



- *Designed for Broadband Receiver IF Applications*
- *Low Insertion Loss*
- *5.0 X 5.0 mm Surface-mount Case*
- *Differential Input and Single-ended Output*
- *Complies with Directive 2002/95/EC (RoHS)*

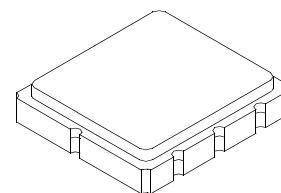


#### Absolute Maximum Ratings

| Rating                                                       | Value           | Units |
|--------------------------------------------------------------|-----------------|-------|
| Maximum Incident Power in Passband                           | +10             | dBm   |
| Maximum DC Voltage on any Non-ground Terminal                | 3               | VDC   |
| Storage Temperature Range in Tape and Reel                   | -40 to +85      | °C    |
| Suitable for Lead-free Soldering - Maximum Soldering Profile | 260 °C for 30 s |       |

**SF2120C**

**149.00 MHz  
SAW Filter**



**SM5050-8**

#### Electrical Characteristics

| Characteristic                                                   | Sym   | Min                                 | Typ              | Max | Units             |
|------------------------------------------------------------------|-------|-------------------------------------|------------------|-----|-------------------|
| Nominal Center Frequency                                         | $f_c$ |                                     | 149.00           |     | MHz               |
| Insertion Loss                                                   |       |                                     | 2.0              | 2.5 | dB                |
| 2 dB Bandwidth                                                   |       | 148 to 150                          | 147.65 to 150.35 |     | MHz               |
| Amplitude Ripple, 148 to 150 MHz, -27.5 to 72.5 °C               |       |                                     | 1.5              | 1.8 | dB <sub>p-p</sub> |
| Amplitude Ripple, 148 to 150 MHz, -40 to -27.5 °C, 72.5 to 85 °C |       |                                     | 2.0              | 2.2 | dB <sub>p-p</sub> |
| Rejection, $f_c$ -2.5 MHz                                        |       | 15                                  | 54               |     | dB                |
| Rejection, $f_c$ +2.5 MHz                                        |       | 15                                  | 30               |     | dB                |
| Center Frequency Temperature Coefficient                         |       |                                     | -30              |     | ppm/K             |
| Operating Temperature                                            |       | -40                                 |                  | 85  | °C                |
| Case Style                                                       |       | SM5050-8 5 x 5 mm Nominal Footprint |                  |     |                   |
| Lid Symbolization (Y=year, WW=week, S=shift)                     |       | RFM 635 YWWS                        |                  |     |                   |

#### Electrical Connections

| Connection             |                    | Terminals        |
|------------------------|--------------------|------------------|
| Port 1                 | Differential Input | 1, 2             |
| Port 2                 | Output             | 5                |
|                        | Ground             | All others       |
| Single-ended Operation |                    | Return is ground |
| Differential Operation |                    | Return is hot    |
| Dot indicates Pin 1    |                    |                  |

