



### Features


- ◇ For IF SAW filter
- ◇ Single-ended operation
- ◇ Ceramic Surface Mount Package
- ◇ Small size
- ◇ RoHS compliant (2002/95/EC), Pb-free

### Specifications

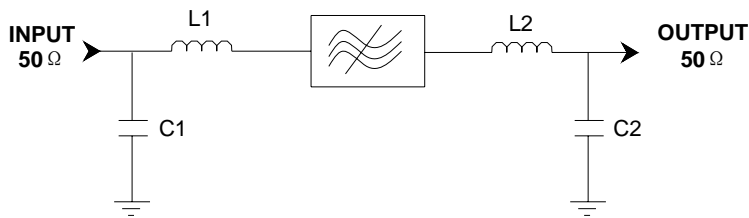
| Parameter  | Unit        | Minimum | Typical | Maximum |
|--|-------------|---------|---------|---------|
| Center Frequency                                 | MHz         | 139.6   | 140     | 140.4   |
| Insertion Loss                                   | dB          | -       | 11.5    | 13      |
| 1dB Bandwidth                                    | MHz         | 22      | 24.89   | -       |
| 3 dB Bandwidth                                   | MHz         | 23.9    | 26      | -       |
| 35 dB Bandwidth                                  | MHz         | -       | 29.58   | 33.5    |
| Passband Variation( $f_0 \pm 9.6\text{MHz}$ )    | dB          | -       | 0.7     | 1       |
| Phase Linearity( $f_0 \pm 9.6\text{MHz}$ )       | deg         | -       | 4       | 14      |
| Group Delay Variation( $f_0 \pm 9.6\text{MHz}$ ) | nsec        | -       | 85      | 100     |
| Absolute Delay                                   | usec        | -       | 0.98    | -       |
| Ultimate Rejection                               | dB          | -       | 38      | -       |
| Material Temperature coefficient                 | KHz/°C      | -13.16  |         |         |
| Substrate Material                               | -           | YZ LN   |         |         |
| 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                                     | SMD13.3*6.5 |         |         |         |

#### 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.

|  |  |             |            |      |
|--|--|-------------|------------|------|
|  | <b>SIPAT Co., Ltd.</b><br>( CETC No.26 Research Institute )<br>#14 Nanping Huayuan Road,<br>Chongqing, China, 400060 | Part Number | LB140DS17  |      |
|  |  | Rev. Date   | 2009-03-27 |      |
|  |  | Ver.        | 1.0        | Page |

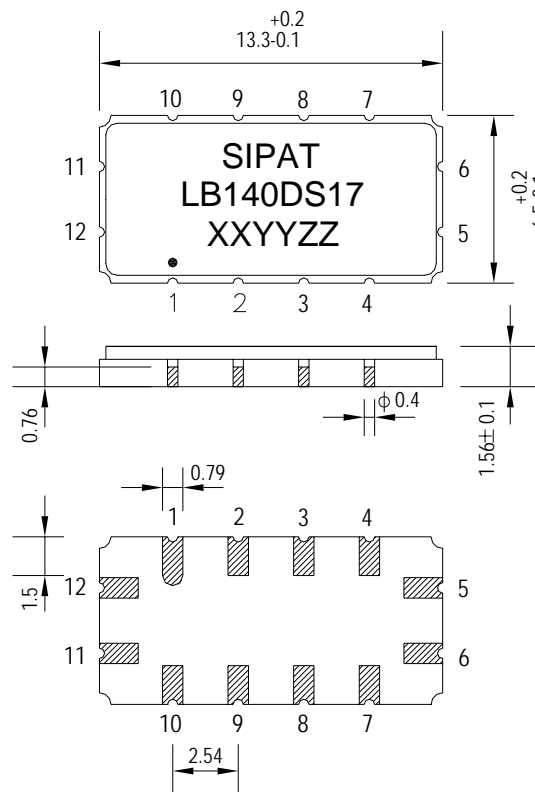
### Matching Configuration



**L1=120nH L2=(100+18)nH**  
**C1=22pF C2=15pF**  
**Source/Load Impedance=50 ohm**

Notes - Component values may change depending  
on board layout.

