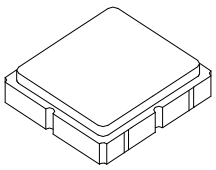
# Preliminary

RFM products are now Murata products.

# SF2374E

## 1645 MHz SAW Filter

- ***Low-loss RF SAW Filter***
- ***Miniature 3 x 3 mm SMD Package***
- ***Complies with Directive 2002/95/EC (RoHS)***



**SM3030-8**

### Absolute Maximum Ratings

| Rating | Value | Units |
|---|---|---|
| Input Power Level | +10 | dBm |
| DC Voltage on any Non-grounded Terminal | 3 | V |
| Operating Temperature Range | -40 to +100 | °C |
| Storage Temperature Range in Tape and Reel | -40 to +85 | °C |
| Maximum Soldering Profile, 5 cycles/10 seconds maximum | 265 | °C |

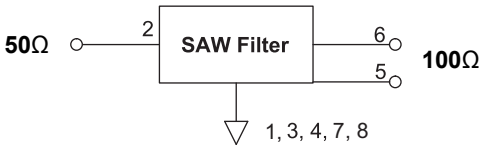
### Electrical Characteristics

| Characteristic - @25°C | Sym | Notes | Min | Typ | Max | Units |
|---|---|---|---|---|---|---|
| Center Frequency | $f_C$ | | | 1645 | | MHz |
| Insertion Loss, 1625 to 1665 MHz | IL | | | | 5.5 | dB |
| Group Delay Ripple 1625 to 1665 MHz | | | | | 20 | nS |
| Amplitude Ripple, 1625 to 1665 MHz | | | | 0.7 | 2.0 | $dB_{P-P}$ |
| Return Loss 1625 to 1665 MHz | | | 10 | | | dB |
| Attenuation out of Passband: | | | | | | dB |
| <1000 MHz | | | -40 | | | |
| 1000 to 1605 MHz | | | -35 | | | |
| 1685 to 2720 MHz | | | -35 | | | |
| 2720 to 4860 MHz | | | -40 | | | |
| 4860 to 6000 MHz | | | -30 | | | |
| >6000 MHz | | | -25 | | | |
| Temperature Coefficient | | | | -30 | | ppm/°C |

| | | |
|---|---|---|
| Case Style | | SM3030-8 3.0 x 3.0 mm Nominal Footprint |
| Lid Symbolization (Y=year, WW=week, S=shift) dot=pin 1 indicator | | 6B, YWWS |
| Standard Reel Quantity | Reel Size 7 inch | 500 Pieces/Reel |
| | Reel Size 13 inch | 3000 Pieces/Reel |

### Electrical Connections

| Connection | Terminals |
|---|---|
| Input | 2 - 50 Ω |
| Output | 5, 6 - 100 Ω differential |
| Case Ground | All others |

