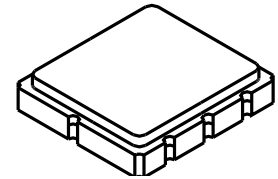


**SF2346D**

**924.375 MHz  
SAW Filter**



**SM3838-8**

- *Designed for Front End GPS Applications*
- *Steep Rejection*
- *3.8 x 3.8 x 1.2 mm Surface-Mount Case*
- *No Matching Circuit Required*

## Absolute Maximum Ratings

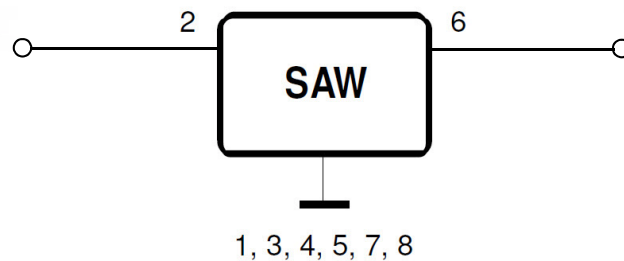
| Rating  | Value           | Units |
|---|-----------------|-------|
| Maximum Input Power                           | +20             | dBm   |
| Maximum DC Voltage On any Non-ground Terminal | 0               | VDC   |
| Storage Temperature Range                     | -40 to +85      | °C    |
| Operating Temperature Range                   | 0 to +40        | °C    |
| Maximum Soldering Profile (5 cycles maximum)  | 265 °C for 10 s |       |

## Electrical Characteristics

| Characteristic                             | Sym   | Notes | Min     | Typ | Max | Units    |
|--|-------|-------|---------|-----|-----|----------|
| Center Frequency                           | $f_c$ |       | 924.375 |     |     | MHz      |
| Insertion Loss (920.925 to 927.825 MHz)    | IL    |       |         | 2.5 | 3   | dB       |
| 1dB Bandwidth ( )                          |       |       | 7       | 10  |     | MHz      |
| Amplitude Ripple, (920.925 to 927.825 MHz) |       |       |         | 0.6 | 1.0 | dB       |
| Attenuation relative to IL                 |       |       |         |     |     | dB       |
| 10 to 914.8 MHz                            |       |       | 7       | 12  |     |          |
| 940 to 1500 MHz                            |       |       | 30      | 35  |     |          |
| VSWR (920.925 to 927.825 MHz)              |       |       | 1.9     | 2.2 |     |          |
| Ambient Temperature                        |       |       |         | 25  |     |          |
| Source impedance                           | $Z_s$ |       |         | 50  |     | $\Omega$ |
| Load impedance                             | $Z_L$ |       |         | 50  |     | $\Omega$ |

|                   |               |
|-------------------|---------------|
| Case Style        | SMD 3.8 x 3.8 |
| Lid Symbolization | B30           |

| Connection | Terminal   |
|------------|------------|
| Input      | 2          |
| Output     | 6          |
| Ground     | All others |



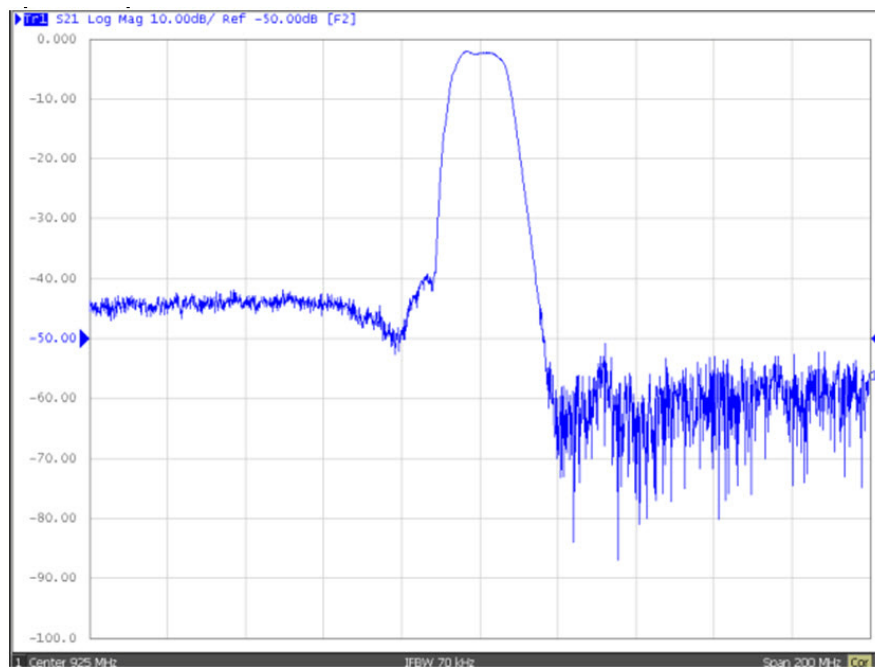
**CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