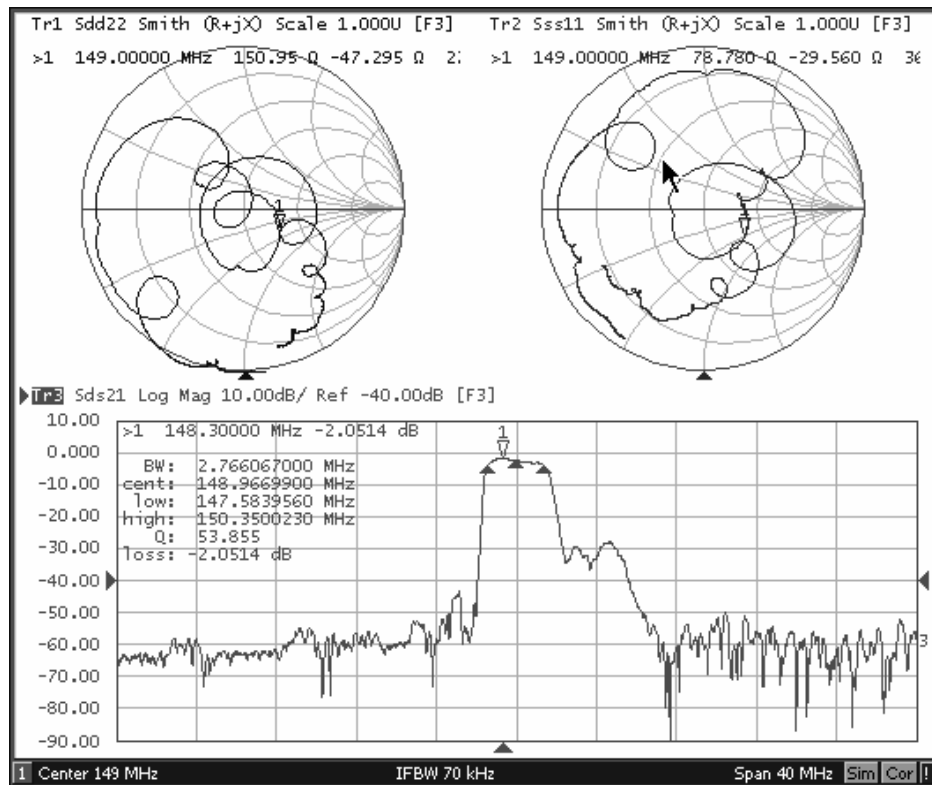


**CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

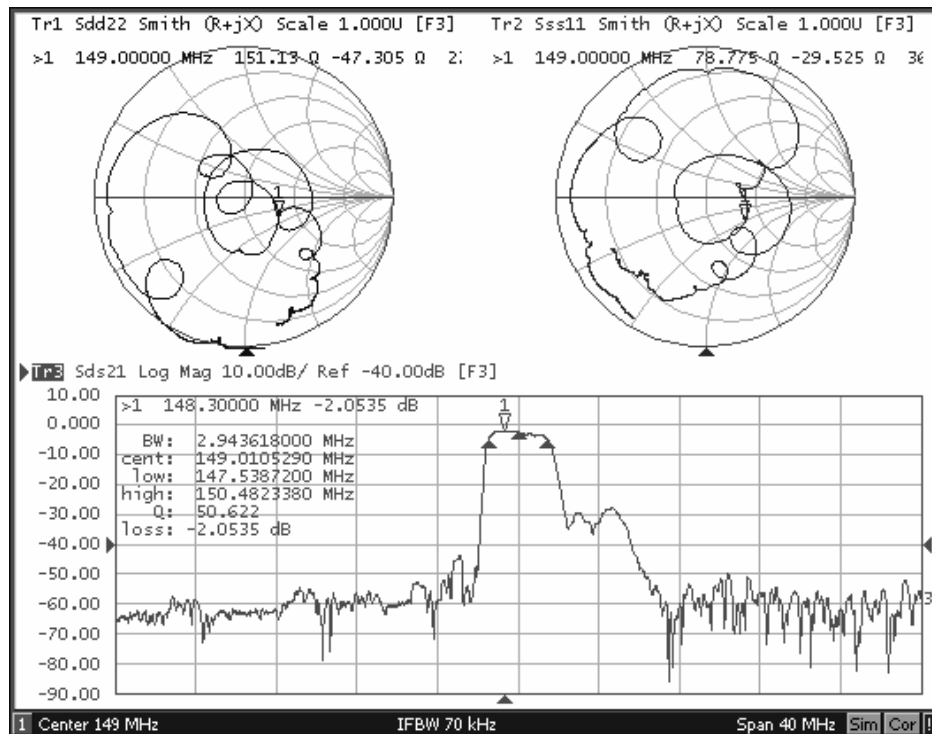
#### Notes:

