



### Features

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

### Specifications

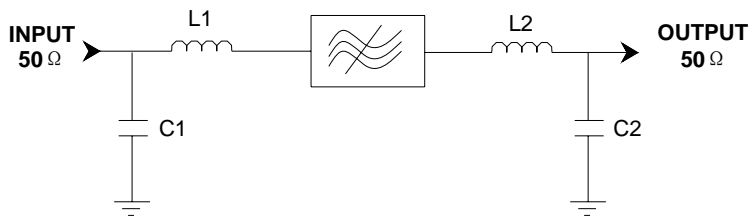
Parameter	Unit	Minimum	Typical	Maximum
Center Frequency	MHz	103.65	103.8	103.95
Insertion Loss	dB	-	26	27
1 dB Bandwidth	MHz	2.6	2.66	-
Passband Variation	dB	-	0.4	1
Phase Linearity( $f_0 \pm 1.2\text{MHz}$ )	deg	-	3.5	7
Absolute Delay	usec	-	3.98	4
Ultimate Rejection	$f_0 \pm 1.75\text{MHz}$	dB	35	-
	$f_0 \pm 1.95\text{MHz}$	dB	45	-
	$f_0 \pm 2.35\text{MHz}$	dB	50	-
Material Temperature coefficient	KHz/°C	0.104		
Substrate Material	-	Qz		
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	DIP3512 (35.0x12.8x4.7mm3)			

#### 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> ( CETC No.26 Research Institute ) #14 Nanping Huayuan Road, Chongqing, China, 400060	Part Number	LBS10401	
		Rev. Date	2008-06-18	
		Ver.	1.0	Page

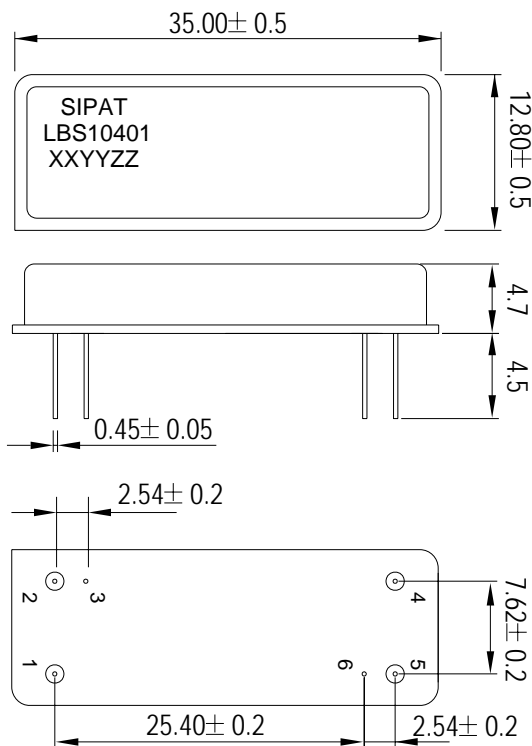
### Matching Configuration



**L1=150nH L2=18nH**  
**C1=20pF C2=36pF**  
**Source/Load Impedance=50 ohm**

Notes - Component values may change depending  
on board layout.

### Package Dimension



#### Pad Configuration:

Input 1  
Output 5  
Ground All Others

#### Marking Configuration:

- 1) SIPAT: Manufacturer Name
- 2) LBS10401: Part Number
- 3) XXYY: Date(Year/month)
- 4) ZZ: Identified Code

Package: DIP3512

Unit: mm



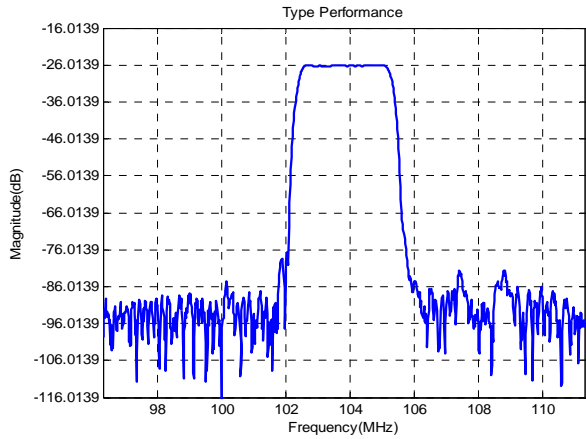
**SIPAT Co., Ltd.**  
( CETC No.26 Research Institute )  
#14 Nanping Huayuan Road,  
Chongqing, China, 400060

