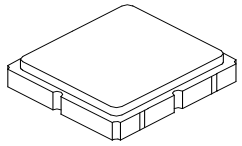
muRata
INNOVATOR IN ELECTRONICS

# SF2421D

## 485 MHz SAW Filter

- ***Hermetically sealed Surface Mount package***
- ***Complies with Directive 2002/95/EC (RoHS)***



**SM3838-8 Case**

### Absolute Maximum Ratings

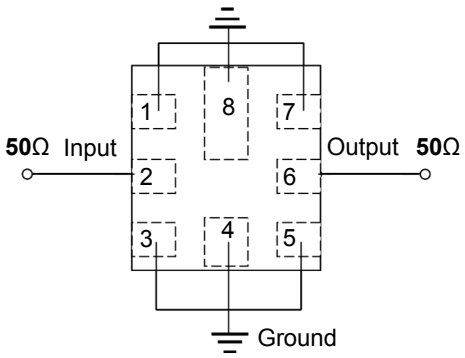
| Rating | Value | Units |
|---|---|---|
| Maximum Input Power | +10 | dBm |
| DC Voltage | 3 | VDC |
| Operable Temperature Range | -45 to +125 | °C |
| Specification Temperature | -40 to +85 | °C |
| Storage Temperature | -40 to +85 | °C |

### Electrical Characteristics

| Characteristic | Sym | Notes | Minimum | Typical | Maximum | Units |
|---|---|---|---|---|---|---|
| Nominal Operating Frequency | $f_C$ | | | 485 | | MHz |
| Insertion Loss 480 to 490 MHz | | | | 2.6 | 4.0 | dB |
| Amplitude Ripple 480 to 490 MHz | | | | .6 | 2.0 | dB |
| Attenuation (Reference level from 0dB) | | | | | | |
| 385 to 445 MHz | | | 47 | 63 | | dB |
| 525 to 585 MHz | | | 36 | 54 | | dB |
| Impedance at Fc: Input $Z_{IN} = R_{IN} // C_{IN}$ | 50 // 0pF | | | | | Ω |
| Output $Z_{OUT} = R_{OUT} // C_{OUT}$ | 50 // 0pF | | | | | |
| Footprint Size: 3.8 X 3.8 | SM3838-8 | | | | | |
| Lid Symbolization (Y=Year, WW=week, S=shift) | B36//YWWS | | | | | |

### Electrical Connections

| Connection | Terminals |
|---|---|
| Input | 2 |
| Output | 6 |
| Ground | All Others |