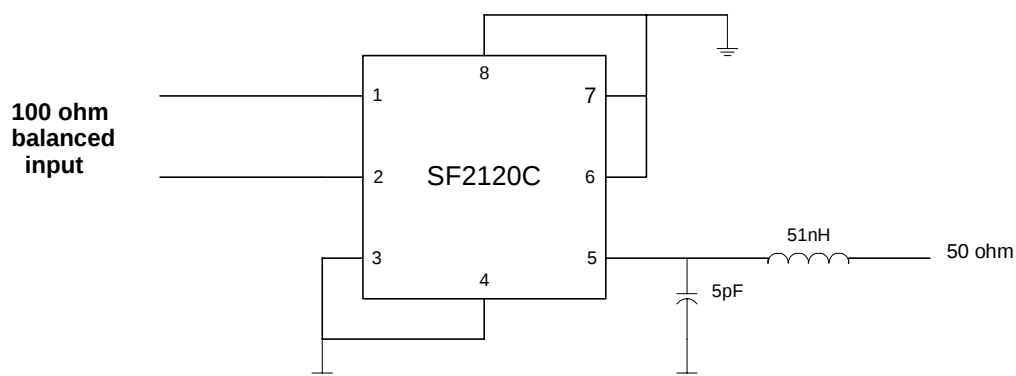
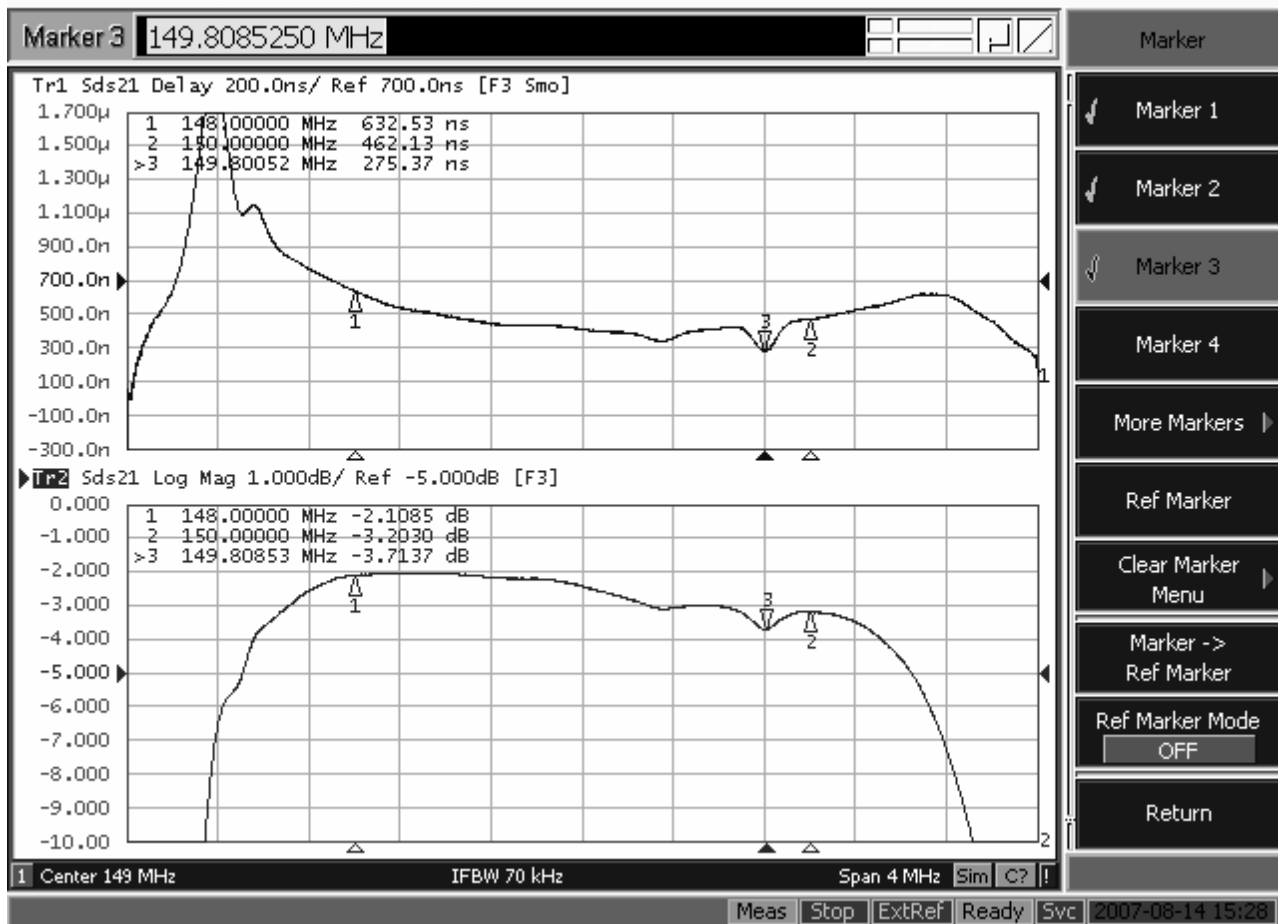
1. Unless noted otherwise, all specifications apply over the operating temperature range with filter soldered to the specified demonstration board with impedance matching to 50  $\Omega$  and measured with 50  $\Omega$  network analyzer.
2. Rejection is measured as attenuation below the minimum IL point 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. Tape and Reel Standard ANSI / EIA 481.
5. US and international patents may apply.
6. RFM, stylized RFM logo, and RF Monolithics, Inc. are registered trademarks of RF Monolithics, Inc.
7. The center frequency will move with ambient temperature changes.