### Package Dimension



#### Pad Configuration:

Input: 11  
Output: 5  
Ground: All Others

#### Marking Configuration:

- 1) •: Pad Number 1 Index
- 2) SIPAT: Manufacturer Name
- 3) LB140DS17: Part Number
- 4) XXYY: Date(Year/month)
- 5) ZZ: Identified Code

Package: SMD13.3\*6.5

Unit: mm

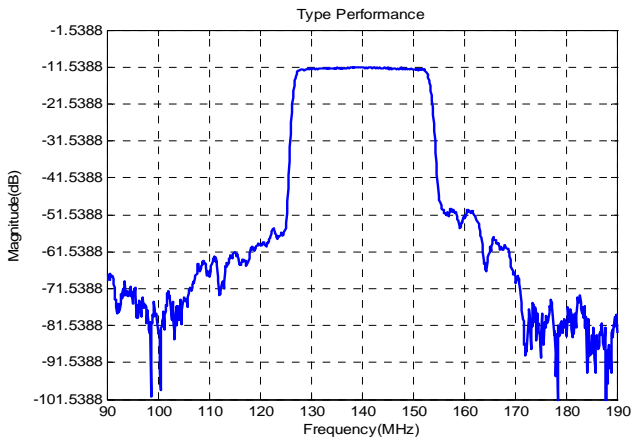


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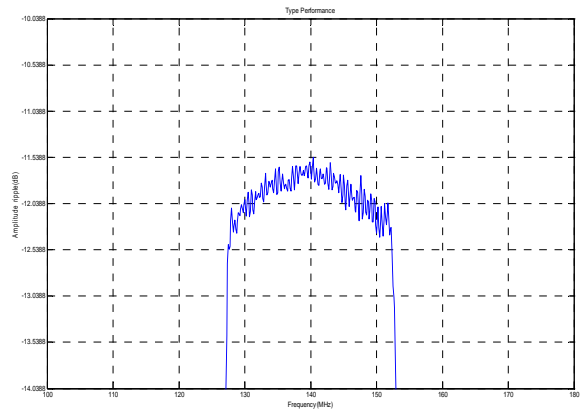
Typical Performance

Frequency Respond



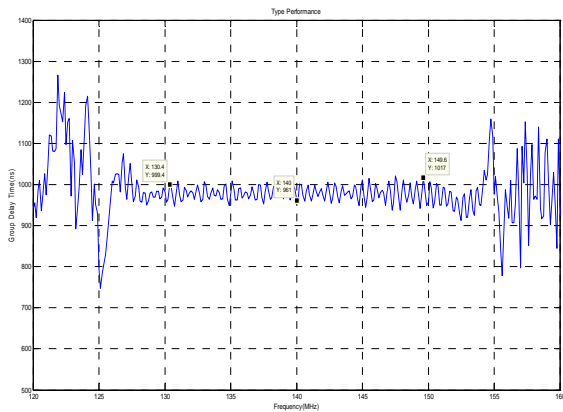
Horizontal: 10MHz/Div Vertical: 10dB/Div

Passband Respond



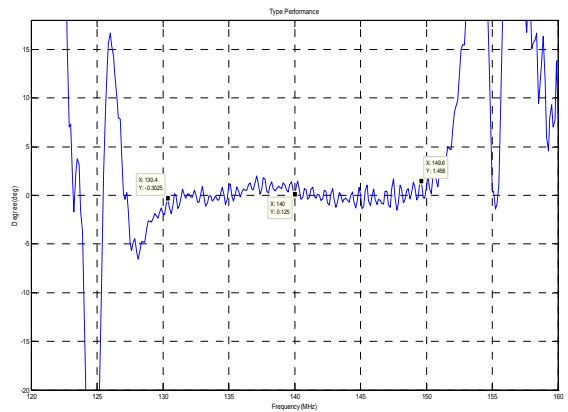
Horizontal: 10MHz/Div Vertical: 0.5dB/Div

Group Delay Variation(f0±9.6MHz)



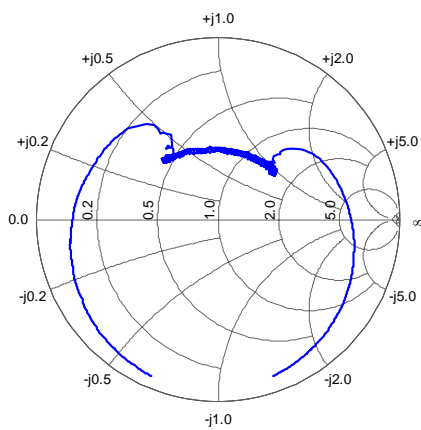
Horizontal: 5MHz/Div Vertical: 100ns/Div

Phase Linearity(f0±9.6MHz)

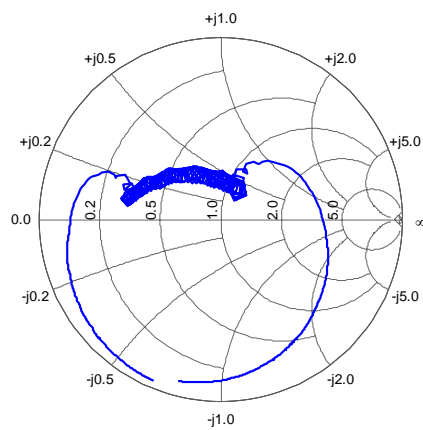


Horizontal: 5MHz/Div Vertical: 5deg/Div

Smith Chart S11



Smith Chart S22



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