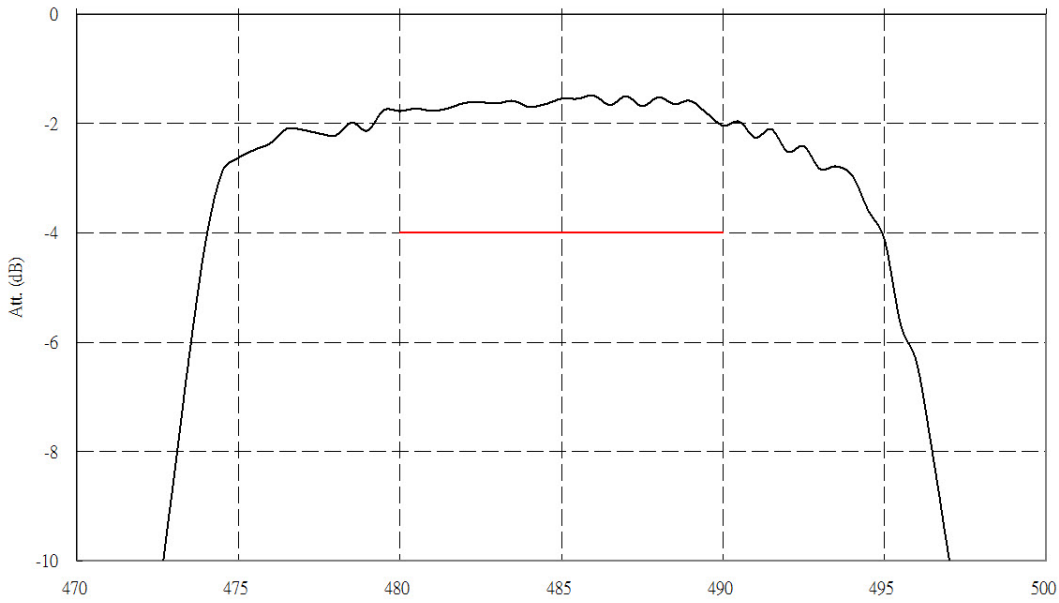

**CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

**NOTES:**

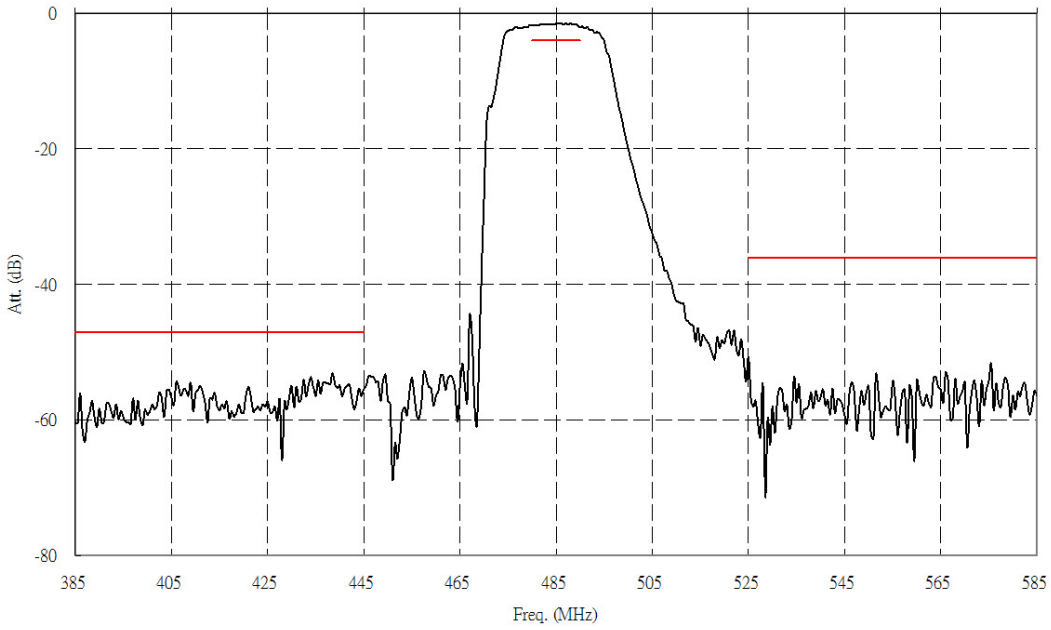
1. All specifications apply over the operating temperature range with filter soldered to the specified demonstration board unless noted otherwise.
2. Ultimate rejection is dependent on PCB layout.
3. Specifications subject to change without notice.
4. Electrostatic Sensitive Device. Observe precautions for handling.
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.

## Frequency Characteristics

### S21 Response: Center 485 MHz, 30 MHz span



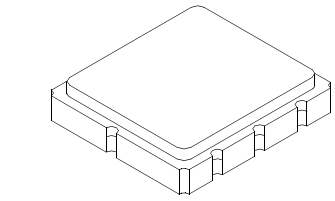

### S21 Response: Center 485 MHz, 200 MHz span

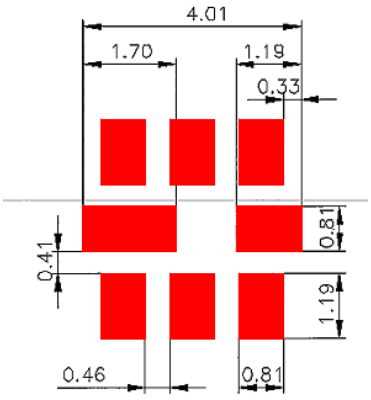


# SM3838-8 Case

## 8-Terminal Ceramic Surface-Mount Case

## 3.8 X 3.8 mm Nominal Footprint






PCB Footprint

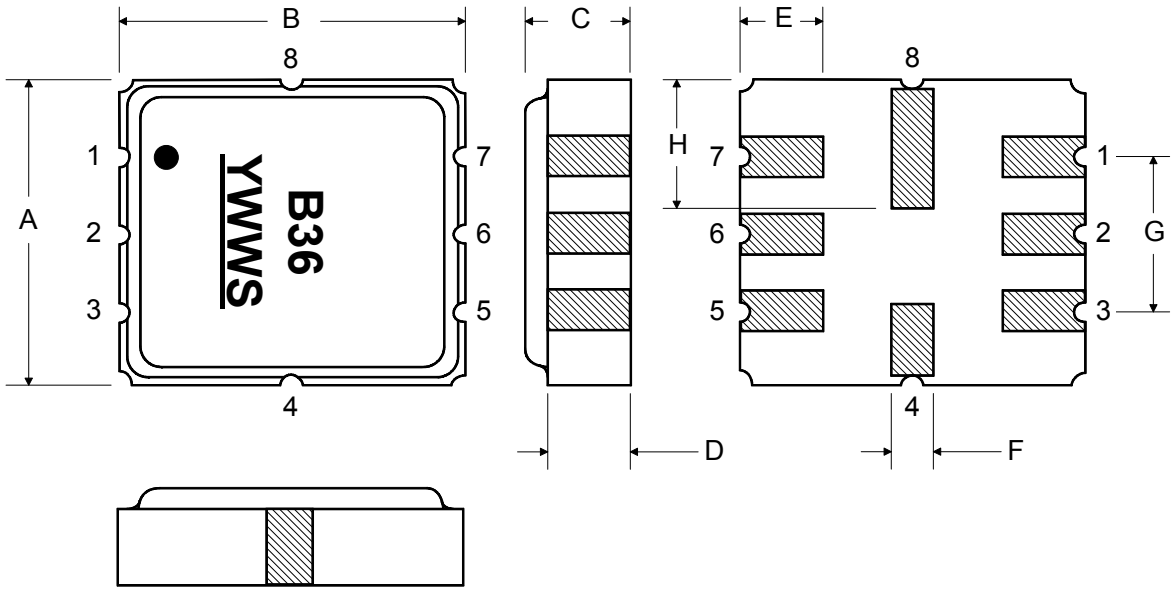
| Case Dimensions | | | | | | |
|---|---|---|---|---|---|---|
| Dimension | mm | | | Inches | | |
| | Min | Nom | Max | Min | Nom | Max |
| A | 3.65 | 3.8 | 3.95 | | 0.15 | |
| B | 3.65 | 3.8 | 3.95 | | 0.15 | |
| C | | | 1.40 | | 0.06 | |
| D | | 1.0 | | | 0.04 | |
| E | | 1.0 | | | 0.04 | |
| F | | 0.6 | | | 0.02 | |
| G | - | 2.54 | - | | 0.100 | |
| H | | 1.5 | | | 0.06 | |