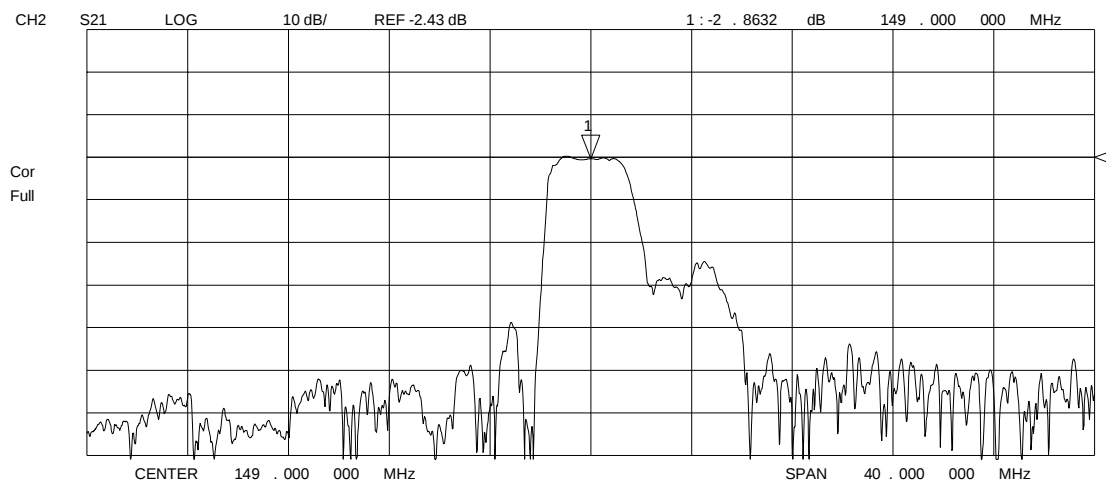
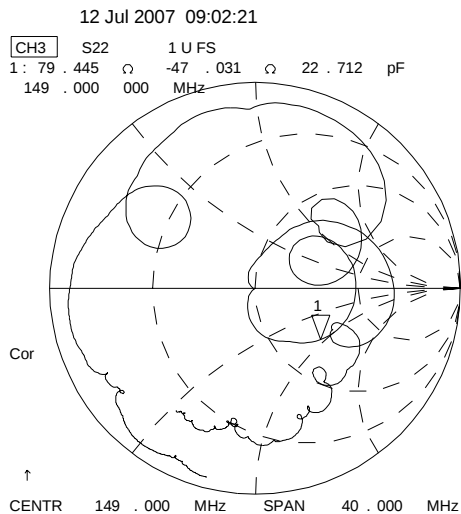
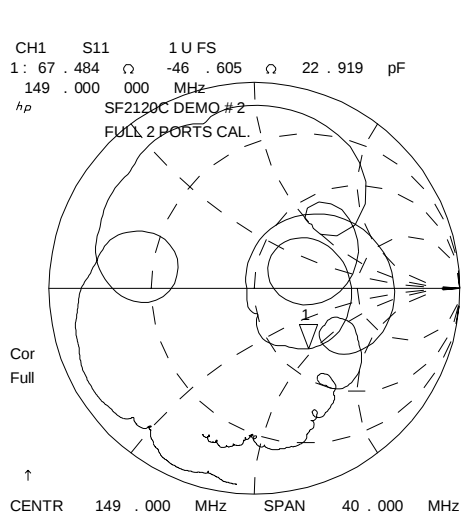
## 2 dB BW

