## Features

- ✧ For IF SAW filter
- ✧ High attenuation
- ✧ Single-ended operation
- ✧ Ceramic Surface Mount Package
- ✧ Small size

## Specifications

| Parameter | Unit | Minimum | Typical | Maximum |
|---|---|---|---|---|
| *Center Frequency* | MHz | 139.8 | 140 | 140.2 |
| *Insertion Loss* | dB | - | 22.7 | 25 |
| *1 dB Bandwidth* | MHz | 11.1 | 11.57 | - |
| *3 dB Bandwidth* | MHz | 12 | 12.27 | - |
| *40 dB Bandwidth* | MHz | - | 14.53 | 15 |
| *Passband Variation* | dB | - | 0.7 | 1 |
| *Phase Linearity(f0±5.5MHz)* | deg | - | 7 | 15 |
| *Group Delay Variation(f0±5.5MHz)* | nsec | - | 73 | 90 |
| *Absolute Delay* | usec | - | 1.31 | - |
| *Ultimate Rejection* | dB | 40 | 45 | - |
| *Material Temperature coefficient* | KHz/°C | -13.16 | | |
| *Substrate Material* | - | YZ | | |
| *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* | - | 1 | | |
| *Package Size* | SMD13.3*6.5A | | | |

**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.

## Matching Configuration

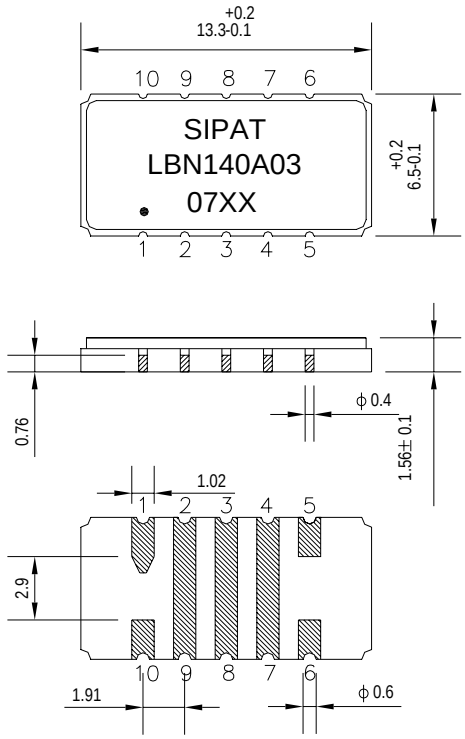



**L1=56nH L2=15nH**

**Source/Load Impedance=50 ohm**

Notes - Component values may change depending on board layout.

## Package Dimension




**Pad Configuration:**

Input 10
Output 5
Ground All Others

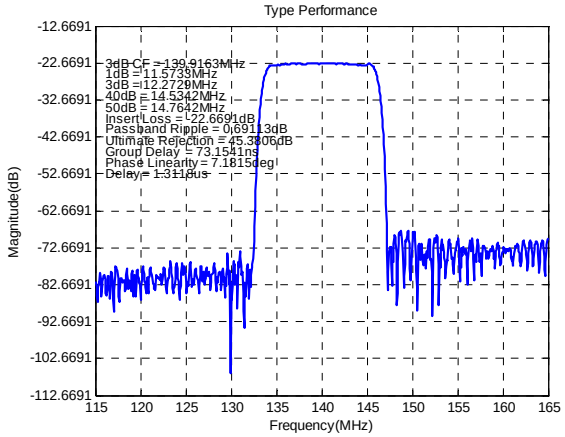
**Marking Configuration:**

1) •: Pad Number 1 Index
2) SIPAT: Manufacturer Name
3) LBN140A03: Part Number
4) 07XX: Date Code

**Package: SMD13.3*6.5A** **Unit: mm**

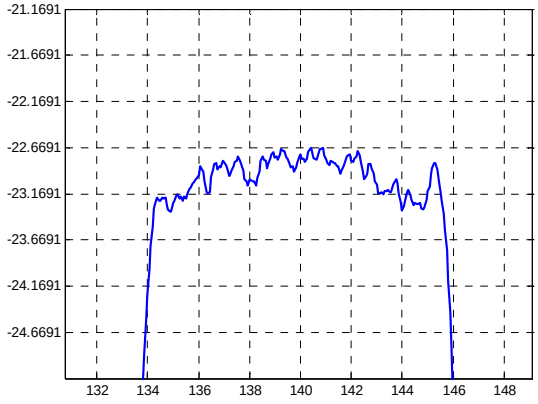
## Typical Performance

### Frequency Respond



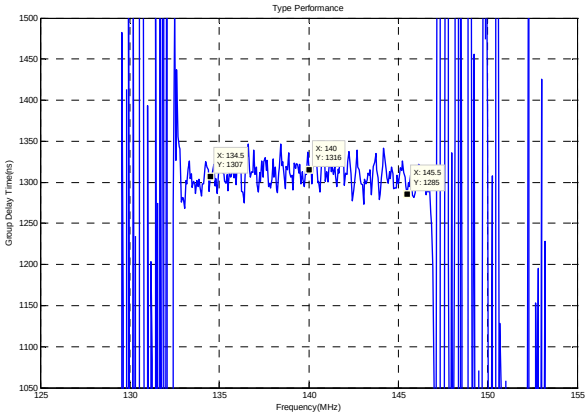

Horizontal: 5MHz/Div Vertical: 10dB/Div

### Passband Respond



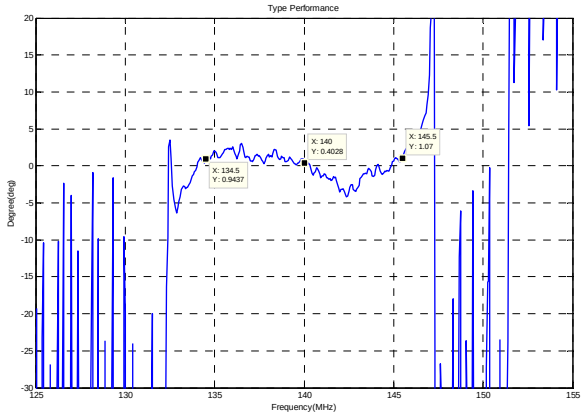

Horizontal: 2MHz/Div Vertical: 0.5dB/Div

### Group Delay Variation(f0±5.5MHz)



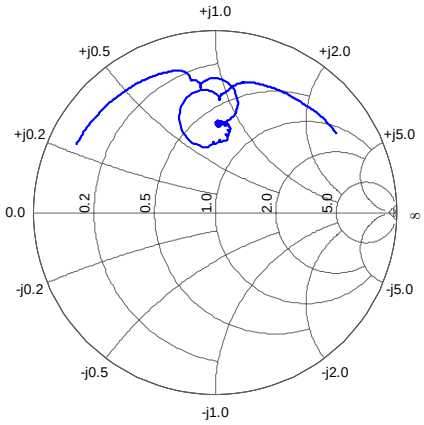

Horizontal: 5MHz/Div Vertical: 50ns/Div

### Phase Linearity(f0±5.5MHz)




Horizontal: 5MHz/Div Vertical: 5deg/Div

### Smith Chart S11




### Smith Chart S22

