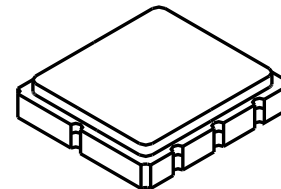


# SF2289C

## 155 MHz SAW Filter



SM5050-8

- Low Loss SAW Filter
- 5.0 x 5.0 mm Surface-mount Case
- Complies with Directive 2002/95/EC (RoHS)
- Moisture Sensitivity Level: 1

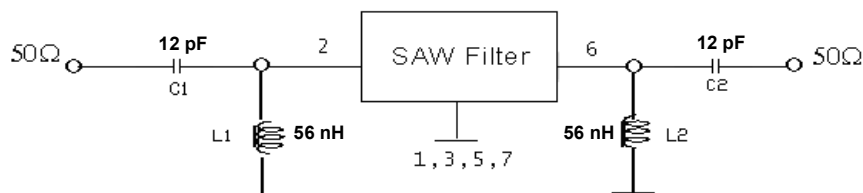
### Absolute Maximum Ratings

| Rating  | Value           | Units |
|---|-----------------|-------|
| Maximum Incident Power in Passband            | 10              | dBm   |
| Maximum DC Voltage on any Non-ground Terminal | 10              | V     |
| Storage Temperature Range in Tape and Reel    | -40 to +85      | °C    |
| Maximum Soldering Profile                     | 265 °C for 10 s |       |

### Electrical Characteristics

| Characteristic                                     | Sym   | Notes | Min                                 | Typ | Max | Units |
|--|-------|-------|-------------------------------------|-----|-----|-------|
| Center Frequency                                   | $f_C$ |       |                                     | 155 |     | MHz   |
| Insertion Loss, $f_C \pm 4$ MHz                    | IL    |       |                                     |     | 6.5 | dB    |
| Rejection Referenced to 0dB:                       |       |       |                                     |     |     | dB    |
| $f_C - 38.8$ to $f_C - 100$ MHz                    |       |       | 50                                  |     |     |       |
| $f_C + 38.8$ to $f_C + 100$ MHz                    |       |       | 42                                  |     |     |       |
| Operating Temperature Range                        | $T_A$ |       | -40                                 |     | +50 | °C    |
| Input Impedance at $f_C$                           |       |       | 263 $\Omega$    8.7 pF              |     |     |       |
| Output Impedance at $f_C$                          |       |       | 685 $\Omega$    9.1 pF              |     |     |       |
| Case Style   |       |       | SM5050-8 5 x 5 mm Nominal Footprint |     |     |       |
| Lid Symbolization (Y = year, WW = week, S = shift) |       |       | A36, YWWS                           |     |     |       |