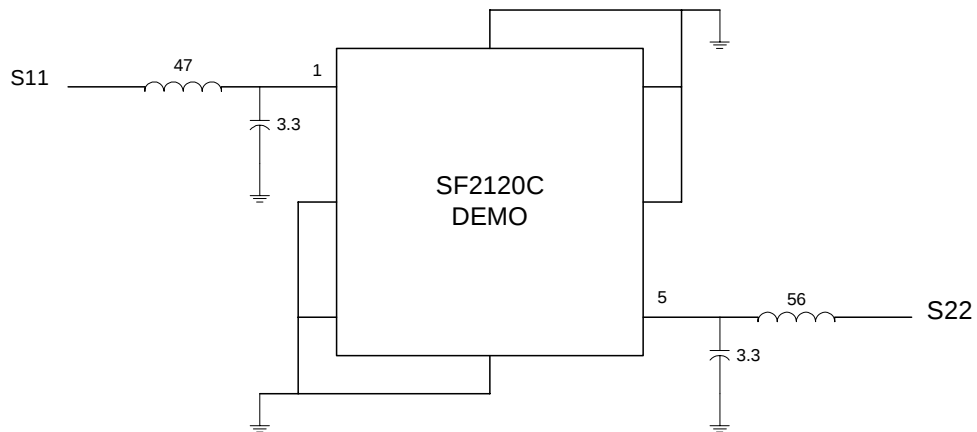
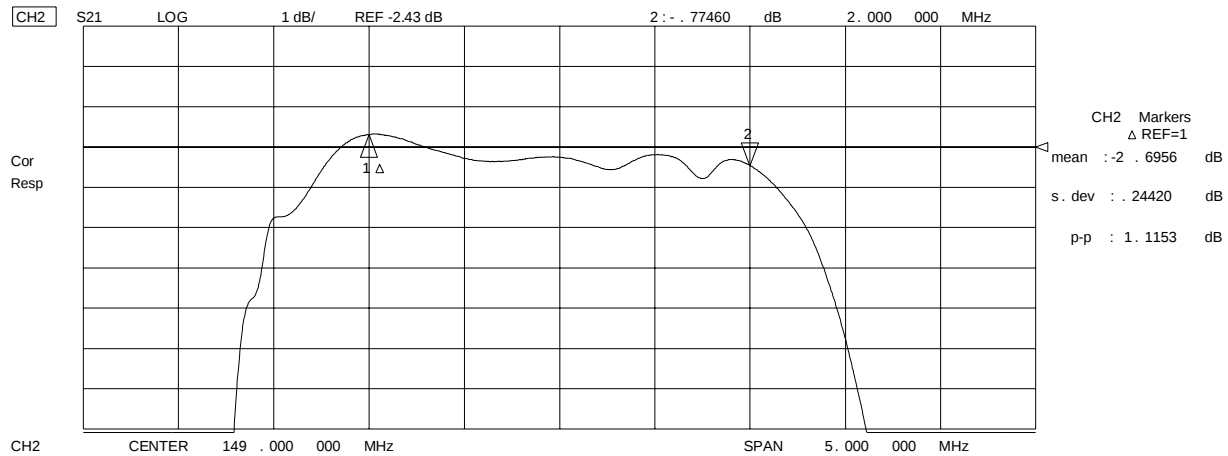
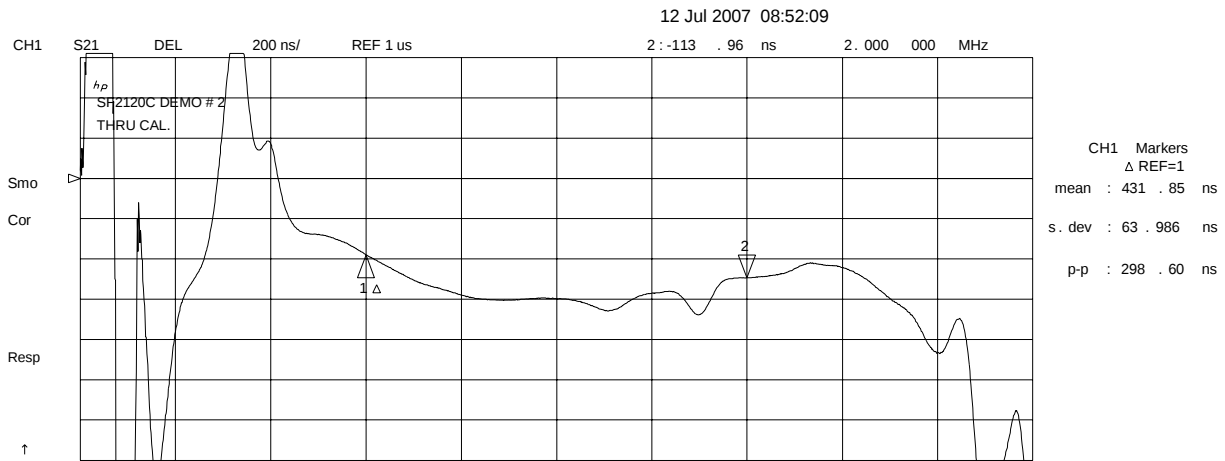


