

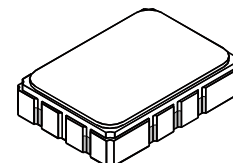
- SAW Filter, 895 MHz, 15 MHz BW
- 7.0 X 5.0 mm 10 pin Surface-Mount Case
- Complies with Directive 2002/95/EC (RoHS)
- Moisture Sensitivity Level: 1

Absolute Maximum Ratings

| Rating | Value | Units |
|--|------------|-------|
| Maximum Incident Power in Passband | +20 | dBm |
| Maximum DC Voltage Between any Two Terminals | 0 | VDC |
| Operating Temperature Range | -20 to +70 | °C |

SF2145B

**895 MHz
SAW Filter**



SMP-03

Electrical Characteristics

| Characteristic | Sym | Notes | Min | Typ | Max | Units |
|--|-------|-------|-----|-----|-----|-------------------|
| Center Frequency | f_c | | | 895 | | MHz |
| Source Impedance, single ended | | | | 50 | | Ω |
| Load Impedance, single ended | | | | 50 | | Ω |
| 1 dB Bandwidth | | | | 18 | | MHz |
| Insertion Loss, 894 to 895.5 MHz | IL | | | 8.5 | 9.0 | dB |
| Insertion Loss Variation: Any point within 894 to 895.5 MHz measured at a constant temperature with the RF input level varying from +10 to +20 dBm | | | | | 0.3 | Δ dB |
| Amplitude Ripple, 894 to 895.5 MHz | | | | .35 | .75 | dB |
| Average Group Delay, 894 to 895.5 MHz | | | 804 | 814 | 824 | ns |
| Group Delay Variation, 894.0 to 895.5 MHz | | | | 10 | 25 | ns _{p-p} |
| Input / Output Return Loss at f_c | | | 10 | 15 | | dB |
| Temperature Coefficient | | | | -18 | | ppm/K |

| | |
|---|---------------------------------------|
| Case Style | SMP-03 7.0 x 5.0 mm Nominal Footprint |
| Lid Symbolization (YY=year, WW=week, S=Shift, ## = Sequence Code) | RFM, SF2145B, YYWWS## |

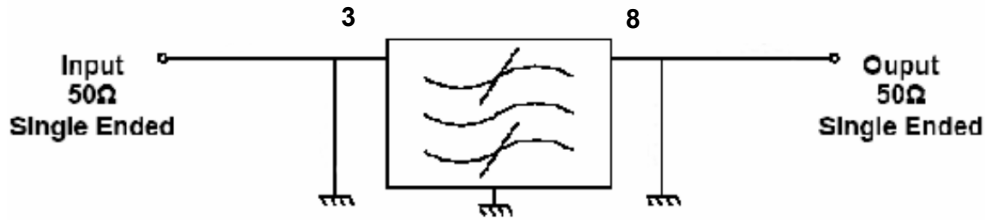
 **CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

NOTES:

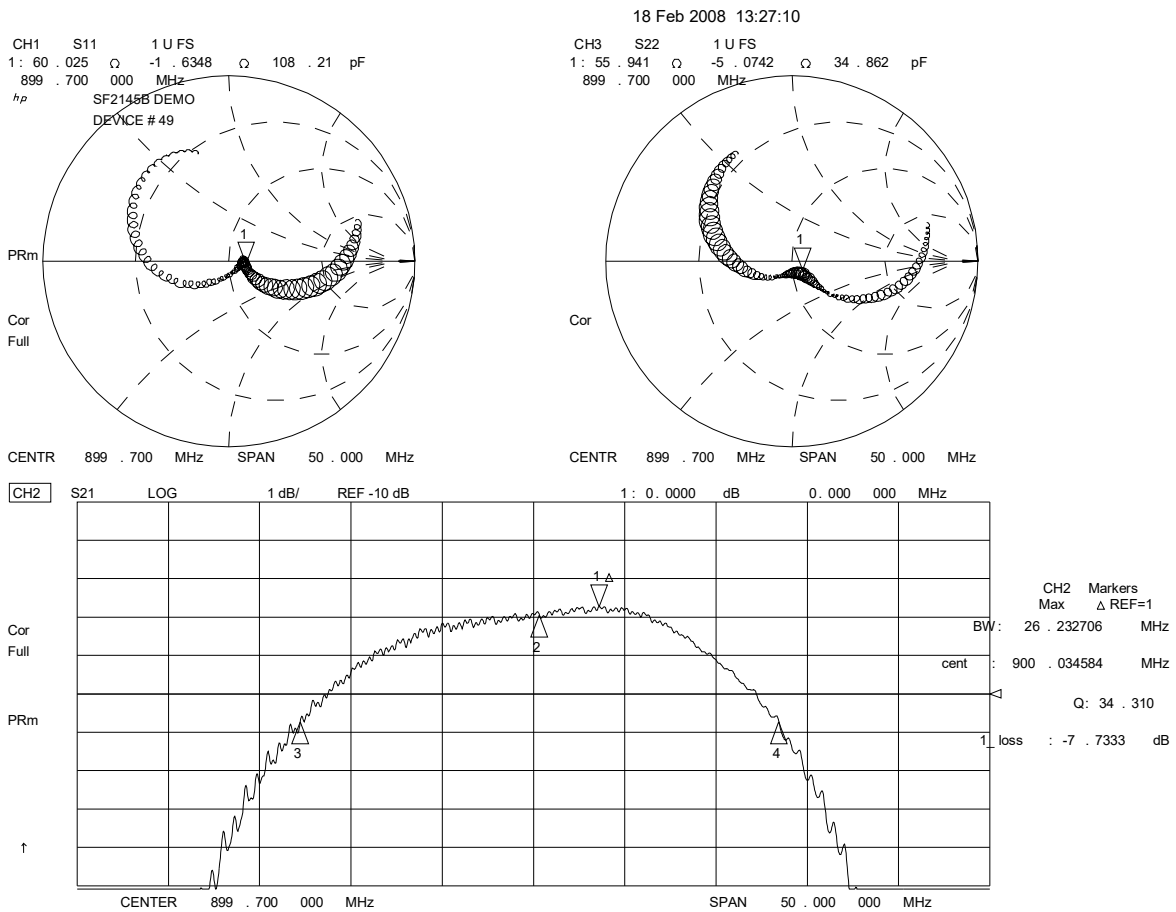
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

Testing Environment

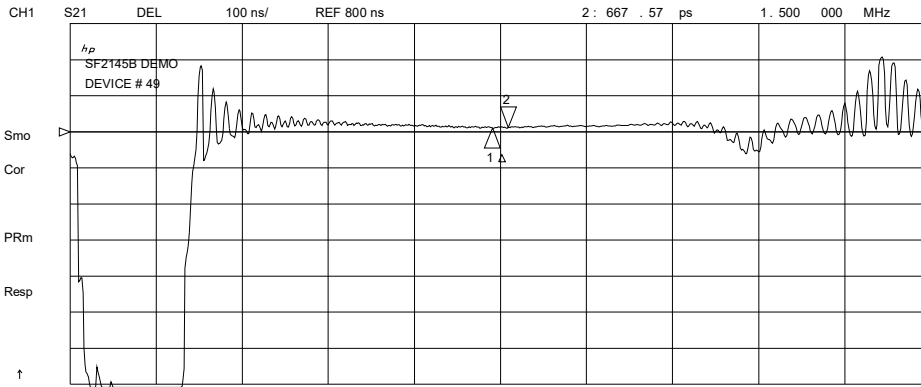
50 Ω / 50 Ω CONFIGURATION



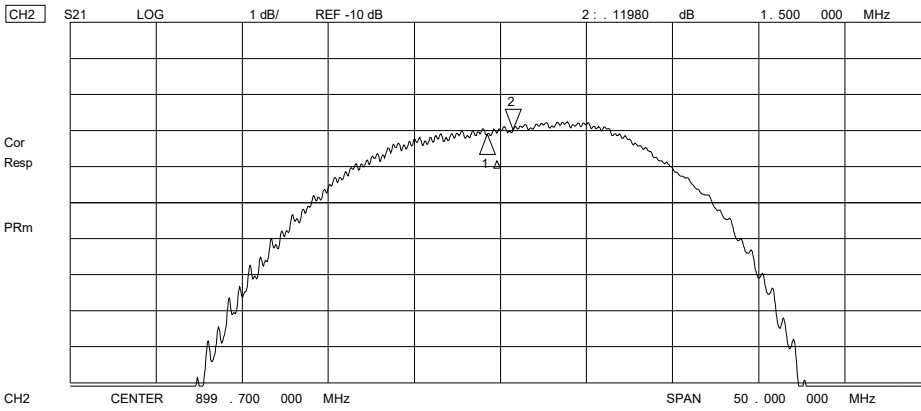
Note: Unmatched Filter to 50Ω Input / Output.



