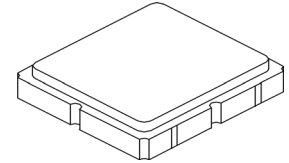


SF2391E

**897.5 MHz
SAW Filter**



SM3030-6

- Low-loss 897.5 MHz SAW Filter
- Designed for 50 ohm Source/Load
- Complies with Directive 2002/95/EC (RoHS)
- Moisture Sensitivity Level: 1
- AEC-Q200 Qualified

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

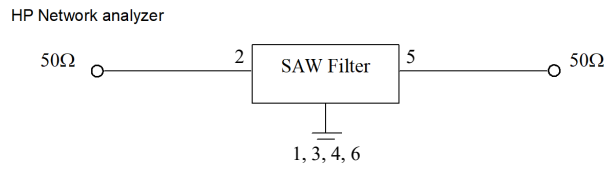
| Characteristic | Sym | Notes | Min | Typ | Max | Units |
|--|------------------------------------|-----------------|-----|-------|-----|-------|
| Center Frequency | f_c | | | 897.5 | | MHz |
| Insertion Loss, 880 to 915 MHz | IL | | | 2.5 | 3.5 | dB |
| Amplitude Ripple (p-p), 880 to 915 MHz | | | | 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, <u>YWWS</u> | | | | | |

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

NOTES:

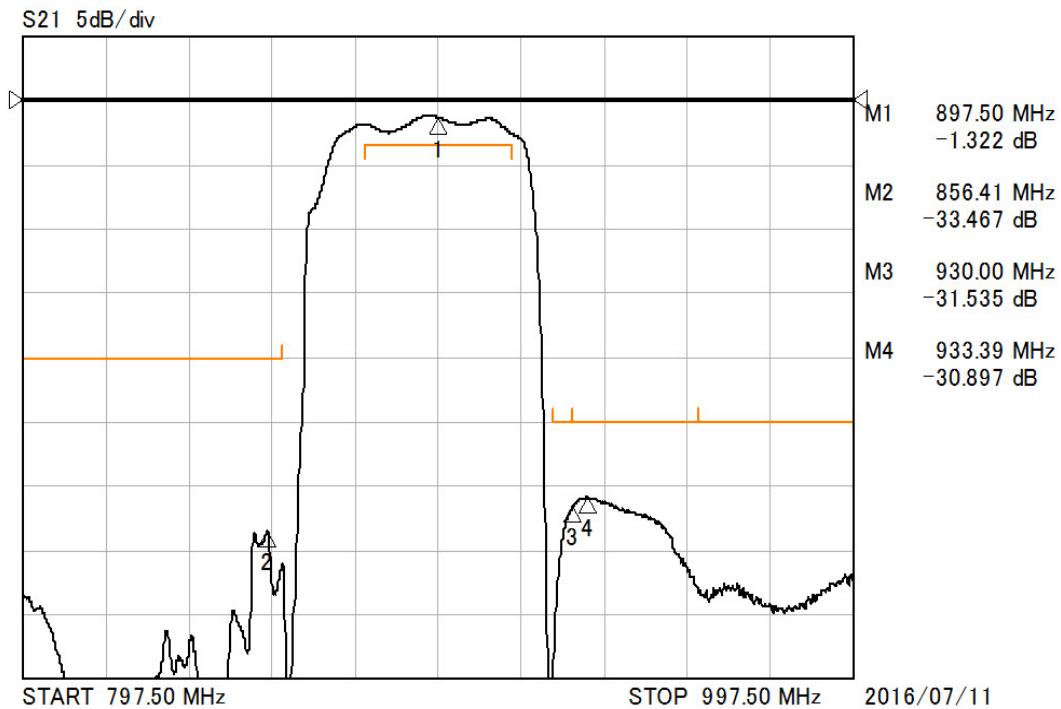
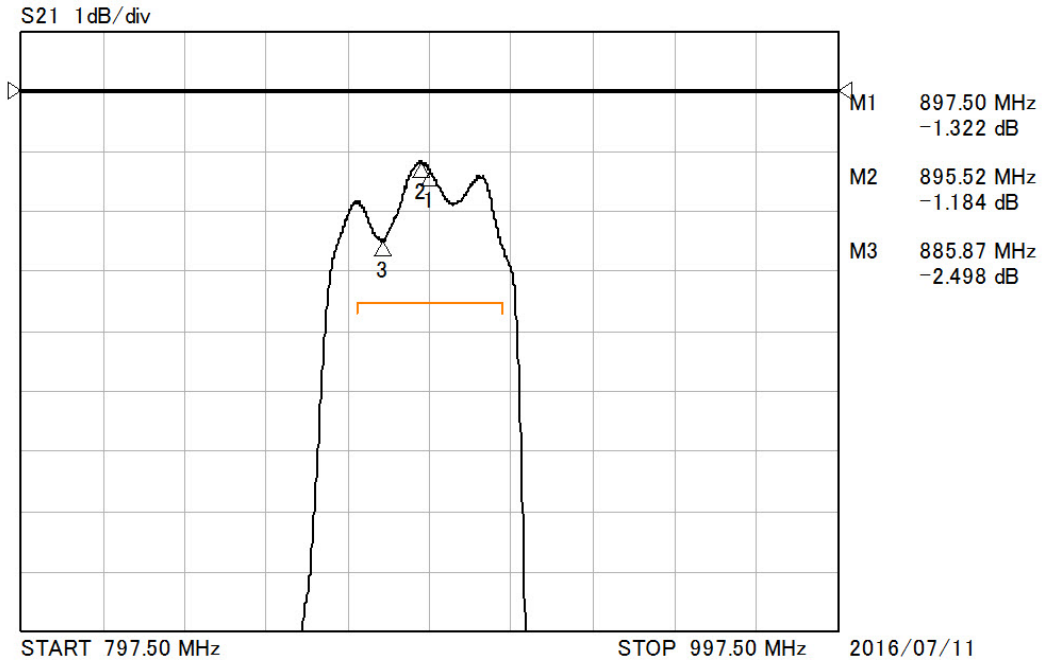
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