| Electrical Connections | | |
|---|---|---|
| | Connection | Terminals |
| Port 1 | Input | 2 |
| Port 2 | Output | 6 |
| | Ground | All Others |
| Dot Indicates Pin 1 | | |

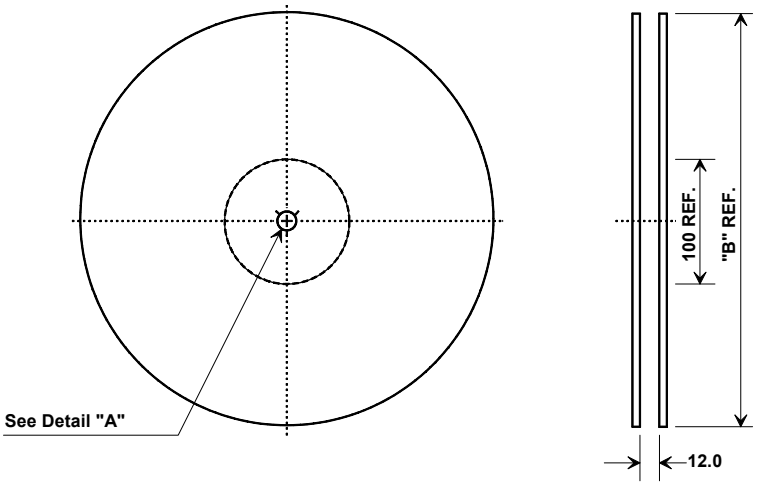
| Materials | |
|---|---|
| Solder Pad Termination | Au plating 30 - 60 µInches (76.2-152 µM) over 80-200 µInches (203-508 µM) Ni. |
| Lid | Fe-Ni-Co Alloy Electroless Nickel Plate (8-11% Phosphorus) 100-200 µInches Thick |
| Body | $Al_2O_3$ Ceramic |
| Pb Free | |

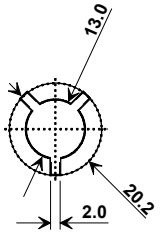
TOP VIEW

BOTTOM VIEW



**Tape and Reel Specifications**

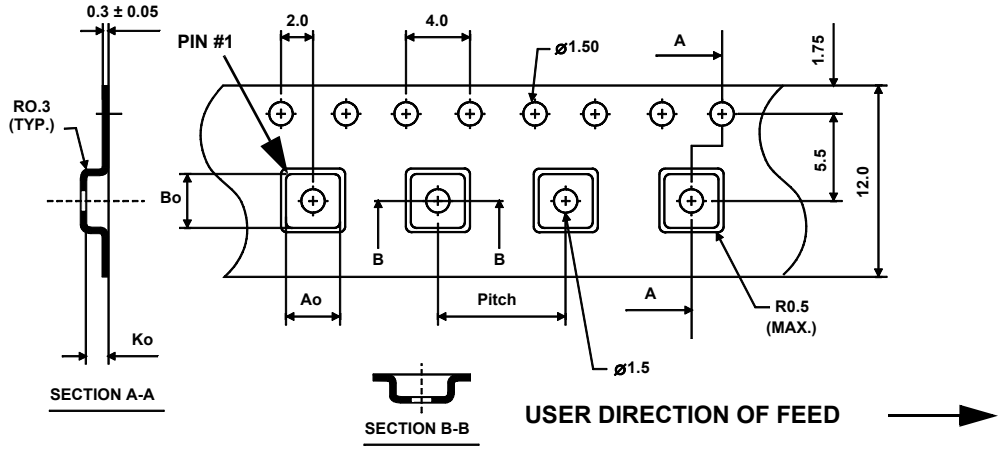



| "B " Nominal Size | | Quantity Per Reel |
|---|---|---|
| Inches | millimeters | |
| 7 | 178 | 500 |
| 13 | 330 | 3000 |

**COMPONENT ORIENTATION and DIMENSIONS**

| Carrier Tape Dimensions | |
|---|---|
| Ao | 4.25 mm |
| Bo | 4.25 mm |
| Ko | 1.30 mm |
| Pitch | 8.0 mm |
| W | 12.0 mm |



## Reflow Profile