### 50 ohm Matching Network

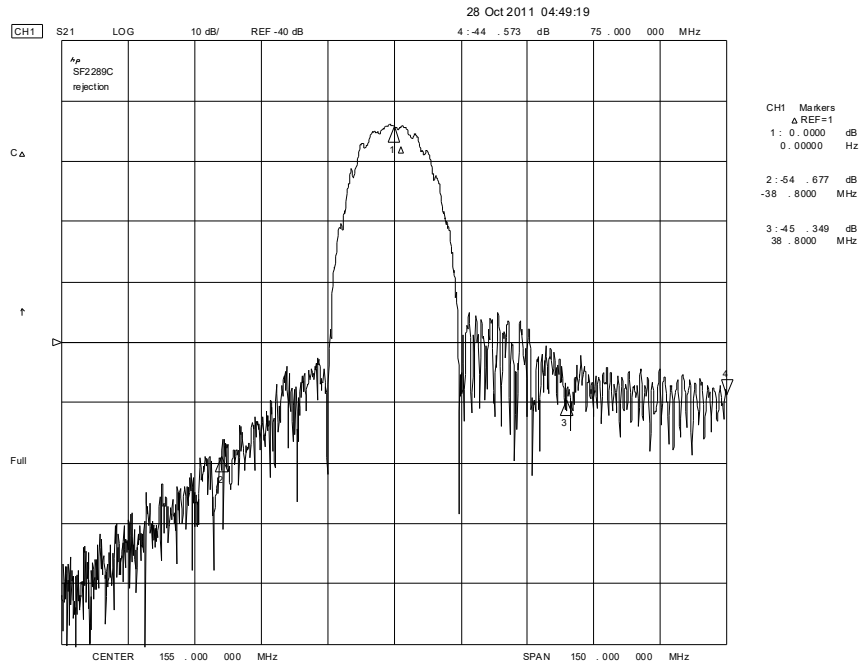


**CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

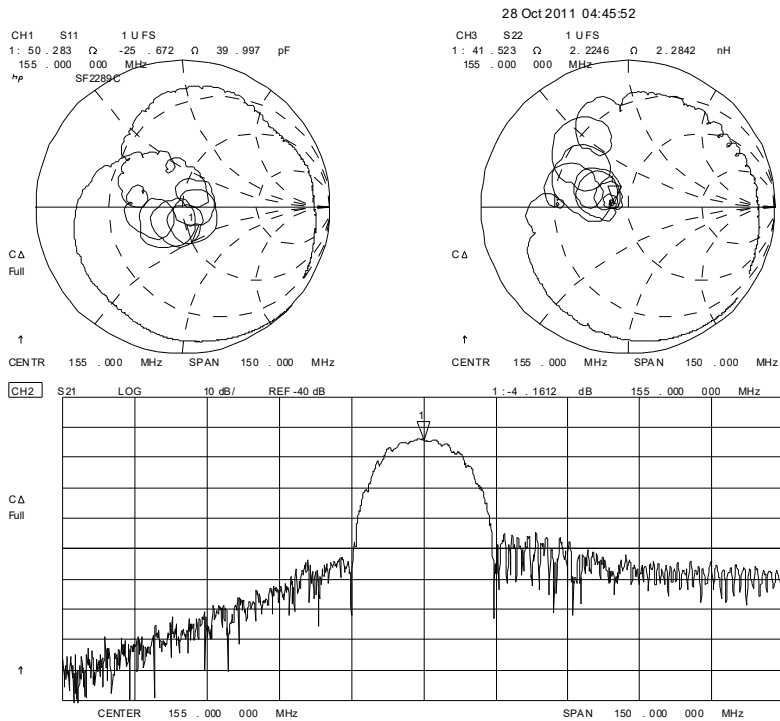
#### NOTES:

1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

# Filter Broadband Plot



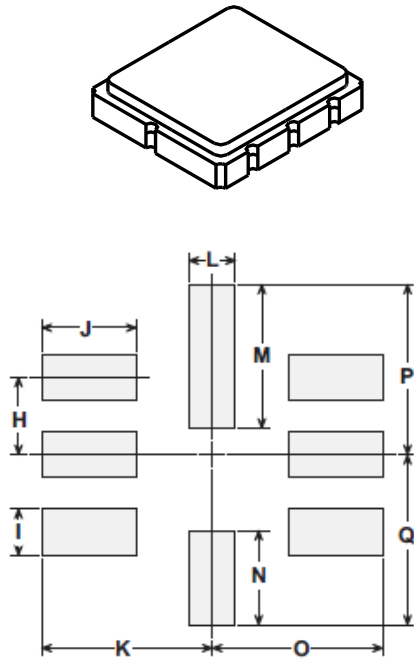
# Filter Impedance and Passband Plot



# SM5050-8 Surface-Mount 8-Terminal Ceramic Case 5.0 X 5.0 mm Nominal Footprint

## Case Dimensions

| Dimension | mm   |      |      | Inches |       |       |
|-----------|------|------|------|--------|-------|-------|
|           | Min  | Nom  | Max  | Min    | Nom   | Max   |
| A         | 4.80 | 5.00 | 5.20 | 0.189  | 0.197 | 0.205 |
| B         | 4.80 | 5.00 | 5.20 | 0.189  | 0.197 | 0.205 |
| C         | 1.30 | 1.50 | 1.70 | 0.050  | 0.060 | 0.067 |
| D         | 1.98 | 2.08 | 2.18 | 0.078  | 0.082 | 0.086 |
| E         | 1.07 | 1.17 | 1.27 | 0.042  | 0.046 | 0.050 |
| F         | 0.50 | 0.64 | 0.70 | 0.020  | 0.025 | 0.028 |
| G         | 2.39 | 2.54 | 2.69 | 0.094  | 0.100 | 0.106 |
| H         |      | 1.27 |      |        | 0.050 |       |
| I         |      | 0.76 |      |        | 0.030 |       |
| J         |      | 1.55 |      |        | 0.061 |       |
| K         |      | 2.79 |      |        | 0.110 |       |
| L         |      | 0.76 |      |        | 0.030 |       |
| M         |      | 2.36 |      |        | 0.093 |       |
| N         |      | 1.55 |      |        | 0.061 |       |
| O         |      | 2.79 |      |        | 0.110 |       |
| P         |      | 2.79 |      |        | 0.110 |       |
| Q         |      | 2.79 |      |        | 0.110 |       |