Measurement Circuit:



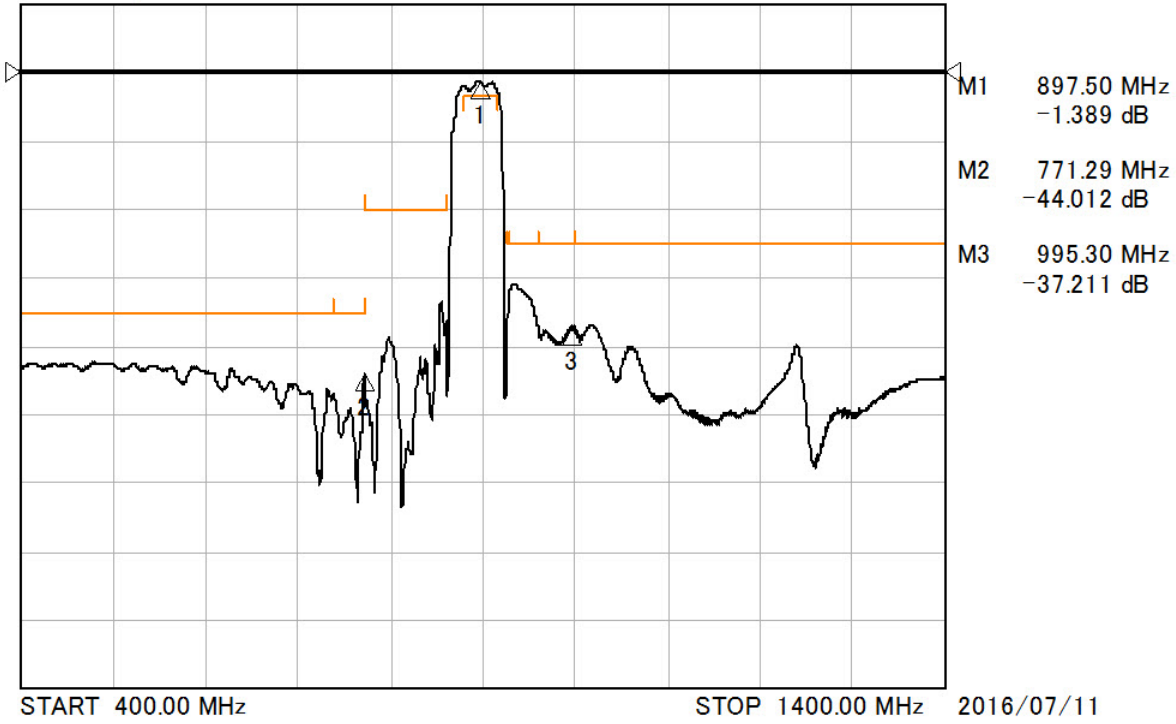
#2: Input
 #5: Output
 #1,3,4,6: Ground

Frequency Characteristics:

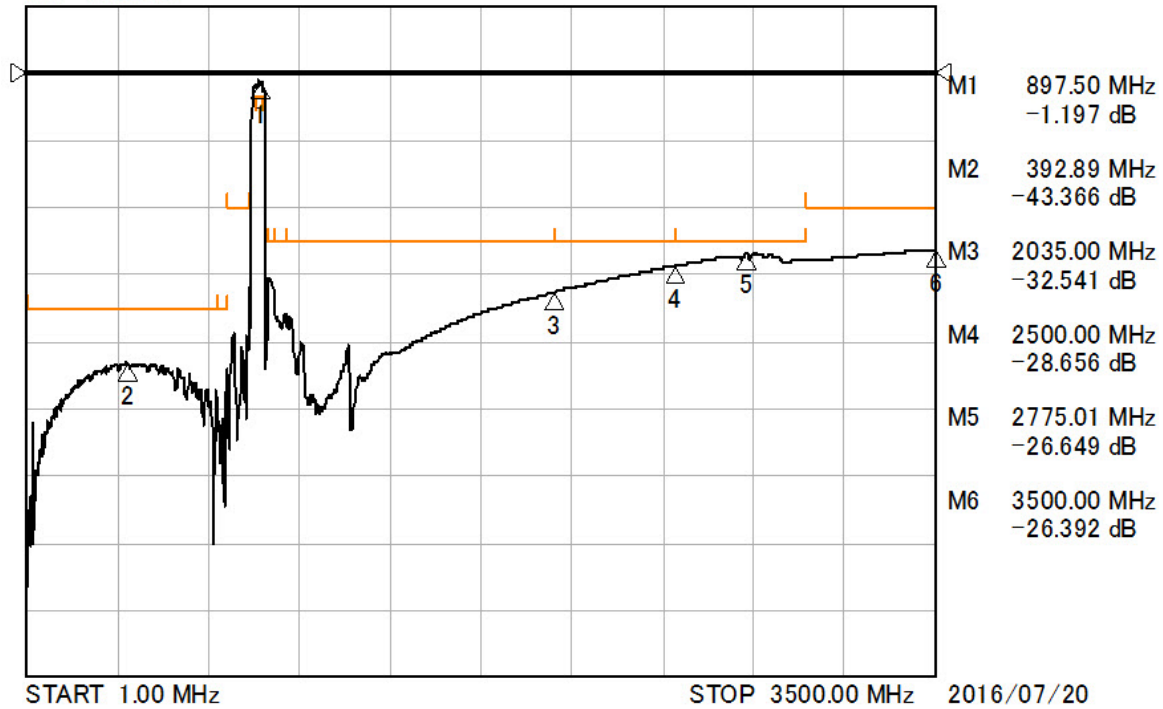


Frequency Characteristics:

S21 10dB/div



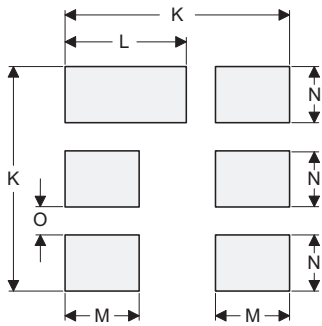
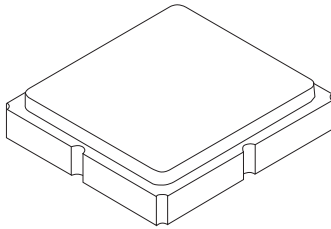
S21 10dB/div



