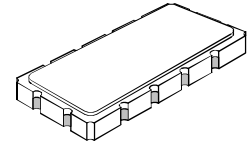


PX1002

**86.85 MHz
SAW Filter**



SM13365-12

- **Designed for TDMA IS-54 Receiver IF Applications**
- **Low Insertion Loss**
- **Excellent Selectivity**
- **Hermetic 13.3 X 6.5 mm Surface-mount Case**
- **Unbalanced Input and Output**
- **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 Between any 2 terminals | 30 | VDC |
| Storage Temperature Range | -40 to +85 | °C |
| Suitable for Lead-free Soldering - Maximum Soldering Profile | 260 °C for 30 s | |

Electrical Characteristics

| Characteristic | Sym | Notes | Min | Typ | Max | Units |
|---|--|-------|----------|----------|-----|------------------------|
| Nominal Center Frequency | f_C | | 86.850 | | | MHz |
| Passband Insertion Loss at f_C 3 dB Passband Amplitude Ripple over $f_C \pm 15$ kHz Group Delay Variation over $f_C \pm 10$ kHz | IL | | | 3 | 4.0 | dB |
| | BW_3 | | ± 12 | ± 25 | | kHz |
| | | | | | 1.0 | dB _{P-P} |
| | | | | | 6.0 | μ s _{P-P} |
| Third-Order Intermod. for -20 dBm tones at $f_C \pm 60$ & 120 kHz | | | | | -95 | dBm |
| Rejection $f_C \pm 60$ kHz $f_C - 880$ kHz to $f_C - 940$ kHz Ultimate | | | 11 | 16 | | dB |
| | | | 65 | | | |
| | | | | 65 | | |
| Operating Temperature Range | T_A | | -20 | | +70 | °C |
| Impedance Matching to 50 Ω unbalanced | External L-C | | | | | |
| Case Style | SM13365-12 13.3 X 6.5 mm Nominal Footprint | | | | | |

Electrical Connections

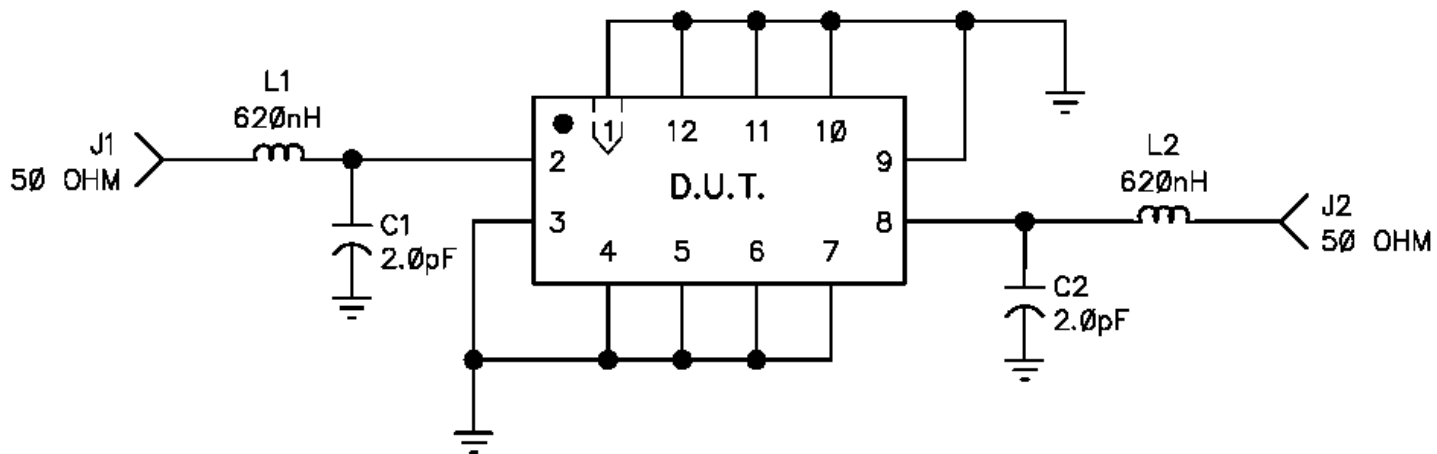
| Connection | Terminals |
|-------------------|------------|
| Port 1 Hot | 2 |
| Port 1 Gnd Return | 3 |
| Port 2 Hot | 8 |
| Port 2 Gnd Return | 9 |
| Case Ground | All Others |