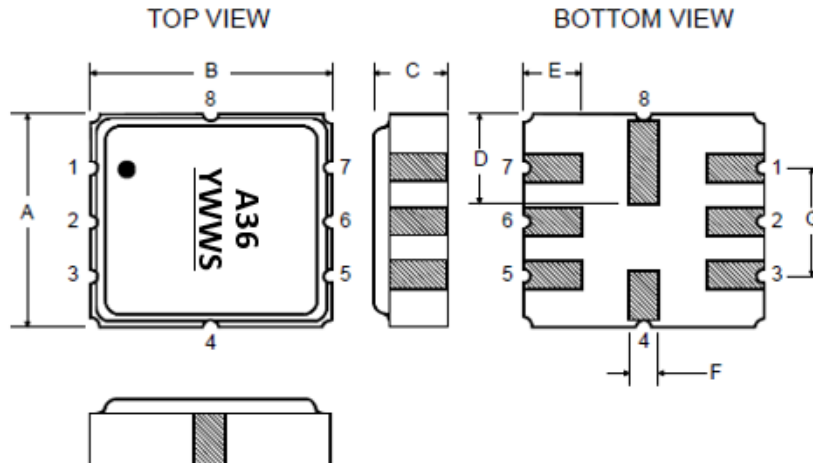
PCB Footprint

## Case Materials

| Materials          |  |
|--------------------|--|
| Solder Pad Plating | 0.3 to 1.0 $\mu\text{m}$ Gold over 1.27 to 8.89 $\mu\text{m}$ Nickel |
| Lid Plating        | 2.0 to 3.0 $\mu\text{m}$ Nickel                                      |
| Body               | $\text{Al}_2\text{O}_3$ Ceramic                                      |

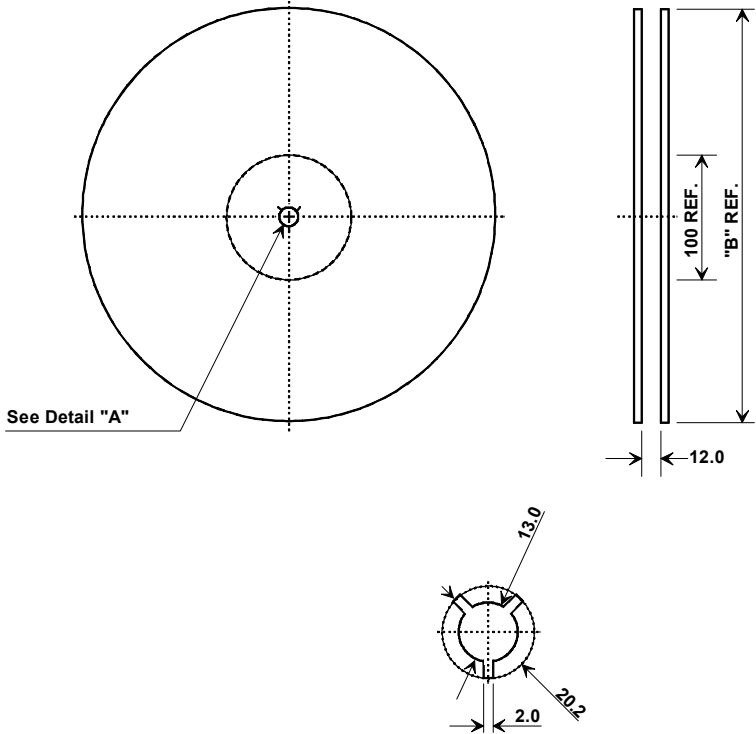
## Electrical Connections

| Connection          |        | Terminals  |
|---------------------|--------|------------|
| Port 1              | Input  | 2          |
| Port 2              | Output | 6          |
|                     | Ground | All others |
| Dot indicates Pin 1 |        |            |



## Tape and Reel Specifications

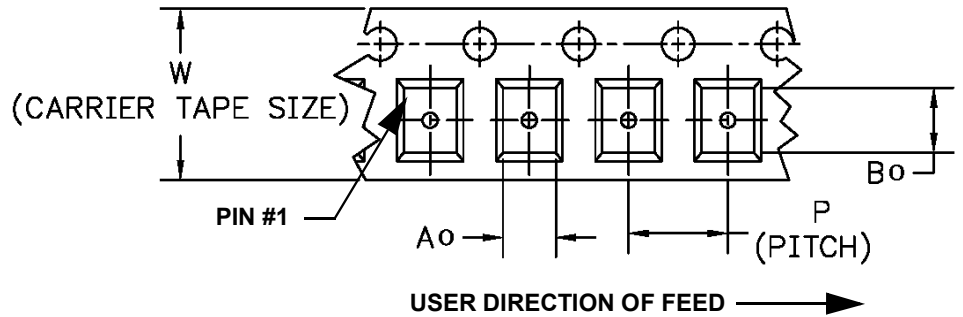
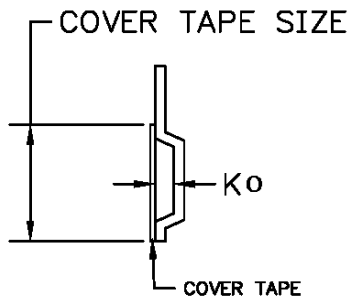
Tape and Reel Standard per ANSI/EIA-481



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

### COMPONENT ORIENTATION and DIMENSIONS

| Carrier Tape Dimensions |         |
|-------------------------|---------|
| Ao                      | 5.3 mm  |
| Bo                      | 5.3 mm  |
| Ko                      | 2.0 mm  |
| Pitch                   | 8.0 mm  |
| W                       | 12.0 mm |



## Recommended Reflow Profile

1. Preheating shall be fixed at 150~180°C for 60~90 seconds.
2. Ascending time to preheating temperature 150°C shall be 30 seconds min.
3. Heating shall be fixed at 220°C for 50~80 seconds and at 260°C +0/-5°C peak (10 seconds).
4. Time: 5 times maximum.