## NOTES:

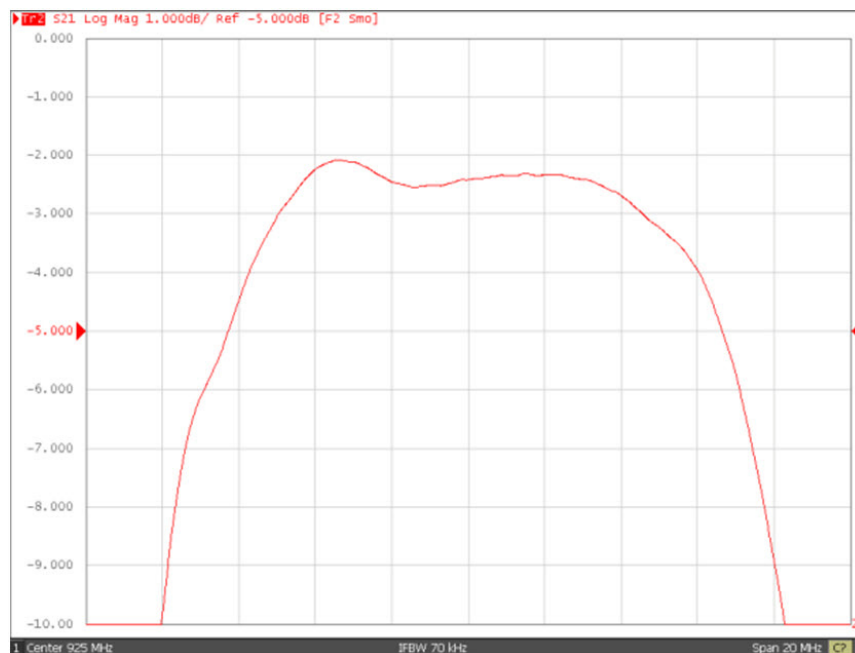
1. US and international patents may apply.
2. Murata, stylized Murata logo, and Murata N.A., Inc. are registered trademarks of Murata Manufacturing Co., Ltd.