Part Number	LBS10401	
Rev. Date	2008-06-18	
Ver.	1.0	Page 2/3



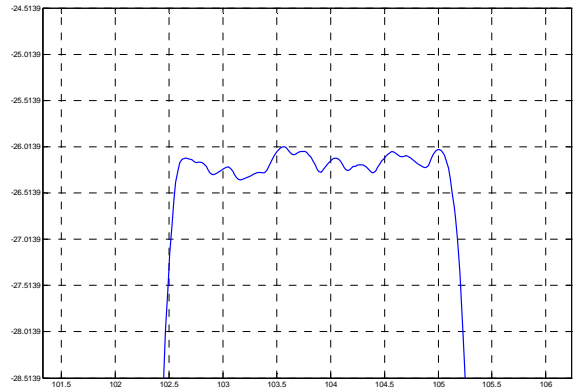
Typical Performance

Frequency Respond



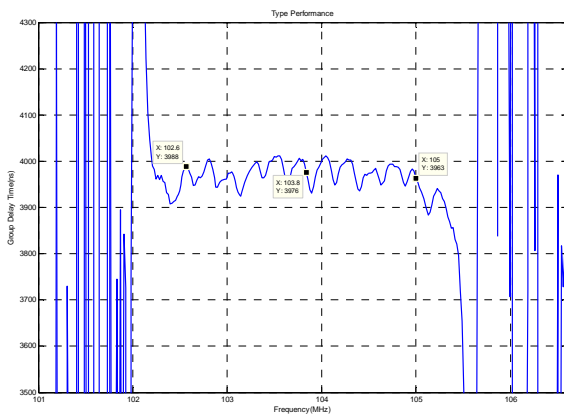
Horizontal: 2MHz/Div Vertical: 10dB/Div

Passband Respond



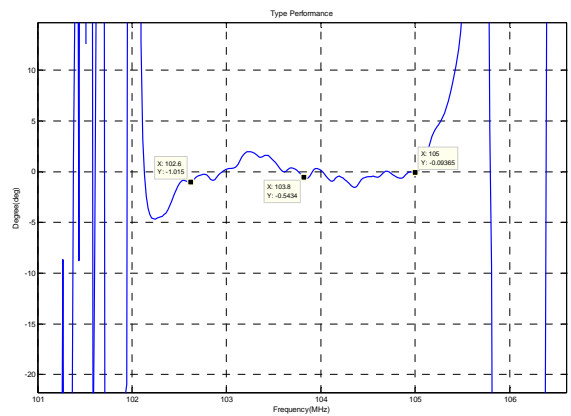
Horizontal: 0.5MHz/Div Vertical: 0.5dB/Div

Group Delay Variation( $f_0 \pm 1.2\text{MHz}$ )



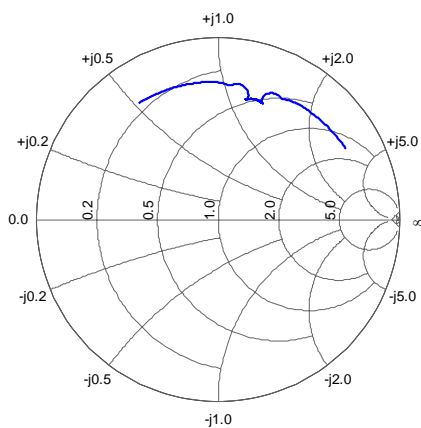
Horizontal: 1MHz/Div Vertical: 100ns/Div

Phase Linearity( $f_0 \pm 1.2\text{MHz}$ )

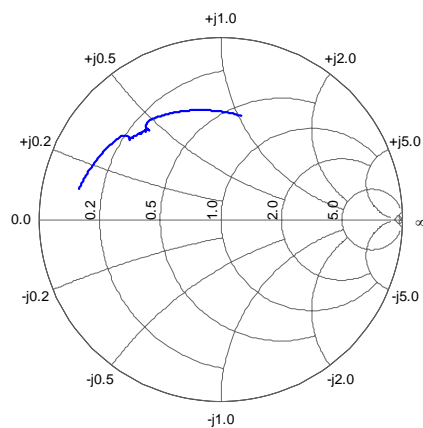


Horizontal: 1MHz/Div Vertical: 5deg/Div

Smith Chart S11



Smith Chart S22



SIPAT Co., Ltd.  
( CETC No.26 Research Institute )  
#14 Nanping Huayuan Road,  
Chongqing, China, 400060

Part Number

LBS10401

Rev. Date

2008-06-18

Ver.

1.0

Page 3/3