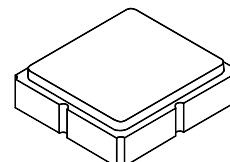


- RF SAW Filter, 2332.5 MHz, 25.6 MHz Bandwidth
- 3.0 x 3.0 x 1.4 mm Surface-mount Case
- Input/Output Impedance 50Ω/50Ω
- Meets AEC-Q200 Standard
- Complies with Directive 2002/95/EC (RoHS)



**SF1224E-1**

**2332.5 MHz  
SAW Filter**



**SM3030-6**

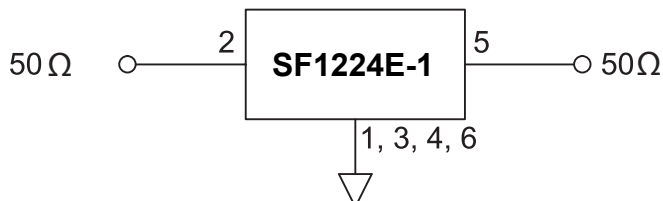
#### Absolute Maximum Ratings

| Rating                                                 | Value       | Units |
|--------------------------------------------------------|-------------|-------|
| Incident Power in Passband                             | +15         | dBm   |
| Incident Power Out of Band                             | +27         | dBm   |
| DC Voltage on any Non-ground Terminal                  | 3           | VDC   |
| Operating Temperature Range                            | -40 to +105 | °C    |
| Component Storage Temperature Range                    | -40 to +105 | °C    |
| Storage Temperature Range in Tape and Reel             | -40 to +85  | °C    |
| Maximum Soldering Profile, 5 cycles/10 seconds maximum | 265         | °C    |

#### Electrical Characteristics

| Characteristic                               | Sym   | Notes | Min    | Typ   | Max   | Units |
|----------------------------------------------|-------|-------|--------|-------|-------|-------|
| Center Frequency                             | $f_c$ |       | 2332.5 |       |       | MHz   |
| Maximum Insertion Loss, 2319.4 to 2345.0 MHz | IL    |       |        | 1.5   | 2.5   | dB    |
| Amplitude Ripple, p-p, 2319.4 to 2345.0 MHz  |       |       |        | 0.7   | 1.2   |       |
| I/O Return Loss, 2319.4 to 2345.0 MHz        |       |       | 10     | 12    |       |       |
| I/O VSWR, 2319.4 to 2345.0 MHz               |       |       |        | 1.7:1 | 2.2:1 |       |
| Attenuation (Reference level from 0 dB)      |       |       |        |       |       | dB    |
| 10 to 2224 MHz                               |       |       | 30     | 38    |       |       |
| 2453 to 2600 MHz                             |       |       | 35     | 42    |       |       |
| 2600 to 3000 MHz                             |       |       | 30     | 35    |       |       |
| 3000 to 6000 MHz                             |       |       | 15     | 18    |       |       |
| Terminating Source impedance                 | $Z_s$ |       |        | 50    |       | Ω     |
| Terminating Load impedance                   | $Z_L$ |       |        | 50    |       | Ω     |

|                                              |                                                       |
|----------------------------------------------|-------------------------------------------------------|
| Single Ended Input / Output, Impedance match | No matching network required for operation at 50 ohms |
| Case Style                                   | SM3030-6                                              |
| Lid Symbolization                            | A65                                                   |