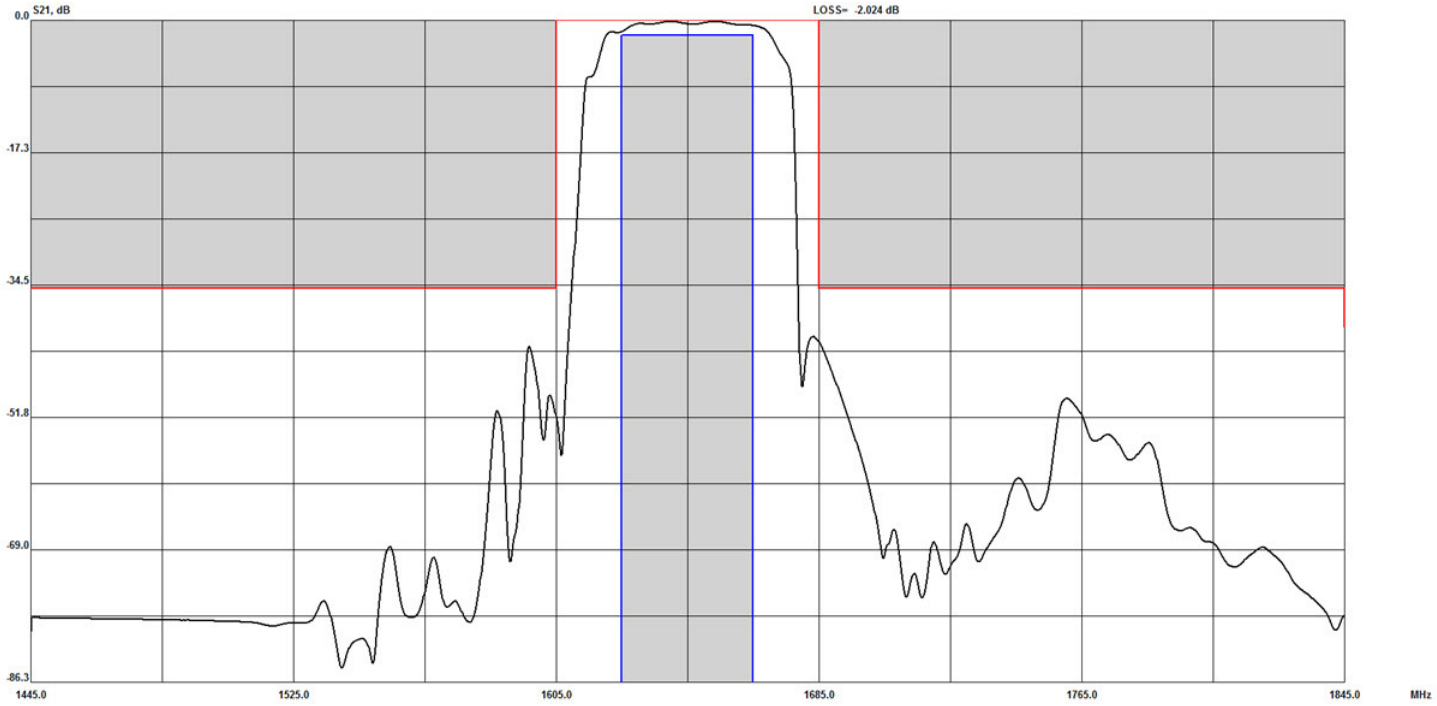


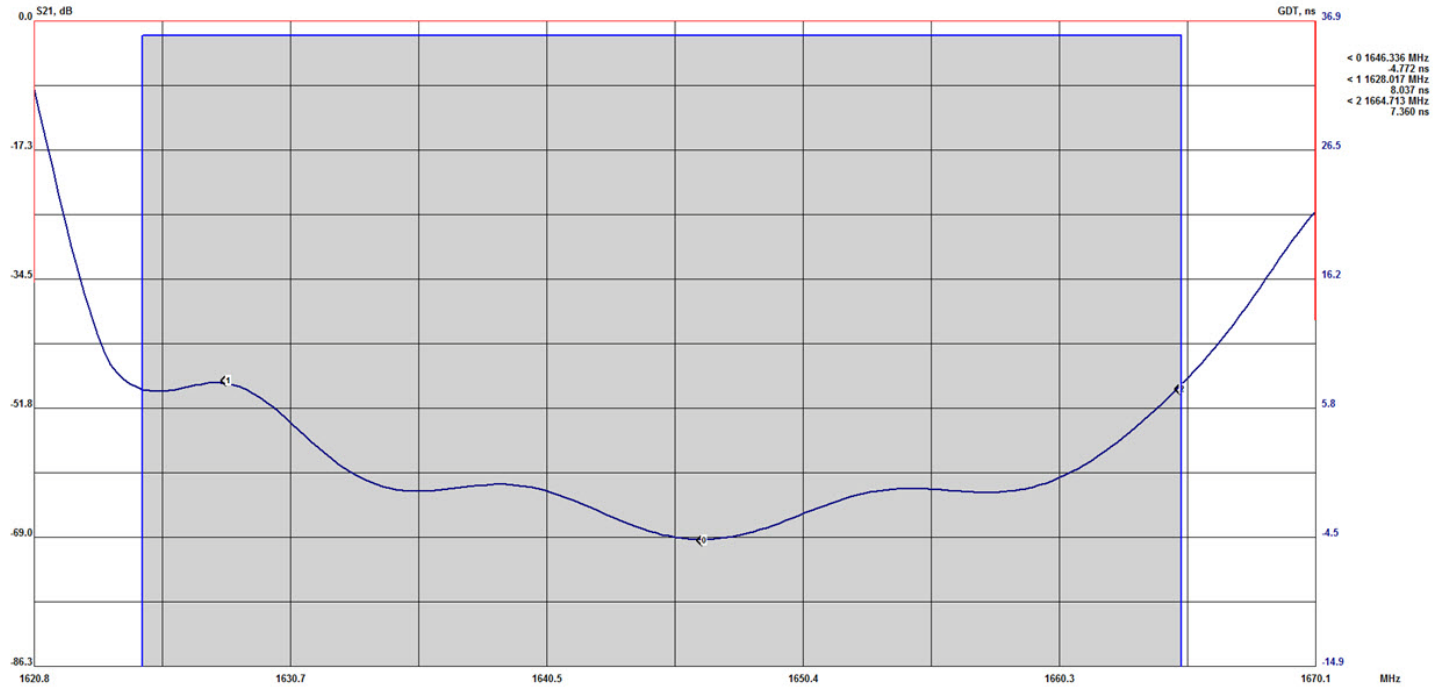

**CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

**NOTES:**

1. Unless noted otherwise, all frequency specifications are referenced to the nominal center frequency, fc.
2. 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.
3. The design, manufacturing process, and specifications of this filter are subject to change.
4. 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.
5. US and international patents may apply.
6. Murata, stylized Murata logo, and Murata N.A., Inc. are registered trademarks of Murata Manufacturing Co., Ltd.

