



Features

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

Specifications

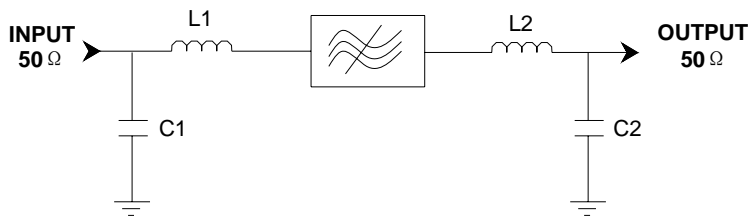
Parameter	Unit	Minimum	Typical	Maximum	
Center Frequency	MHz	139.85	140	140.15	
Insertion Loss	dB	-	29.3	30	
3 dB Bandwidth	MHz	7.1	7.12	-	
40 dB Bandwidth	MHz	-	8	-	
Passband Variation	dB	-	1.3	1.5	
Absolute Delay	usec	-	3.68	4	
Ultimate Rejection	$f_0 \pm 4\text{MHz}$	dB	35	42	-
	$f_0 \pm 4.2\text{MHz}$	dB	45	51	-
	$f_0 \pm 4.6\text{MHz}$	dB	50	52	-
	$f_0 \pm 8.6\text{MHz}$	dB	55	57	-
Material Temperature coefficient	KHz/°C	0.14			
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 (35.0x12.8x4.7mm ³)				

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	LBS140A13	
		Rev. Date	2008-07-17	
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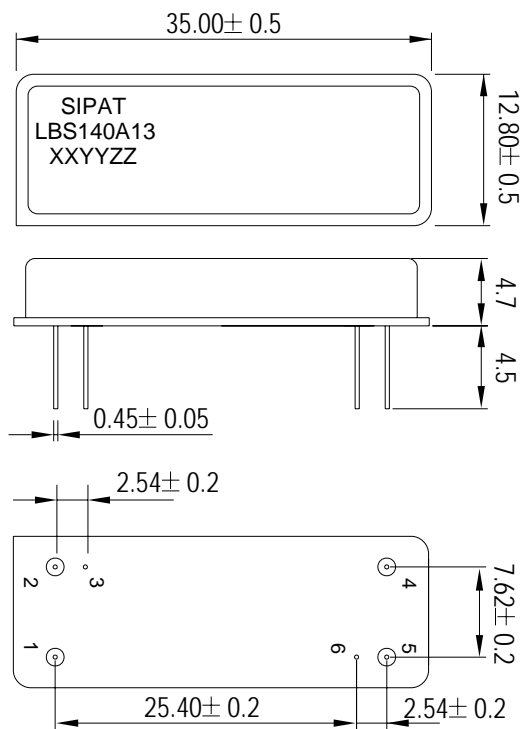
Matching Configuration



L1=100nH L2=82nH
C1=47pF 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) LBS140A13: Part Number
- 3) XXYY: Date(Year/month)
- 4) ZZ: Identified Code

Package: DIP3512

Unit: mm



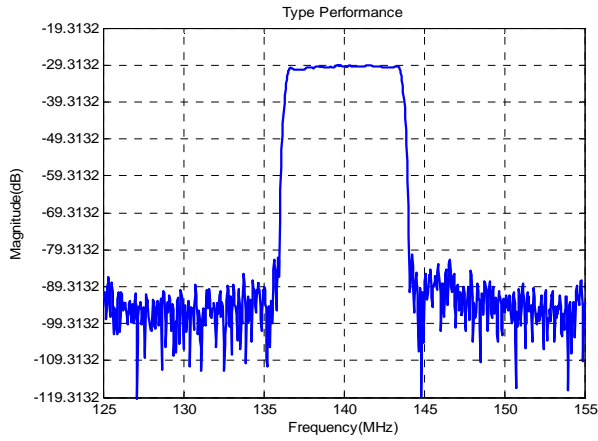
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(CETC No.26 Research Institute)
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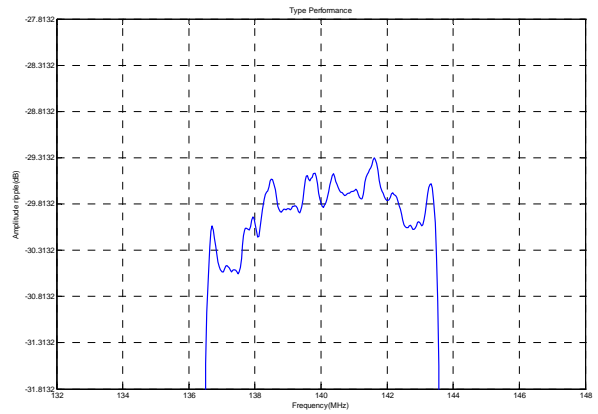
Typical Performance