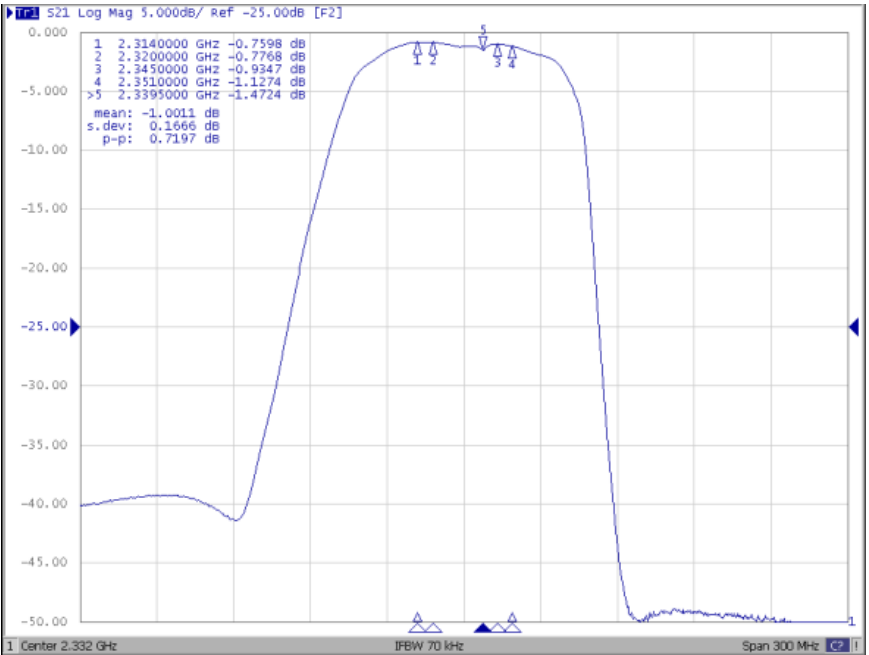
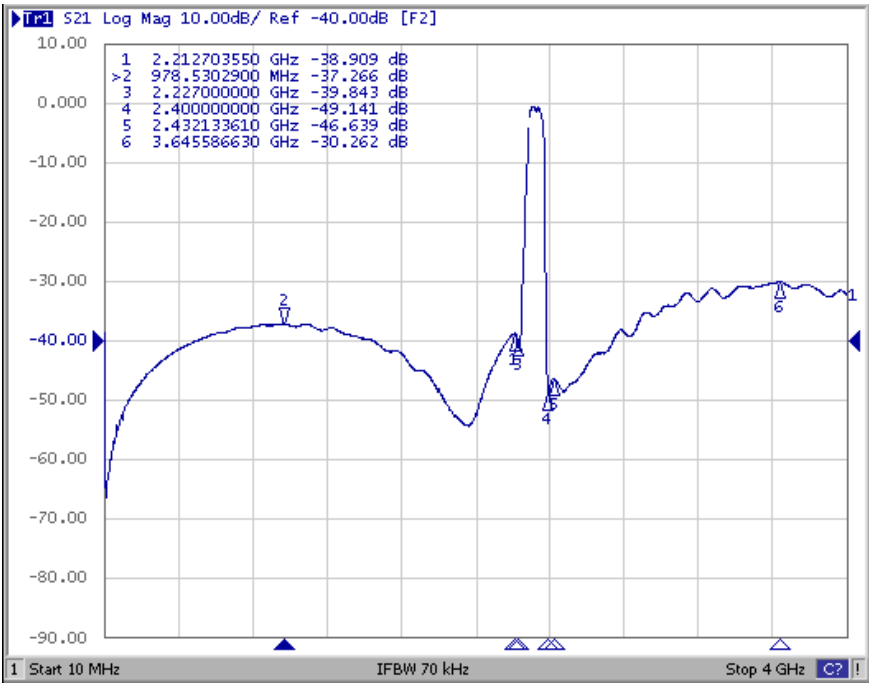


