



Features


- ◇ For IF SAW filter
- ◇ High attenuation
- ◇ Single-ended operation
- ◇ Dual In-line Package
- ◇ RoHS compliant (2002/95/EC), Pb-free

Specifications

| Parameter | Unit | Minimum | Typical | Maximum |
|--|---------|---------|---------|---------|
| Center Frequency | MHz | 233.1 | 233.15 | 233.2 |
| Insertion Loss | dB | - | 14.2 | 15 |
| 3 dB Bandwidth | MHz | 0.47 | 0.53 | - |
| Passband Variation | dB | - | 0.1 | - |
| Group Delay Variation($f_0 \pm 0.2\text{MHz}$) | nsec | - | 160 | 300 |
| Absolute Delay | usec | - | 1.31 | - |
| Ultimate Rejection | dB | 18 | 21 | - |
| Material Temperature coefficient | KHz/°C | Qz | | |
| Substrate Material | - | 0.233 | | |
| Ambient Temperature | °C | 25 | | |
| Operating Temperature Range | °C | -40 | - | +85 |
| Storage Temperature Range | °C | -45 | - | +105 |
| DC Voltage | V | 0 | | |
| Input Power | dBm | - | - | 10 |
| ESD Class | - | 1A | | |
| Package Size | SC04-01 | | | |

Notes:

1. All specifications are based on the test circuit shown;
2. In production, all specifications are measured by Agilent Network analyzer and full 2 port calibration at room temperature;
3. Electrical margin has been built into the design to account for the variations due to temperature drift and manufacturing tolerances;
4. This is the optimum impedance in order to achieve the performance show.

| | | | | |
|--|--|-------------|------------|------|
|  | SIPAT Co., Ltd. (CETC No.26 Research Institute) #14 Nanping Huayuan Road, Chongqing, China, 400060 | Part Number | SP233 | |
| | | Rev. Date | 2009-02-11 | |
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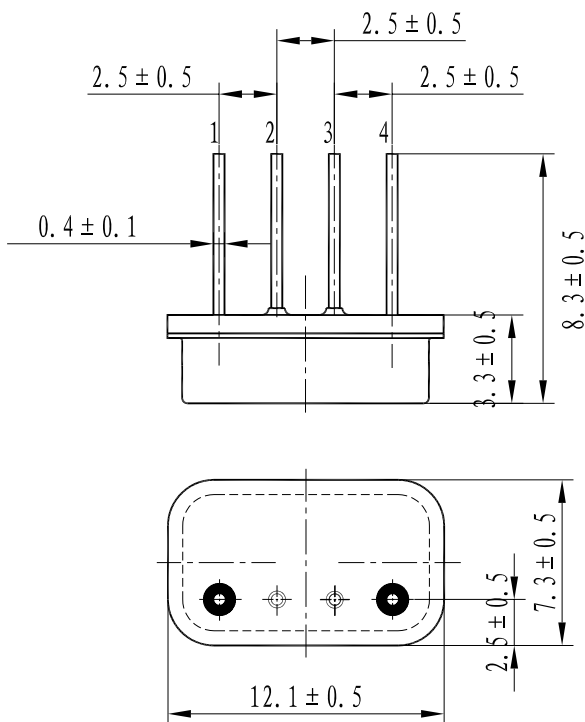
Matching Configuration



L1=27nH L2=39nH
Source/Load Impedance=50 ohm

Notes - Component values may change depending
on board layout.

Package Dimension



Pad Configuration:

Input 1
Output 4
Ground 2, 3

Marking Configuration:

1) SP233: Part Number
2) XXYY: Date(Year/month)

Package: SC04-01

Unit: mm



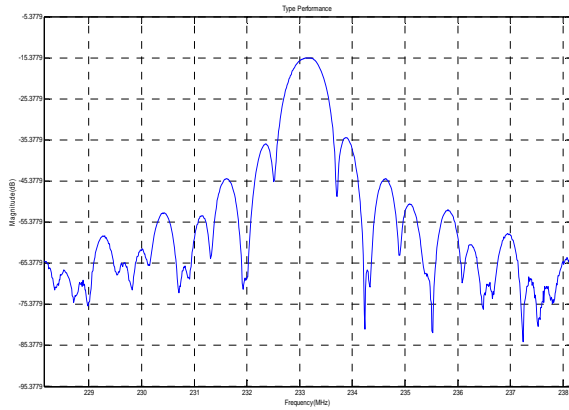
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Typical Performance