## 3 dB BW









401-1624-001  
501-0782-470  
501-0782-560  
501-0621-033

0805, 47NH  
0805, 56NH  
0603, 3.3PF

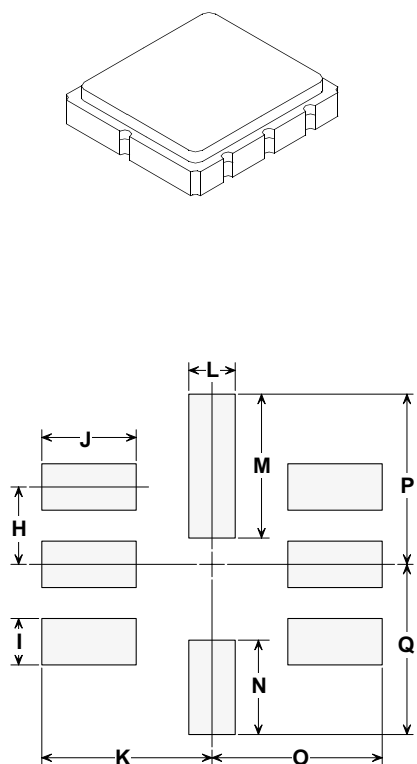
L1  
L2  
C1, C2

# 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 |       |

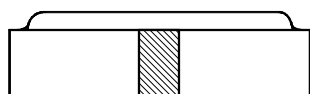
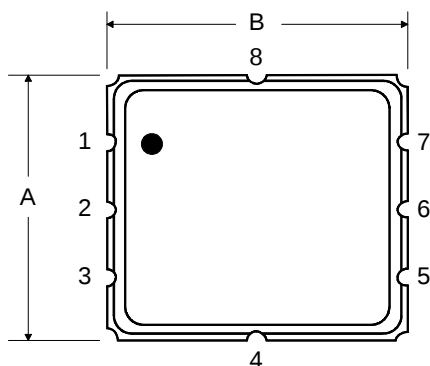


