

- Low-loss SAW Filter, 1615 MHz, 20 MHz Bandwidth
- 3.0 x 3.0 x 1.4 mm Surface-mount Case
- 50  $\Omega$  Input/Output Impedance
- Complies with Directive 2002/95/EC (RoHS)

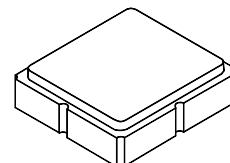


## Absolute Maximum Ratings

| Rating                                                 | Value      | Units |
|--------------------------------------------------------|------------|-------|
| Incident Power in Passband                             | +10        | dBm   |
| DC Voltage on any Non-ground Terminal                  | 3          | VDC   |
| Operating Temperature Range                            | -20 to +70 | °C    |
| Storage Temperature Range in Tape and Reel             | -40 to +85 | °C    |
| Maximum Soldering Profile, 5 cycles/10 seconds maximum | 265        | °C    |

## SF2250E

## 1615 MHz SAW Filter



SM3030-6

## Electrical Characteristics

| Characteristic                          | Sym                                                 | Notes | Min | Typ  | Max | Units    |
|-----------------------------------------|-----------------------------------------------------|-------|-----|------|-----|----------|
| Center Frequency                        | $f_c$                                               |       |     | 1615 |     | MHz      |
| Insertion Loss, 1605 to 1625 MHz        | IL                                                  |       |     | 3.4  | 4.6 | dB       |
| Amplitude Ripple, p-p, 1605 to 1625 MHz |                                                     |       |     | 0.3  | 2.0 |          |
| Attenuation Referenced to 0 dB          |                                                     |       |     |      |     | dB       |
| 1100 to 1400 MHz                        |                                                     |       | 40  | 55   |     |          |
| 1400 to 1550 MHz                        |                                                     |       | 33  | 52   |     |          |
| 1700 to 1825 MHz                        |                                                     |       | 30  | 52   |     |          |
| 1825 to 1900 MHz                        |                                                     |       | 36  | 52   |     |          |
| Terminating Source impedance            | $Z_s$                                               |       |     | 50   |     | $\Omega$ |
| Terminating Load impedance              | $Z_L$                                               |       |     | 50   |     | $\Omega$ |
| Input/Output Impedance Match            | No matching network required for 50 ohm source/load |       |     |      |     |          |
| Case Style                              | SM3030-6                                            |       |     |      |     |          |
| Lid Symbolization                       | 991                                                 |       |     |      |     |          |