# Frequency Characteristics

## S21 Response: Span - 200 MHz

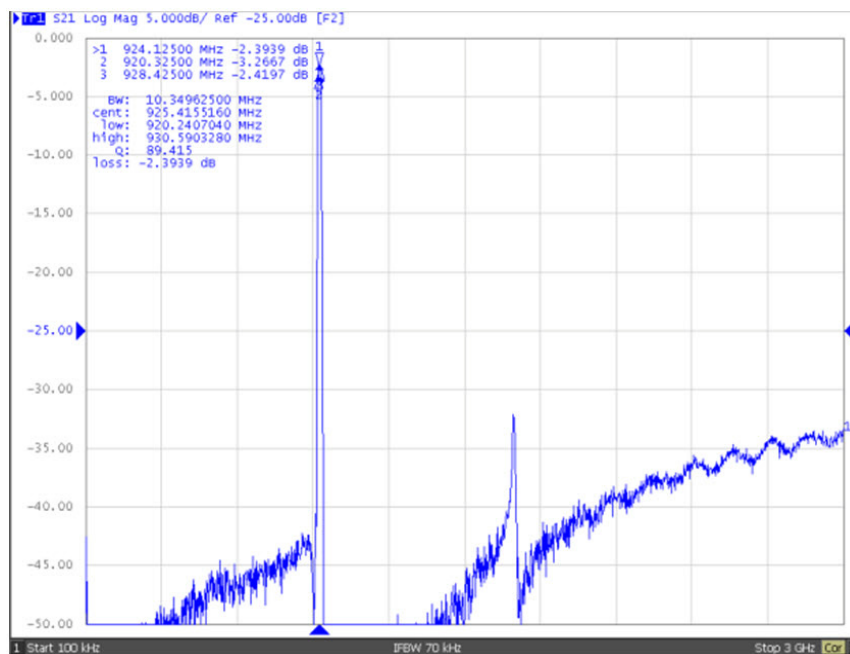


## S21 Response: Span - 20 MHz

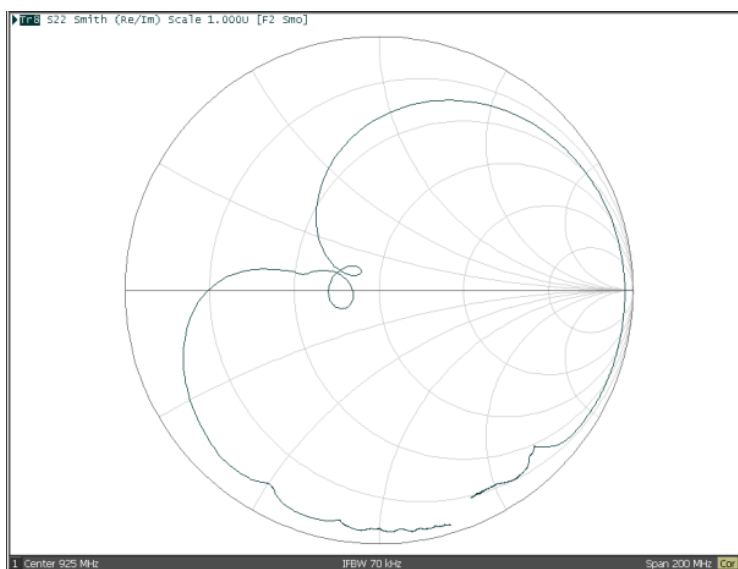
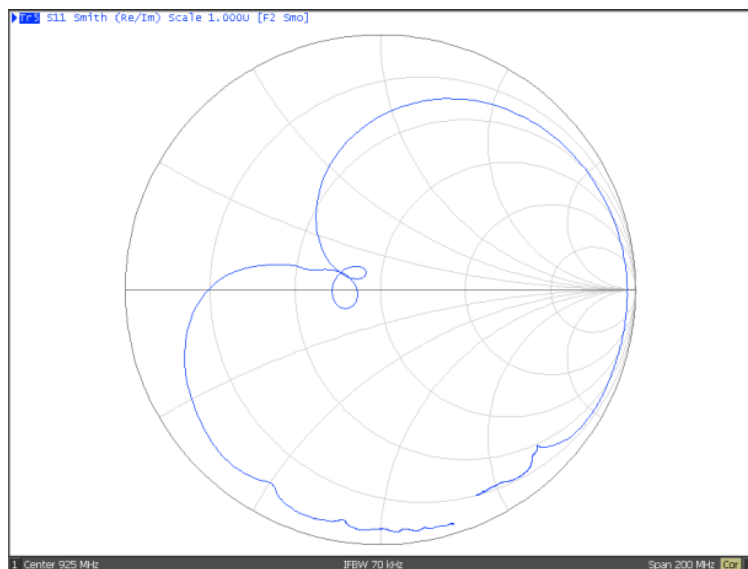


# Frequency Characteristics

S21 Response: Span - 100 KHz - 3 GHz

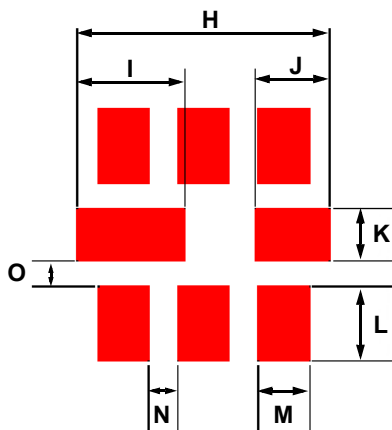
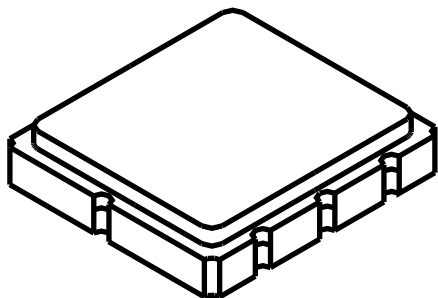