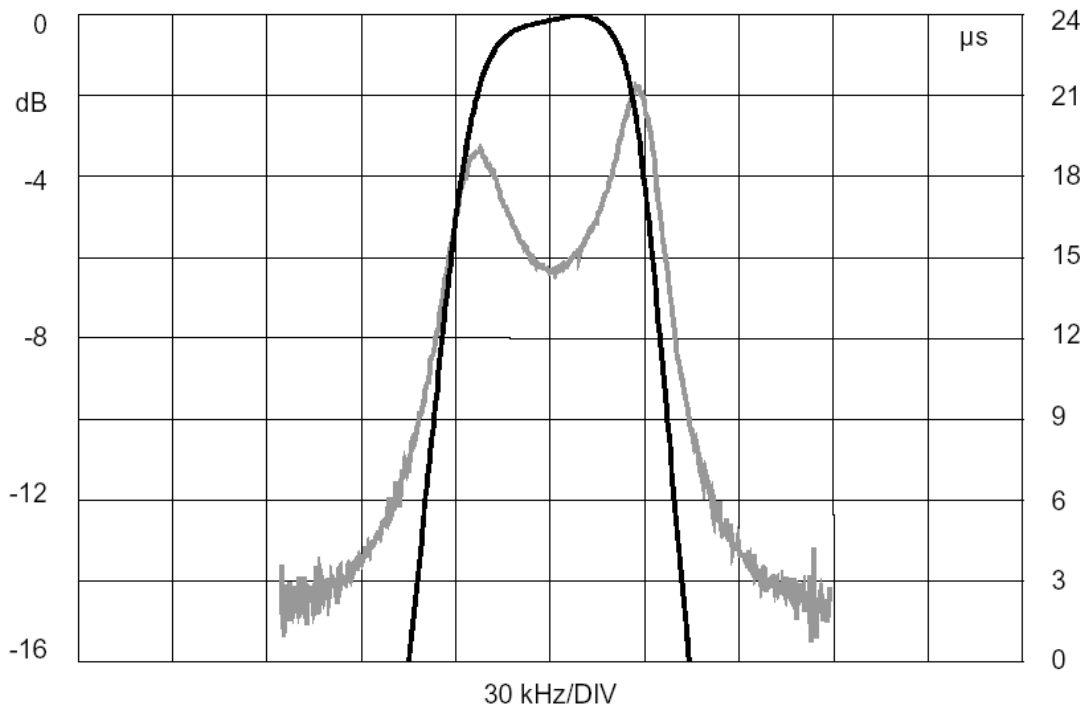
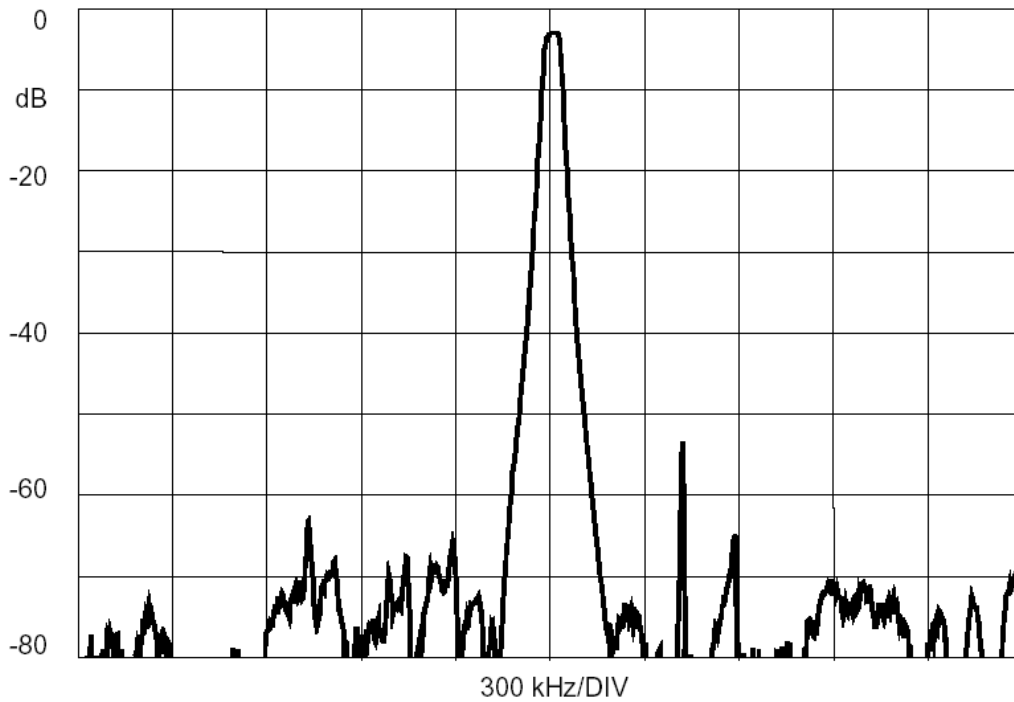
CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

