



### Features


- ◇ For IF SAW filter
- ◇ High attenuation
- ◇ Single-ended operation
- ◇ Dual In-line Package
- ◇ No matching required for operation at 50Ω
- ◇ RoHS compliant (2002/95/EC), Pb-free

### Specifications

Parameter	Unit	Minimum	Typical	Maximum
Center Frequency	MHz	119.9	120	120.1
Insertion Loss	dB	-	22.3	26
1 dB Bandwidth	MHz	0.8	0.85	-
25 dB Bandwidth	MHz	-	1.53	1.6
30 dB Bandwidth	MHz	-	1.58	1.8
35 dB Bandwidth	MHz	-	1.63	2.3
40 dB Bandwidth	MHz	-	1.67	2.6
Passband Variation	dB	-	0.3	1
Group Delay Variation( $f_0 \pm 0.4\text{MHz}$ )	nsec	-	80	150
Absolute Delay	usec	-	3.03	3.1
Ultimate Rejection( $f_0 \pm 1\text{MHz}$ )	dB	40	42	-
Material Temperature coefficient	KHz/°C	0.12		
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	LBS12033	
		Rev. Date	2008-07-24	
		Ver.	1.0	Page

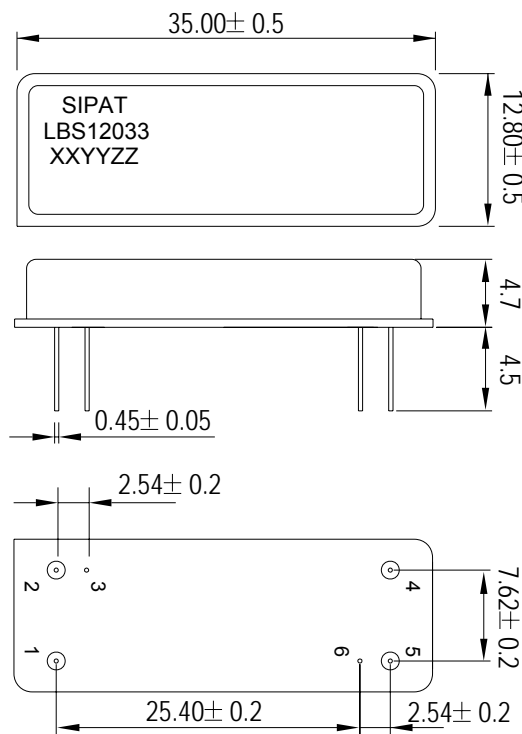
### Matching Configuration



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) LBS12033: Part Number
- 3) XXYY: Date(Year/month)
- 4) ZZ: Identified Code

Package: DIP3512

Unit: mm



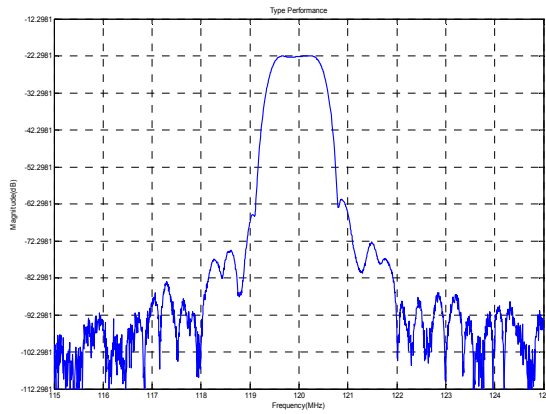
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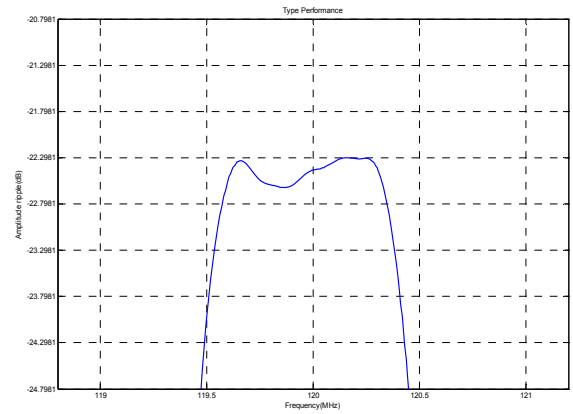
Typical Performance

Frequency Respond



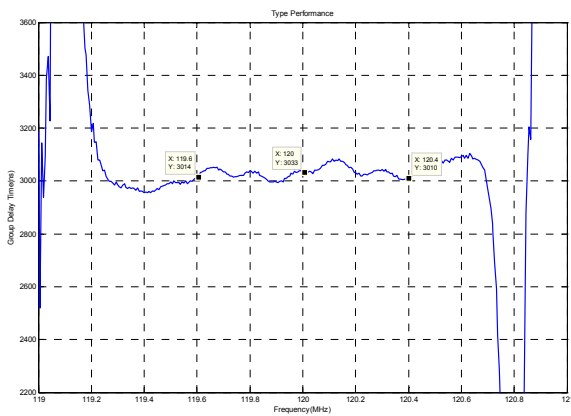
Horizontal: 1MHz/Div Vertical: 10dB/Div

Passband Respond



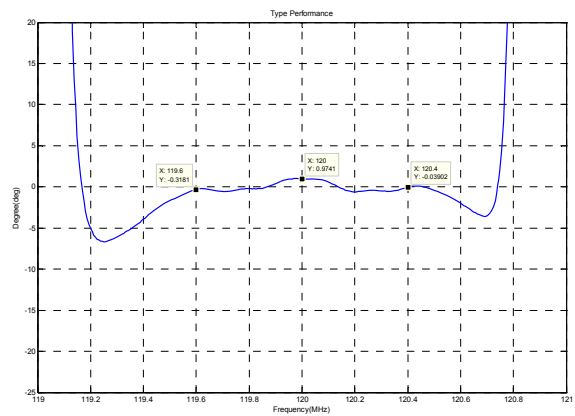
Horizontal: 0.5MHz/Div Vertical: 0.5dB/Div

Group Delay Variation(f0±0.4MHz)



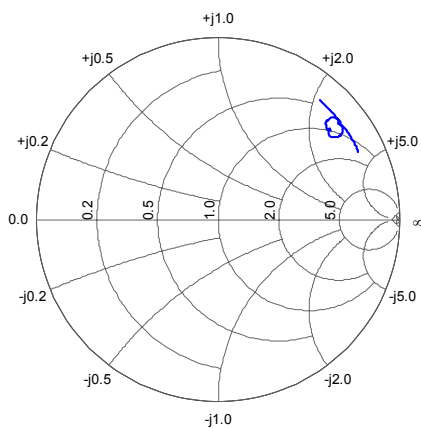
Horizontal: 0.2MHz/Div Vertical: 200ns/Div

Phase Linearity(f0±0.4MHz)

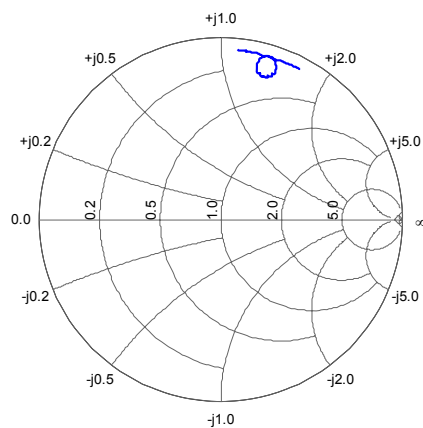


Horizontal: 0.2MHz/Div Vertical: 5deg/Div

Smith Chart S11



Smith Chart S22



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