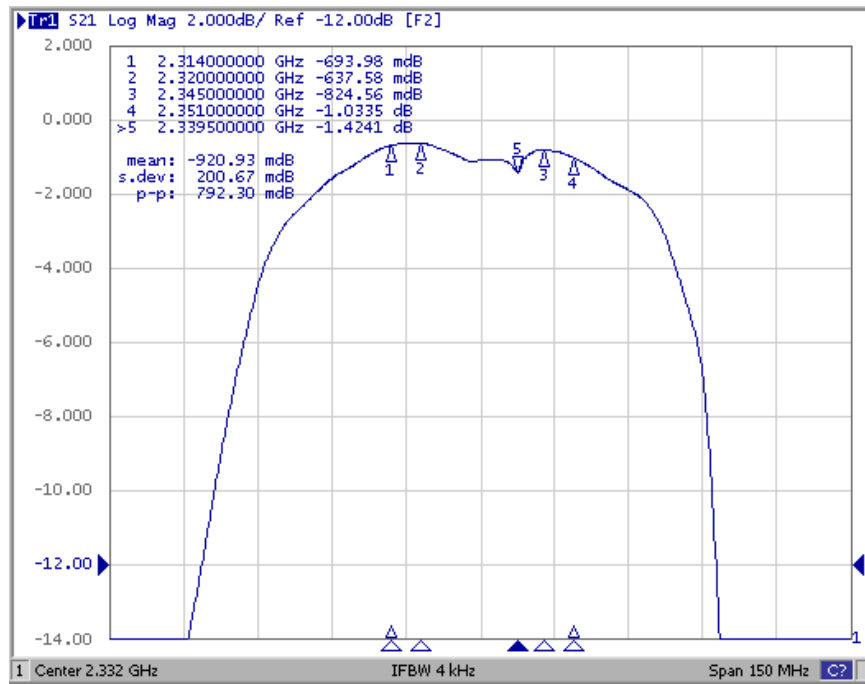
**CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

#### NOTES:

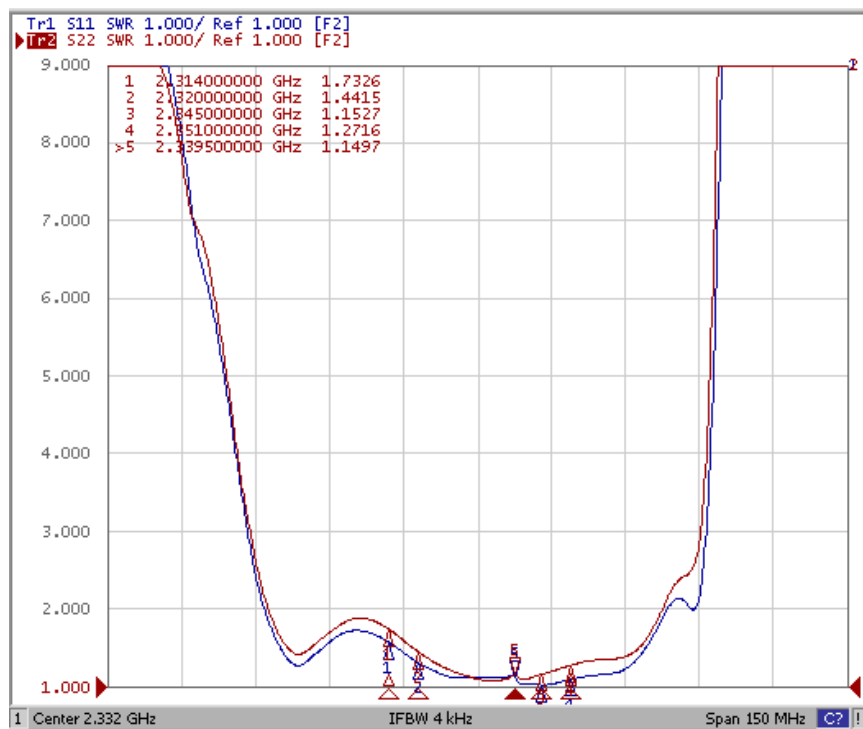
1. US and international patents may apply.
2. Murata, stylized Murata logo, and Murata N.A., Inc. are registered trademarks of Murata Manufacturing Co., Ltd.