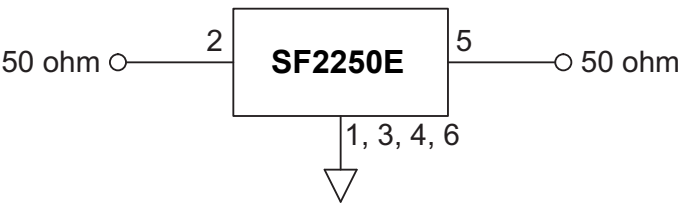


**CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

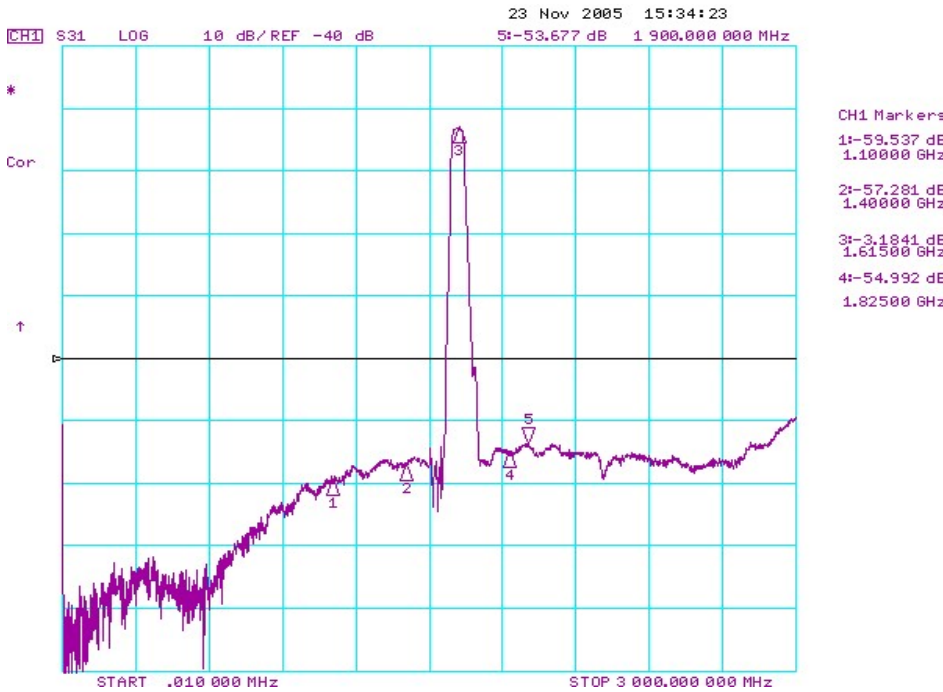
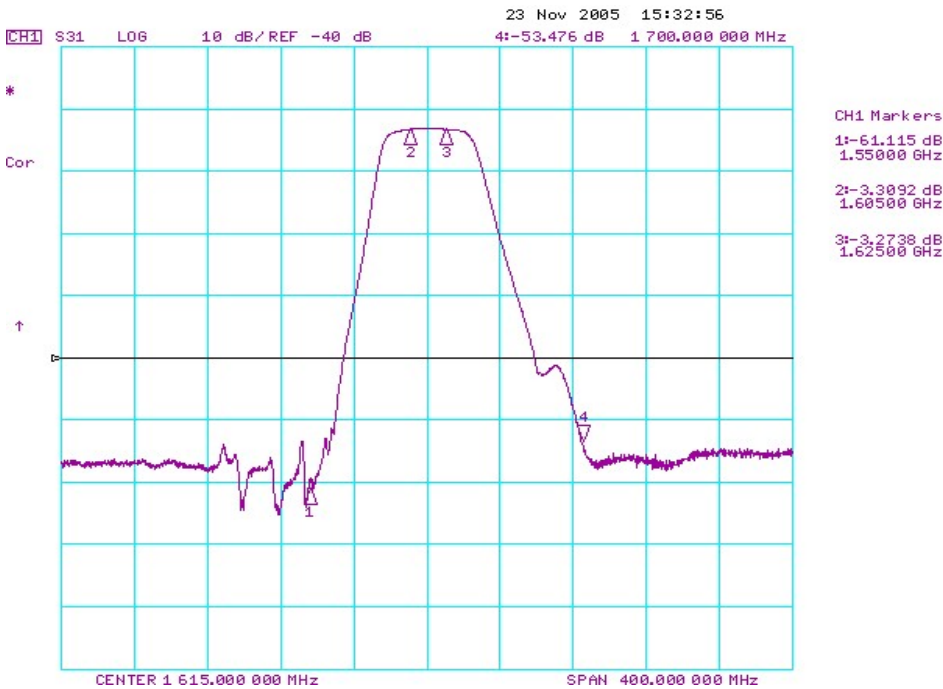
### Notes:

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.