Frequency Respond



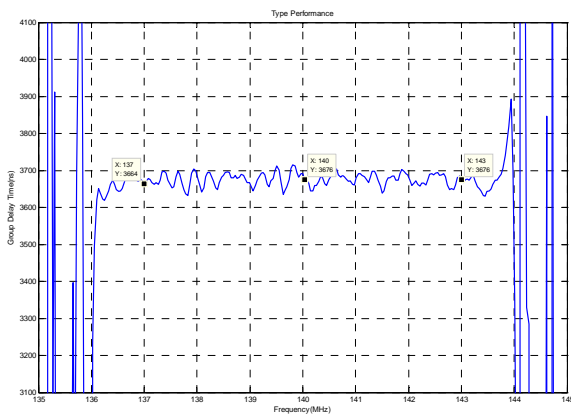
Horizontal: 5MHz/Div Vertical: 10dB/Div

Passband Respond



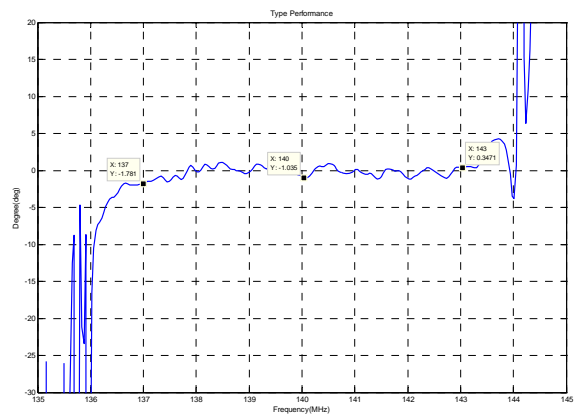
Horizontal: 2MHz/Div Vertical: 0.5dB/Div

Group Delay Variation($f_0 \pm 3\text{MHz}$)



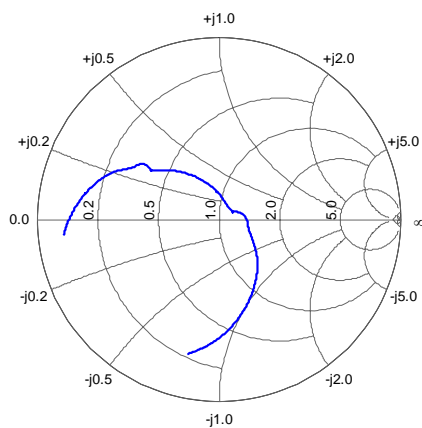
Horizontal: 1MHz/Div Vertical: 100ns/Div

Phase Linearity($f_0 \pm 3\text{MHz}$)

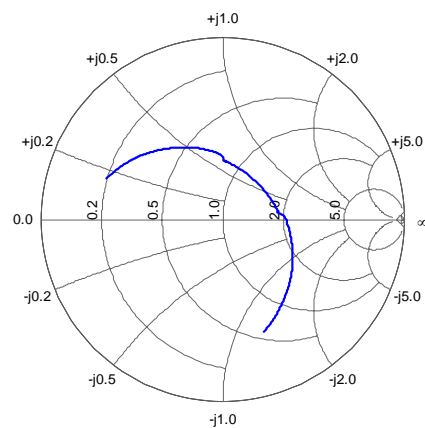


Horizontal: 1MHz/Div Vertical: 5deg/Div

Smith Chart S11



Smith Chart S22



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