## S11/S22 Response



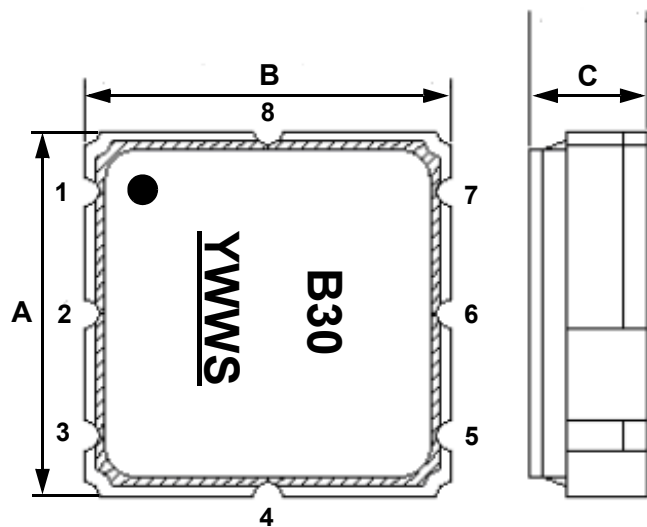
# SM3838-8 Case

## 8-Terminal Ceramic Surface-Mount Case 3.8 X 3.8 mm Nominal Footprint

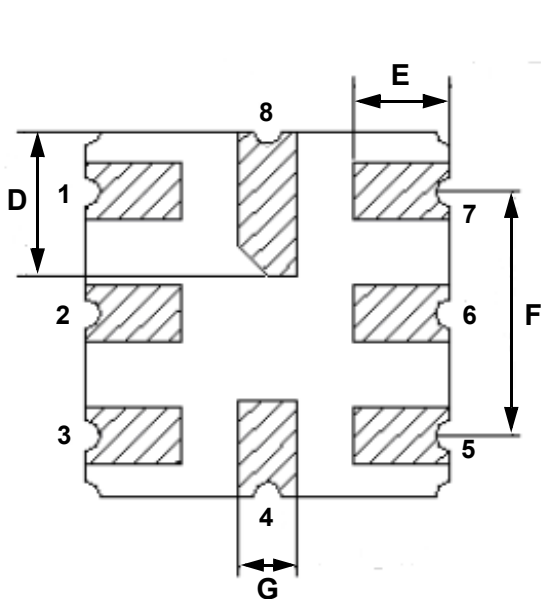


PCB Footprint

TOP VIEW



BOTTOM VIEW



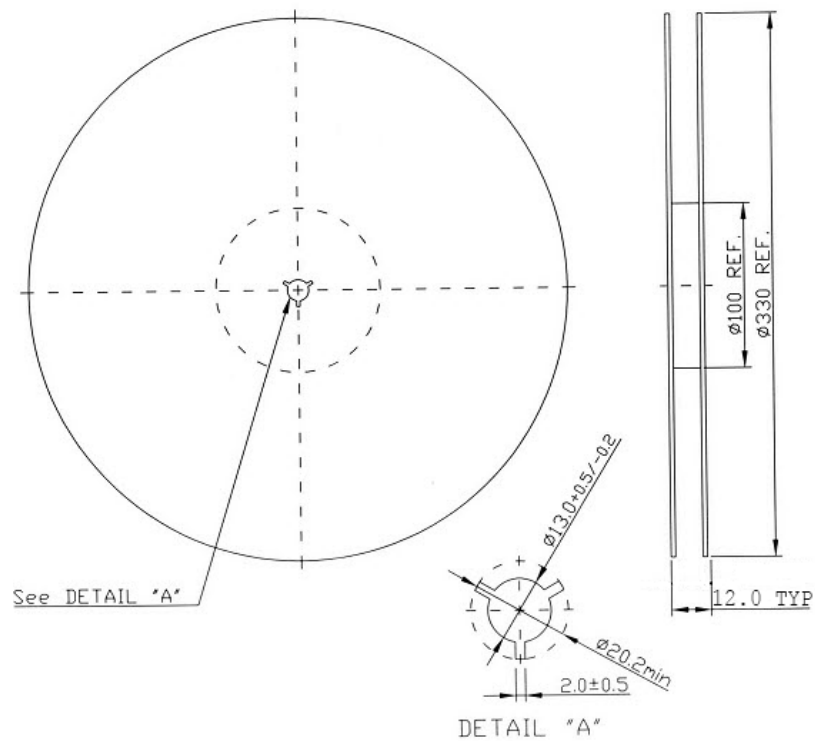
Case and PCB Footprint Dimensions

| Dimension | mm   |      |      | Inches |       |       |
|-----------|------|------|------|--------|-------|-------|
|           | Min  | Nom  | Max  | Min    | Nom   | Max   |
| A         | 3.65 | 3.80 | 3.95 | 0.142  | 0.150 | 0.157 |
| B         | 3.65 | 3.80 | 3.95 | 0.142  | 0.150 | 0.157 |
| C         | -    | -    | 1.40 | -      | -     | 0.047 |
| D         | -    | 1.50 | -    | -      | 0.059 | -     |
| E         | -    | 1.00 | -    | -      | 0.039 | -     |
| F         | -    | 2.54 | -    | -      | 0.100 | -     |
| G         | -    | 0.60 | -    | -      | 0.023 | -     |
| H         | -    | 4.01 | -    | -      | 0.157 | -     |
| I         | -    | 1.70 | -    | -      | 0.066 | -     |
| J         | -    | 1.19 | -    | -      | 0.046 | -     |
| K         | -    | 0.81 | -    | -      | 0.031 | -     |
| L         | -    | 1.19 | -    | -      | 0.046 | -     |
| M         | -    | 0.81 | -    | -      | 0.031 | -     |
| N         | -    | 0.46 | -    | -      | 0.018 | -     |
| O         | -    | 0.41 | -    | -      | 0.016 | -     |

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            |  |

## Reel Dimension



## Tape Dimension