SM3030-6 Ceramic 6-Terminal Surface-Mount Case 3.0 X 3.0 mm Nominal Footprint

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 | |



PCB Footprint Top View

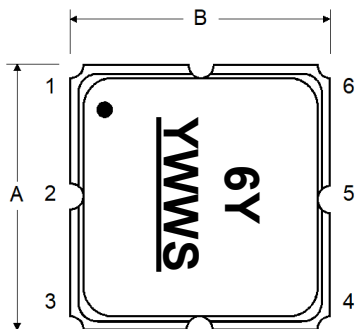
Case Materials

| 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 |

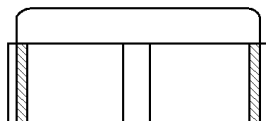
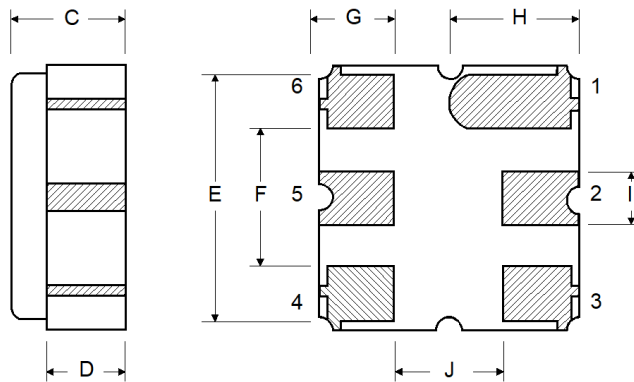
Electrical Connections

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

TOP VIEW

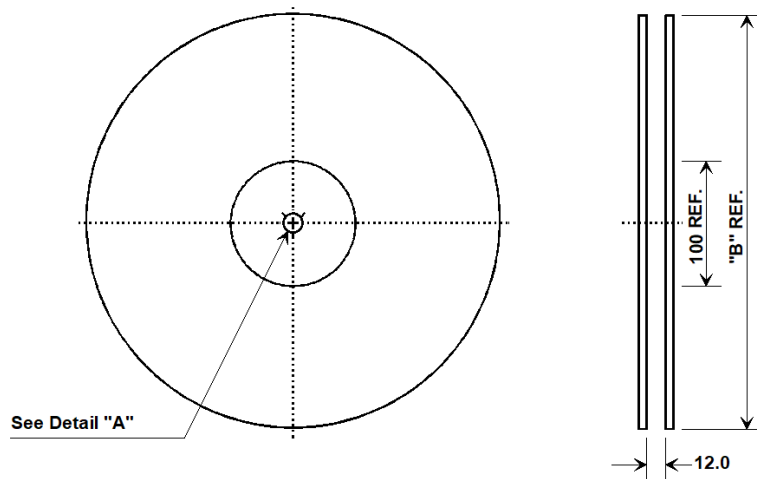


BOTTOM VIEW

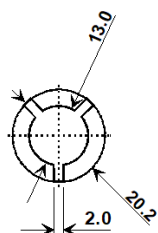


Tape and Reel Specifications

Tape and Reel Standard per ANSI/EIA-481

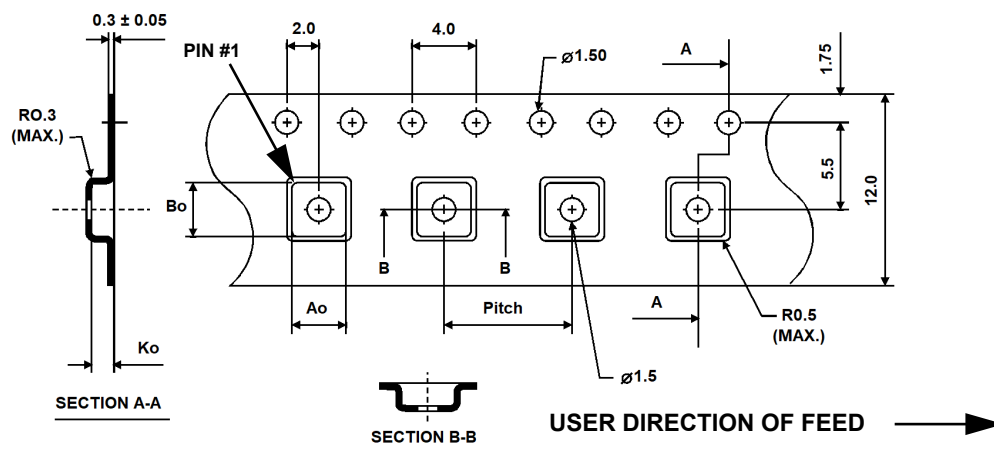


| "B" | | Quantity Per Reel |
|--------|-------------|-------------------|
| Inches | millimeters | |
| 7 | 178 | 500 |
| 13 | 330 | 3000 |



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 |



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.