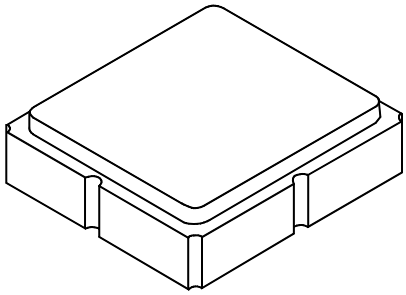
## Filter Response Plots



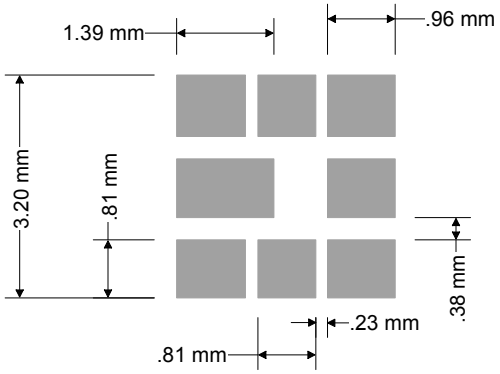



# SM3030-8 Case

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

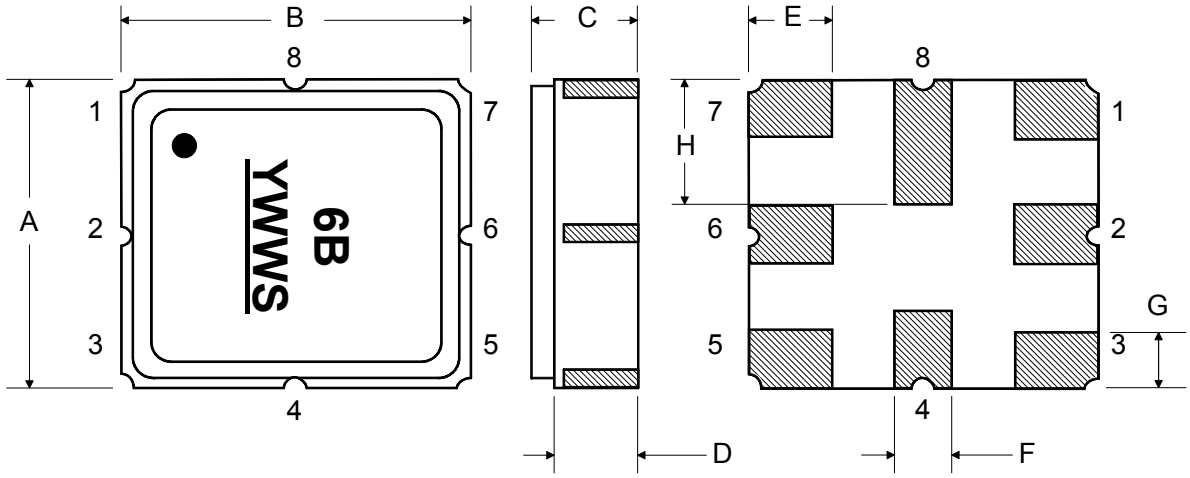


| Dimension | mm | | | Inches | | |
|---|---|---|---|---|---|---|
| | Min | Nom | Max | Min | Nom | Max |
| A | 2.87 | 3.0 | 3.13 | 0.113 | 0.118 | 0.123 |
| B | 2.87 | 3.0 | 3.13 | 0.113 | 0.118 | 0.123 |
| C | 1.14 | 1.27 | 1.40 | 0.045 | 0.050 | 0.055 |
| D | 0.79 | 0.92 | 1.05 | 0.031 | 0.036 | 0.041 |
| E | 0.62 | 0.75 | 0.88 | 0.024 | 0.029 | 0.034 |
| F | 0.47 | 0.60 | 0.73 | 0.018 | 0.024 | 0.029 |
| G | 0.47 | 0.60 | 0.73 | 0.018 | 0.024 | 0.029 |
| H | 1.07 | 1.20 | 1.33 | 0.042 | 0.047 | 0.052 |

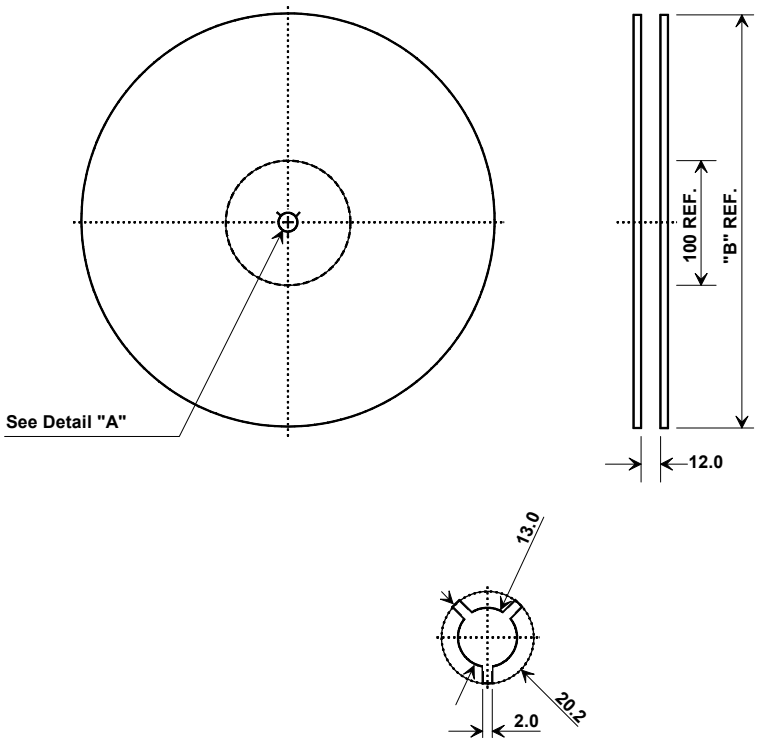



| Materials | |
|---|---|
| Solder Pad Plating | 0.3 to 1.0 µm Gold over 1.27 to 8.89 µm Nickel |
| Lid Plating | 2.0 to 3.0 µm Nickel |
| Body | $Al_2O_3$ Ceramic |
| Pb Free | |

**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 | 3.3 ±0.1 mm |
| Bo | 3.3 ±0.1 mm |
| Ko | 1.40 ±0.1 mm |
| Pitch | 8.0 mm |
| W | 12.0 ±0.3 mm |