18 Feb 2008 13:26:55



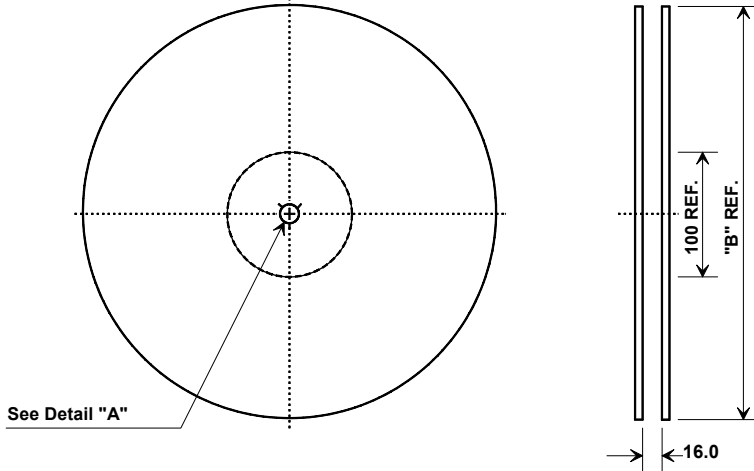
CH1 Markers
Δ REF=1
mean : 812 . 88 ns
s. dev : 1. 2799 ns
p-p : 4. 4631 ns



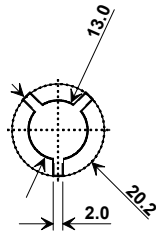
CH2 Markers
Δ REF=1
mean : -8 . 0196 dB
s. dev : . 06000 dB
p-p : . 24780 dB

Tape and Reel Specifications

Tape and Reel Standard per ANSI/EIA-481

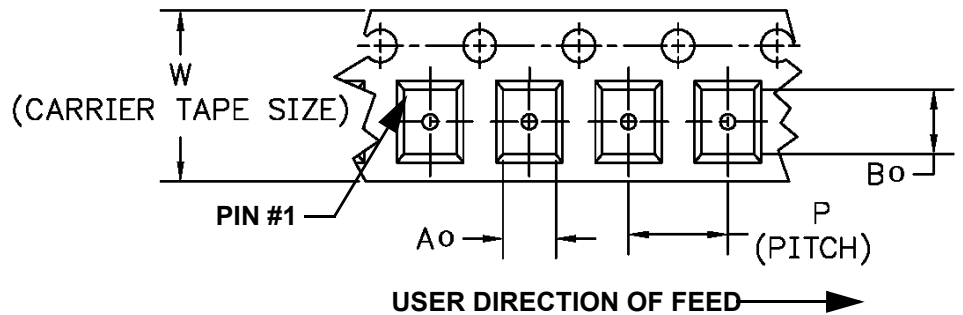
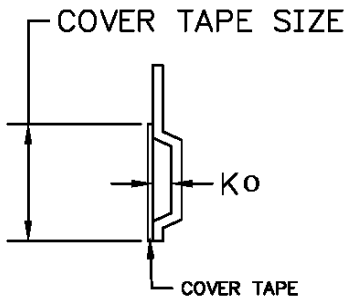


| "B" Nominal Size | | Quantity Per Reel |
|------------------|-------------|-------------------|
| Inches | millimeters | |
| 7 | 178 | 500 |
| 13 | 330 | 2000 |



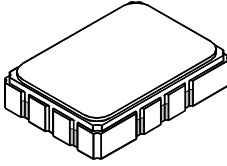
COMPONENT ORIENTATION and DIMENSIONS

| Carrier Tape Dimensions | |
|-------------------------|---------|
| Ao | 5.5 mm |
| Bo | 7.5 mm |
| Ko | 2.0 mm |
| Pitch | 8.0 mm |
| W | 16.0 mm |