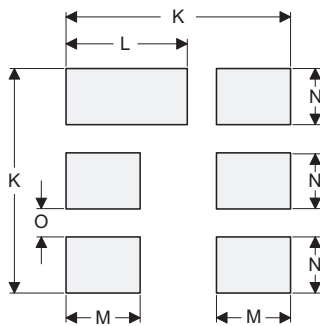
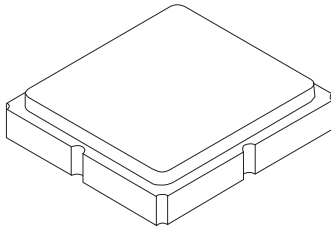
Matching Circuit



Frequency Response Plots



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



PCB Footprint Top View

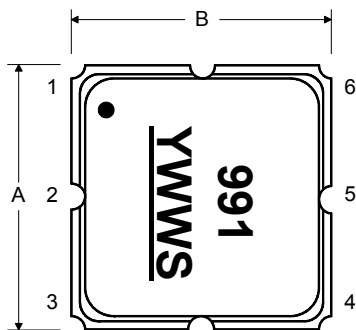
Case and PCB Footprint Dimensions

| 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 |       |

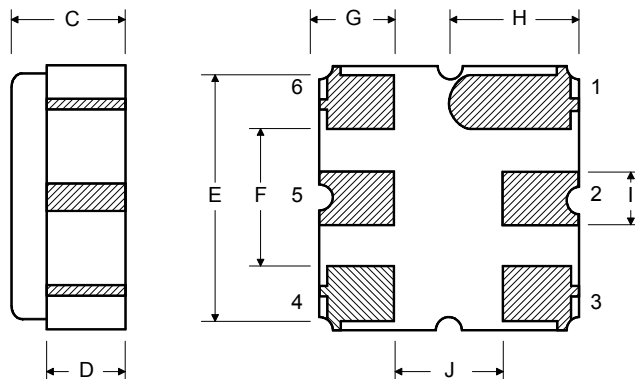
Case Materials

| Materials          |                                                          |
|--------------------|----------------------------------------------------------|
| Solder Pad Plating | 0.3 to 1.0 $\mu$ m Gold over 1.27 to 8.89 $\mu$ m Nickel |
| Lid Plating        | 2.0 to 3.0 $\mu$ m Nickel                                |
| Body               | Al <sub>2</sub> O <sub>3</sub> Ceramic                   |
| Pb Free            |                                                          |

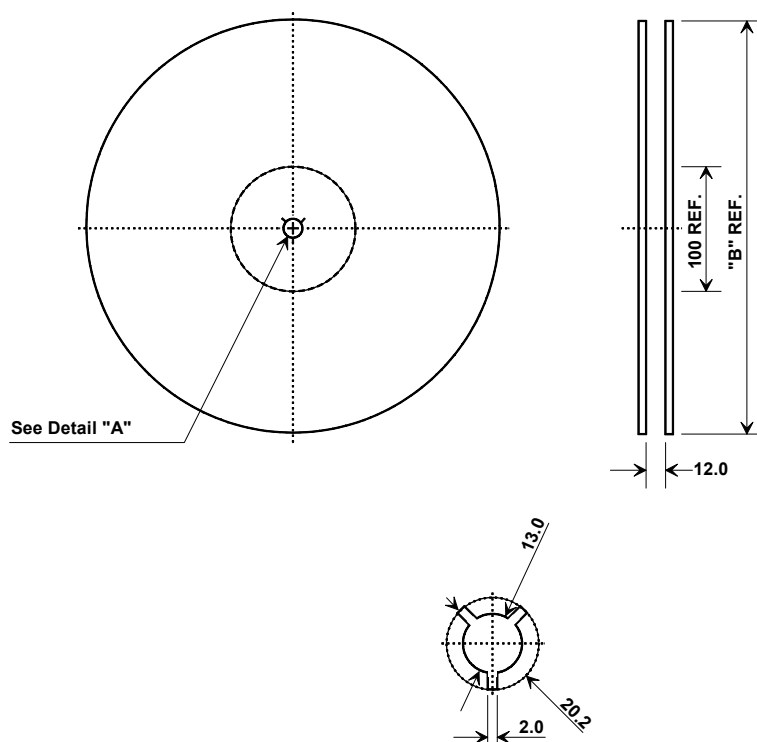
TOP VIEW



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 |