NOTES:

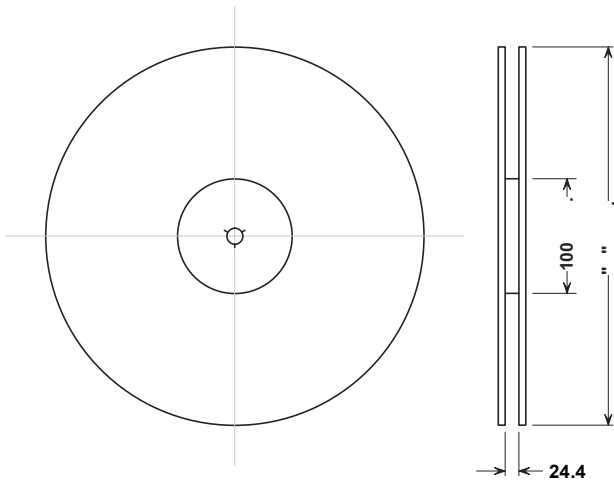
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

SCHEMATIC, PX1002 (DEMO)



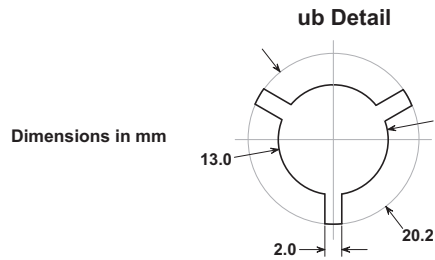


Tape and Reel Specifications



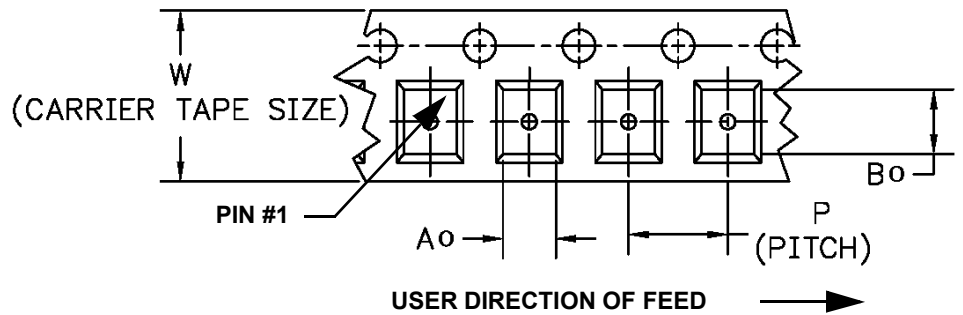
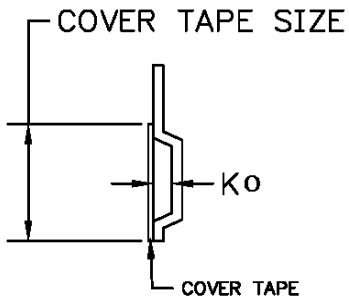
Tape and Reel Standard per ANSI/EIA-481