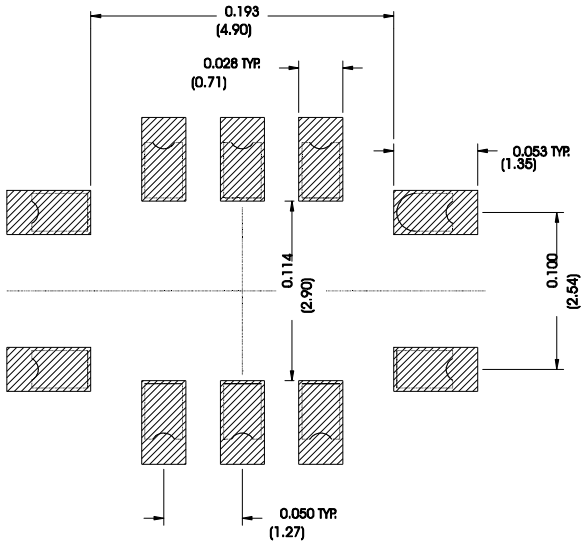


SMP-03 Case

10-Terminal Ceramic Surface-Mount Case 7 x 5 mm Nominal Footprint



Recommended PCB Footprint



Case Dimensions

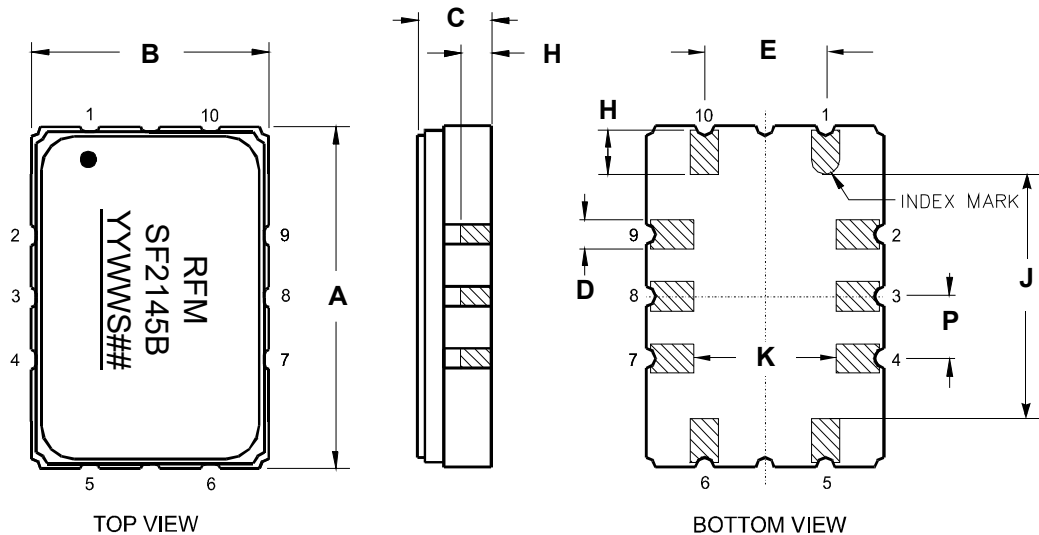
| Dimension | mm | | | Inches | | |
|-----------|------|------|------|--------|-------|-------|
| | Min | Nom | Max | Min | Nom | Max |
| A | 6.80 | 7.00 | 7.20 | 0.268 | 0.276 | 0.283 |
| B | 4.80 | 5.00 | 5.20 | 0.189 | 0.197 | 0.205 |
| C | | 1.65 | 2.00 | | 0.065 | 0.079 |
| D | .47 | 0.60 | .73 | 0.019 | 0.024 | 0.029 |
| E | 2.41 | 2.54 | 2.67 | 0.095 | 0.100 | 0.105 |
| H | 0.87 | 1.0 | 1.13 | 0.034 | 0.039 | 0.044 |
| J | 4.87 | 5.00 | 5.13 | 0.192 | 0.197 | 0.202 |
| K | 2.87 | 3.00 | 3.13 | 0.113 | 0.118 | 0.123 |
| P | 1.14 | 1.27 | 1.40 | 0.045 | 0.050 | 0.055 |

Electrical Connections

| Connection | Terminals |
|-----------------|-------------------------|
| Input (Port 1) | 3 |
| Output (Port 2) | 8 |
| Case Ground | 2, 4, 7, 9 |
| To Be Grounded | 1, 2, 4, 5, 6, 7, 9, 10 |

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 |



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.