PCB Footprint

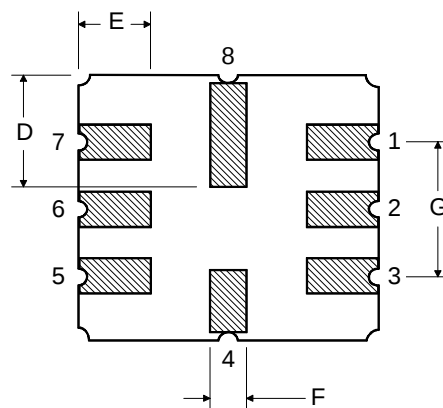
### Case Materials

| 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                                      |
|                    | Pb Free                                                              |

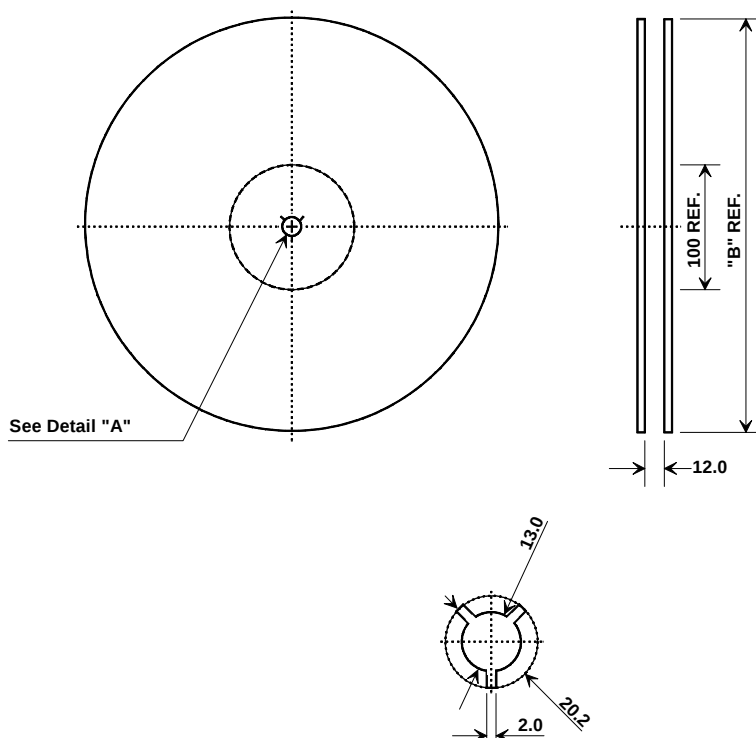
TOP VIEW



BOTTOM VIEW



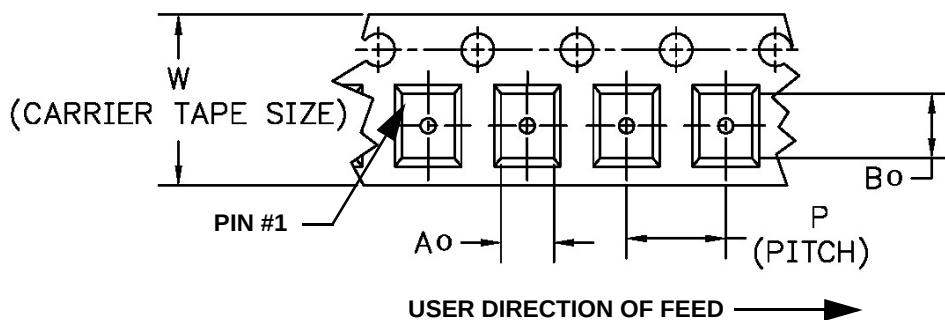
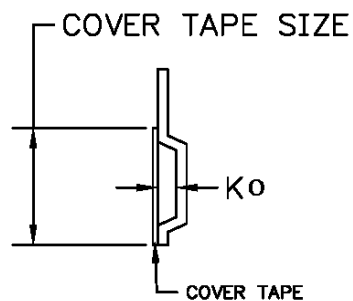
## Tape and Reel Specifications



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

### COMPONENT ORIENTATION and DIMENSIONS

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



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- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
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