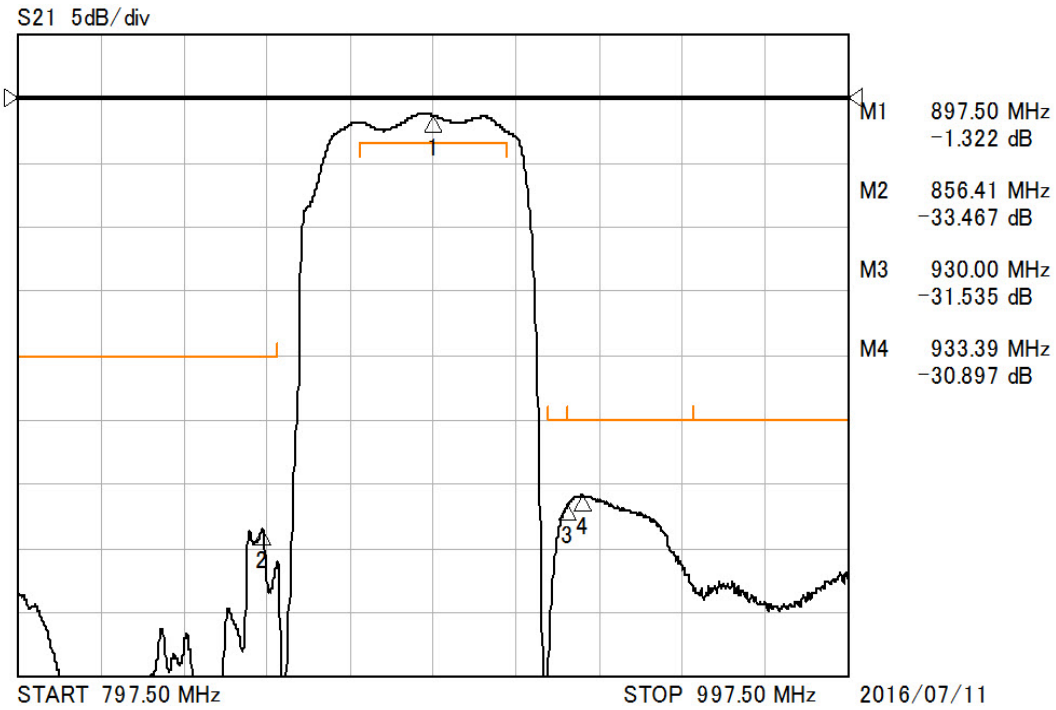
## Measurement Circuit:



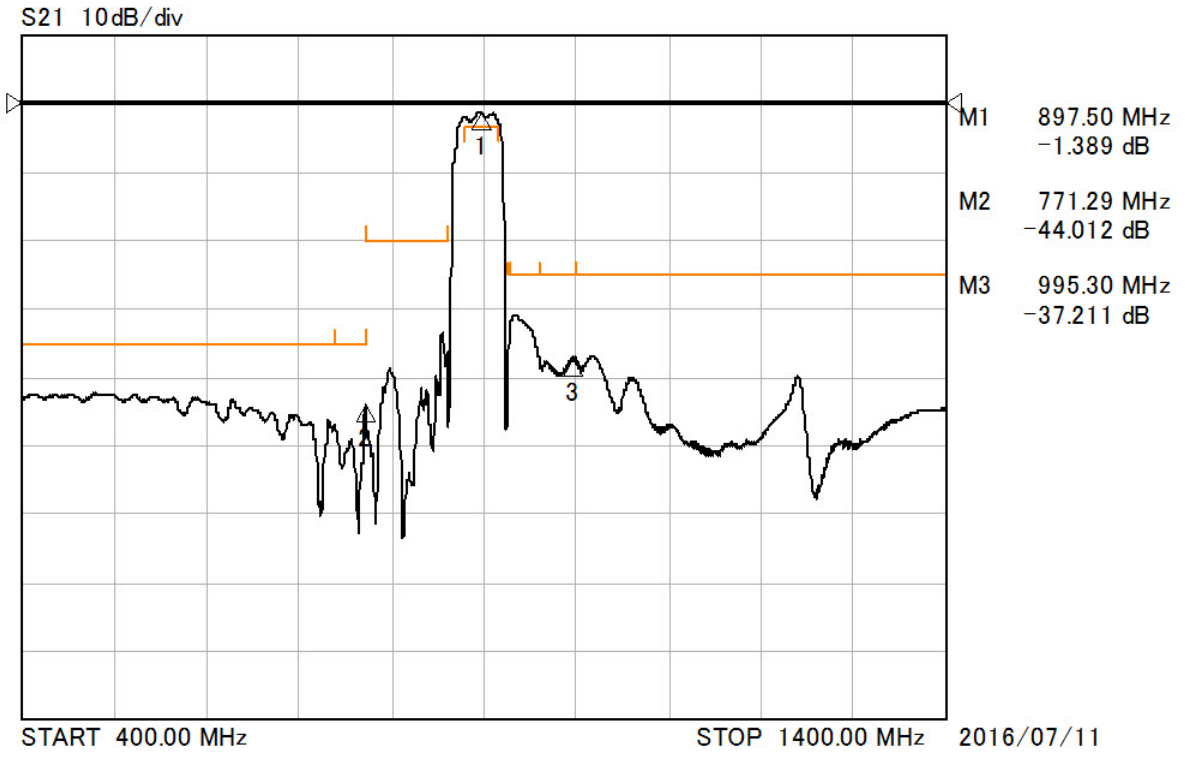

#2: Input
#5: Output
#1,3,4,6: Ground

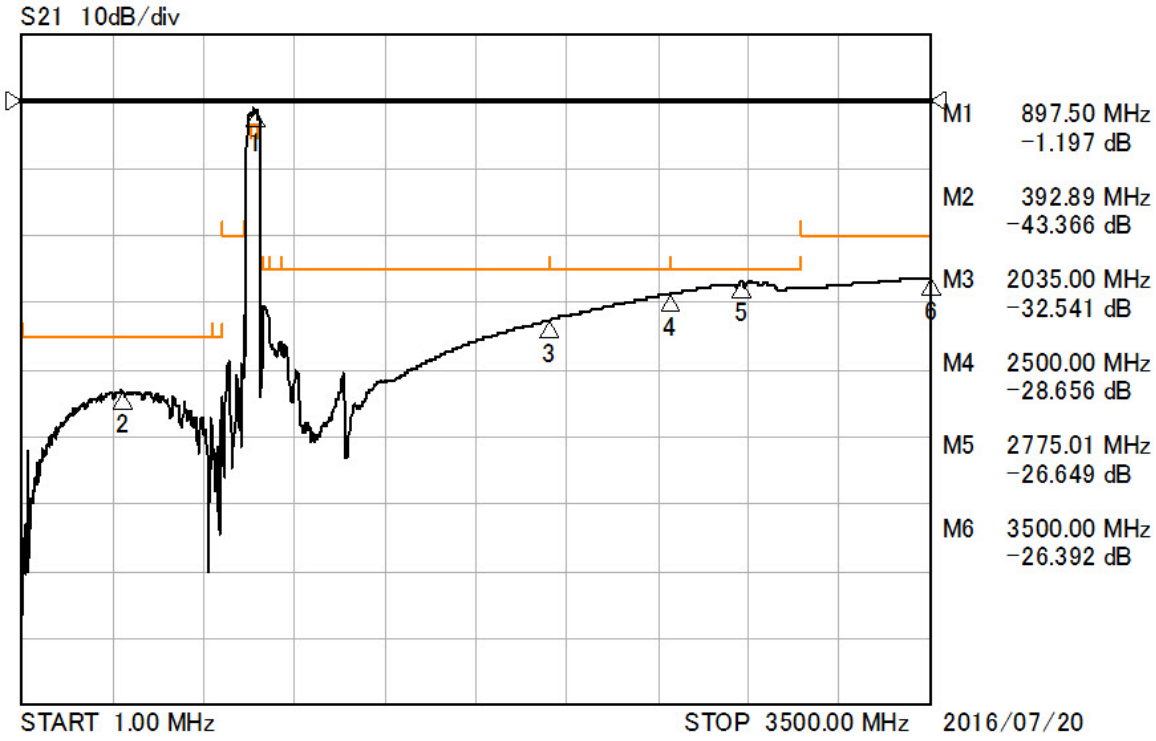
## Frequency Characteristics:



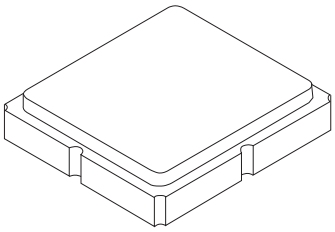



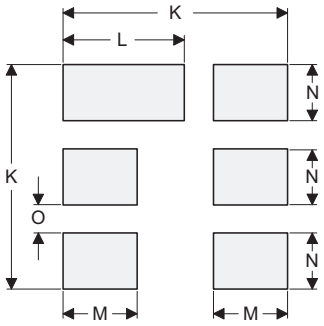
## Frequency Characteristics:



# SM3030-6 Ceramic 6-Terminal 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 | |

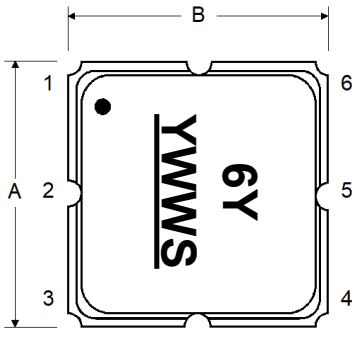
### Case Materials

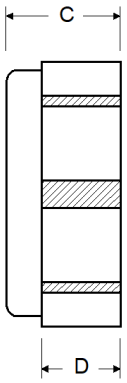
| Materials | |
|---|---|
| Solder Pad Plating | 0.3 to 1.0 µm Gold over 1.27 to 8.89 µm Nickel |
| Lid Plating | 2.0 to 3.0 µm Nickel |
| Body | $Al_2O_3$ Ceramic |
| Pb Free | |

### Electrical Connections

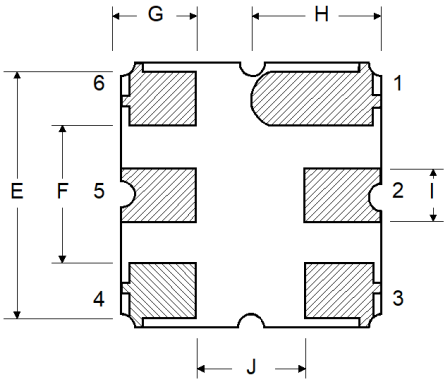
| Connection | Terminals |
|---|---|
| Input | 2 |
| Output | 5 |
| Case Ground | All others |

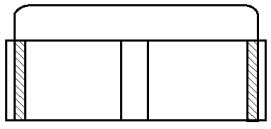
## TOP VIEW



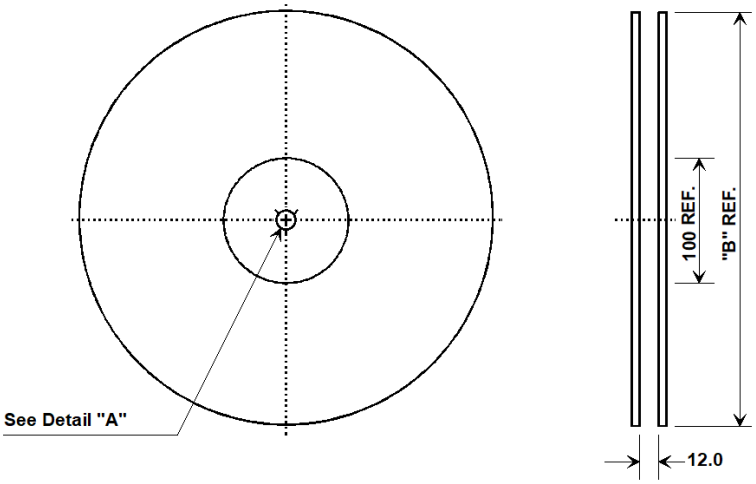



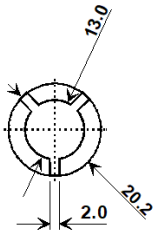

## BOTTOM VIEW



**Tape and Reel Specifications**

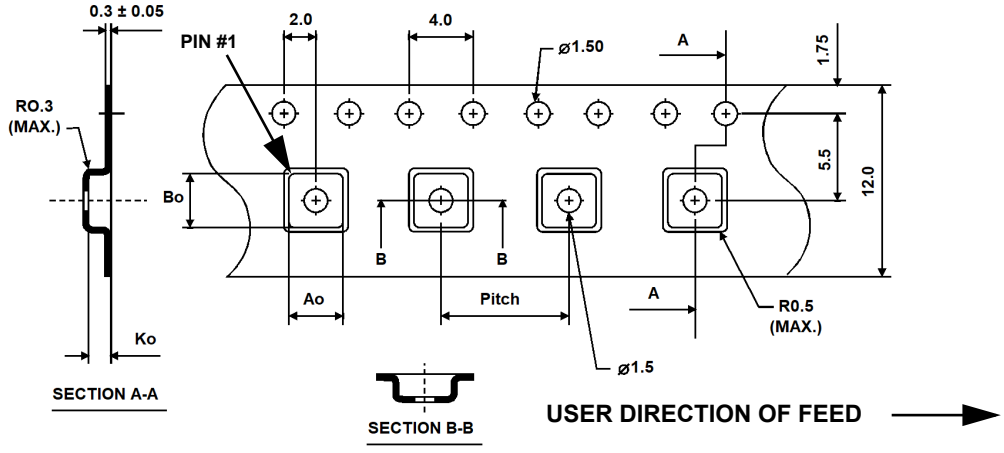



| "B" | | Quantity Per Reel |
|---|---|---|
| Inches | millimeters | |
| 7 | 178 | 500 |
| 13 | 330 | 3000 |

**COMPONENT ORIENTATION and DIMENSIONS**

| Carrier Tape Dimensions | |
|---|---|
| Ao | 3.35 mm |
| Bo | 3.35 mm |
| Ko | 1.40 mm |
| Pitch | 8.0 mm |
| W | 12.0 mm |



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