# Filter Response Plots

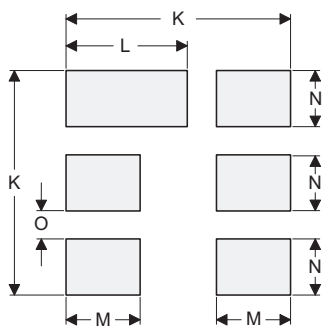
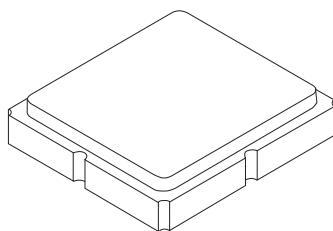




## Input/Output VSWR Plots



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



PCB Footprint Top View

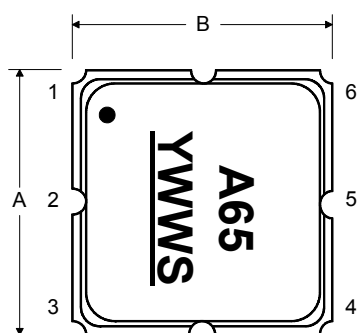
Case and PCB Footprint Dimensions

| 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 |       |

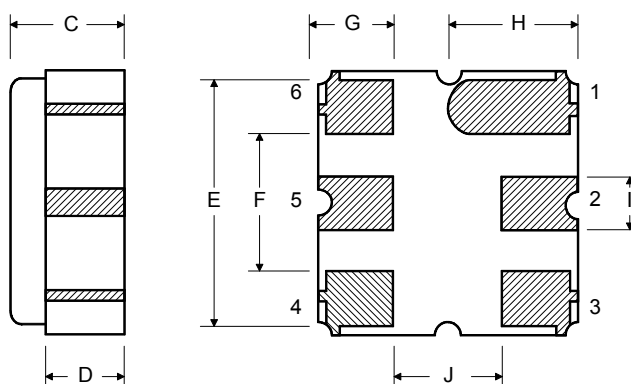
Case Materials

| 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



Technical drawing of a circular component, likely a flange or end plate, showing three views: a top view, a side view, and a detail view.

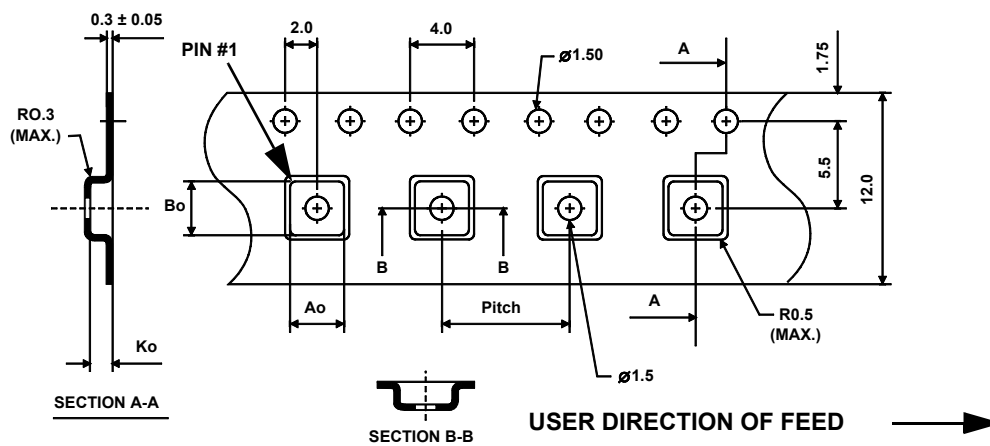
**Top View:** A large circle with a smaller concentric circle in the center. A crosshair indicates the center. A leader line points from the text "See Detail 'A'" to the central hole.

**Side View:** A vertical cross-section showing the thickness of the component. The total thickness is dimensioned as 12.0. The central hole is dimensioned as 100 REF. and "B" REF. (Reference).

**Detail View (Detail A):** A cross-section of the central hole. It shows a circular hole with a diameter of 13.0. The hole is surrounded by a flange with a thickness of 2.0. The outer diameter of the flange is dimensioned as 20.2.

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

| 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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