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



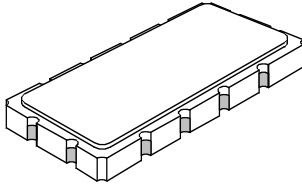
COMPONENT ORIENTATION and DIMENSIONS

| Carrier Tape Dimensions | |
|-------------------------|---------|
| Ao | 7.0 mm |
| Bo | 13.8 mm |
| Ko | 2.0 mm |
| Pitch | 12.0 mm |
| W | 24.0 mm |



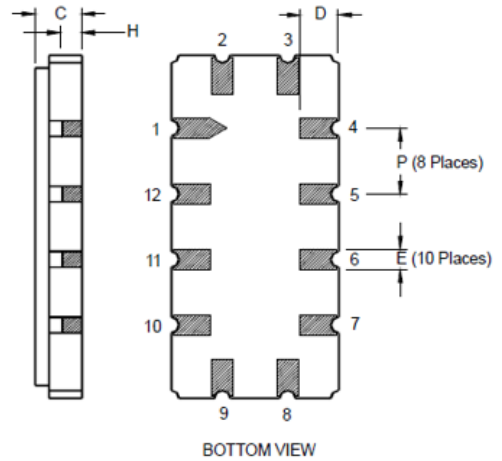
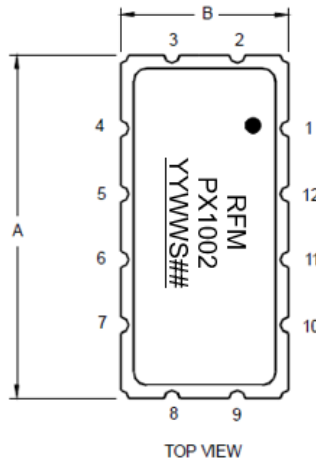
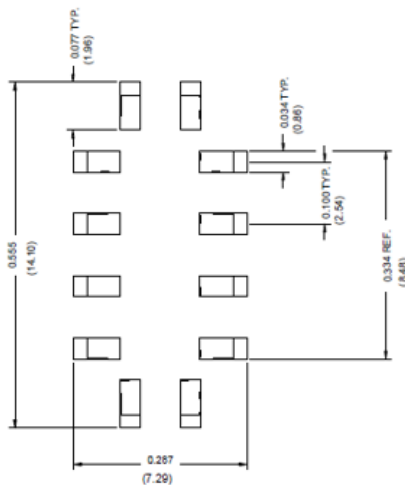
SM13365-12 Case

12-Terminal Ceramic Surface-Mount Case 13.3 x 6.5 mm Nominal Footprint



| Case Dimensions | | | | | | |
|-----------------|-------|-------|-------|--------|-------|-------|
| Dimension | mm | | | Inches | | |
| | Min | Nom | Max | Min | Nom | Max |
| A | 13.08 | 13.31 | 13.60 | 0.515 | 0.524 | 0.535 |
| B | 6.27 | 6.50 | 6.80 | 0.247 | 0.256 | 0.268 |
| C | | 1.91 | 2.00 | | 0.075 | 0.079 |
| D | | 1.50 | | | 0.059 | |
| E | | 0.79 | | | 0.031 | |
| H | | 1.0 | | | 0.039 | |
| P | | 2.54 | | | 0.100 | |

| 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 |



Symbolization:
 YY = Year
 WW = Week
 S = Shift
 ## = Sequence Code

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.