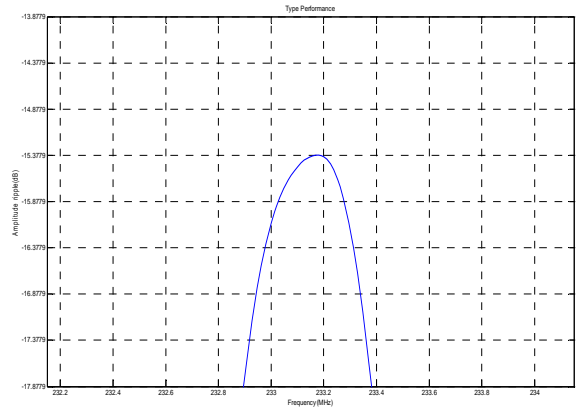
Frequency Respond



Horizontal: 1MHz/Div

Vertical: 10dB/Div

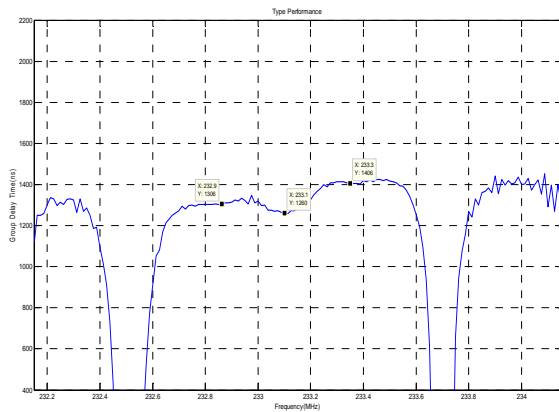
Passband Respond



Horizontal: 0.2MHz/Div

Vertical: 0.5dB/Div

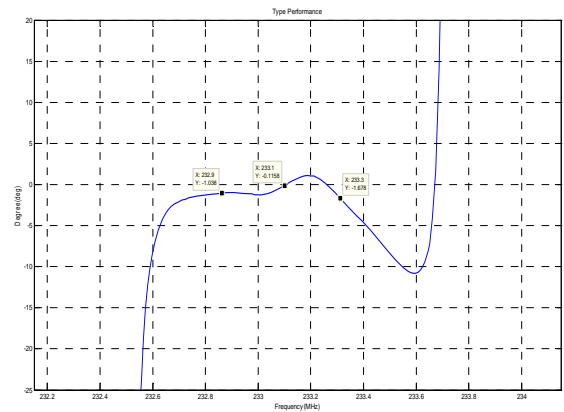
Group Delay Variation(f0±0.2MHz)



Horizontal: 0.2MHz/Div

Vertical: 200ns/Div

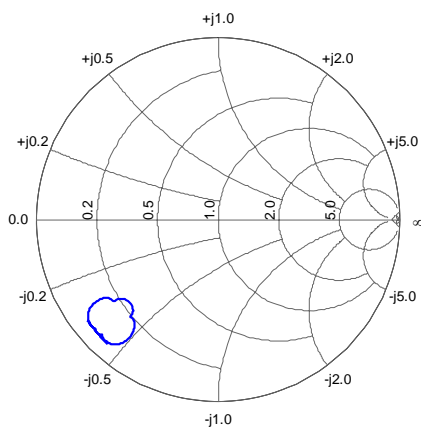
Phase Linearity(f0±0.2MHz)



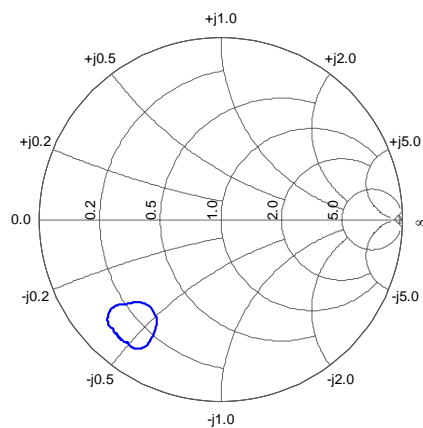
Horizontal: 0.2MHz/Div

Vertical: 5deg/Div

Smith Chart S11



Smith Chart S22



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