



Features

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

Specifications

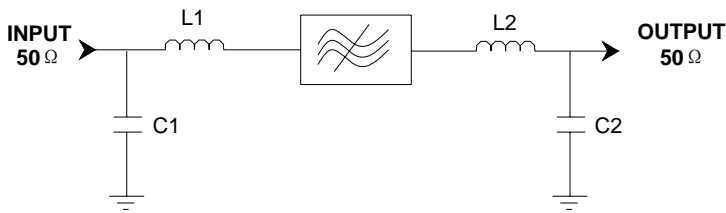
Parameter	Unit	Minimum	Typical	Maximum
Center Frequency	MHz	232.9	233	233.1
Insertion Loss	dB	-	22	25
1.5 dB Bandwidth	MHz	4	4.12	-
3 dB Bandwidth	MHz	-	4.34	-
40 dB Bandwidth	MHz	-	5.5	-
50 dB Bandwidth	MHz	-	5.76	-
Passband Variation	dB	-	0.5	1
Phase Linearity($f_0 \pm 2\text{MHz}$)	deg	-	4	-
Absolute Delay	usec	-	2.61	-
Ultimate Rejection	dB	50	51	-
Material Temperature coefficient	KHz/°C	0.233		
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	-	1		
Package Size	SMD19.0*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.

	SIPAT Co., Ltd. (CETC No.26 Research Institute) #14 Nanping Huayuan Road, Chongqing, China, 400060	Part Number	LBS23301	
		Rev. Date	2007-11-15	
		Ver.	1.0	Page 1/3

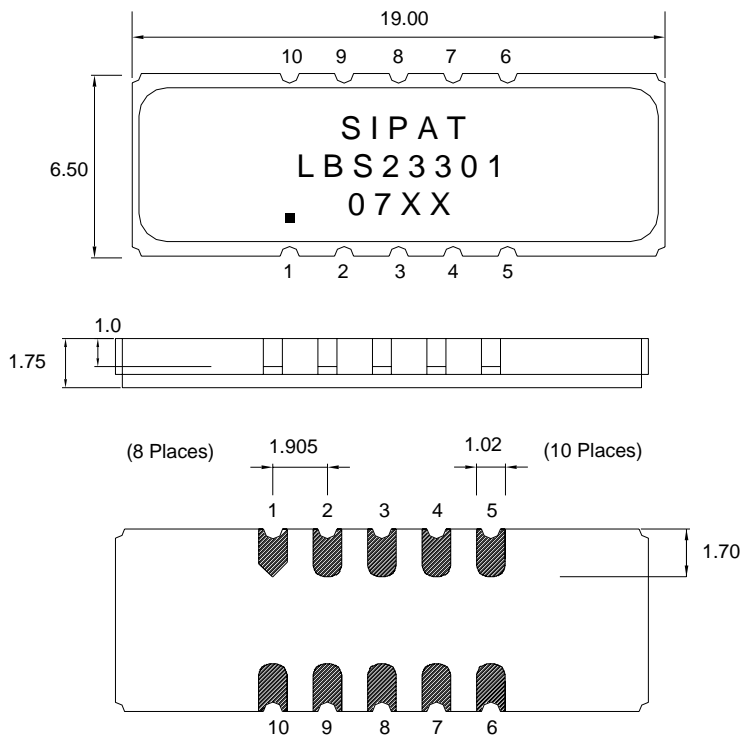
Matching Configuration



L1=33nH L2=22nH
C1=39pF C2=47pF
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) LBS23301: Part Number
- 4) 07XX: Date Code

Package: SMD19.0*6.5A

Unit: mm



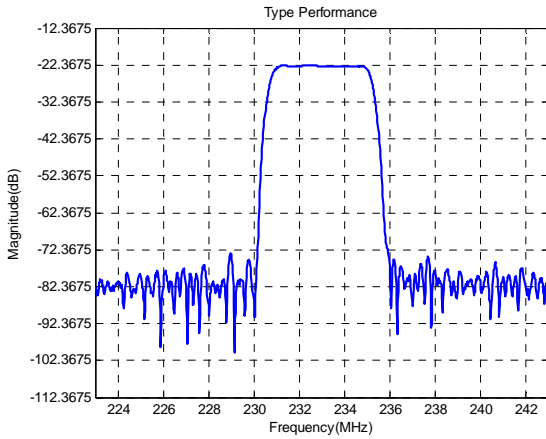
SIPAT Co., Ltd.
(CETC No.26 Research Institute)
#14 Nanping Huayuan Road,
Chongqing, China, 400060

Part Number	LBS23301	
Rev. Date	2007-11-15	
Ver.	1.0	Page 2/3



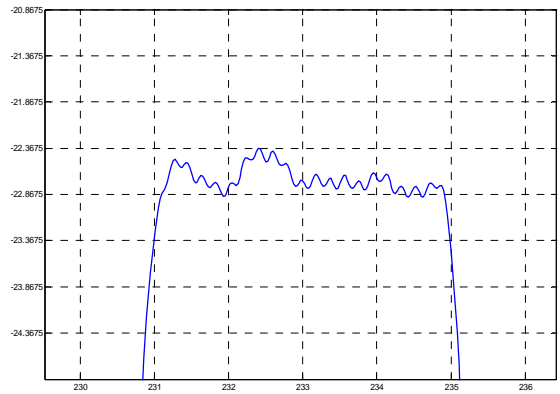
Typical Performance

Frequency Respond



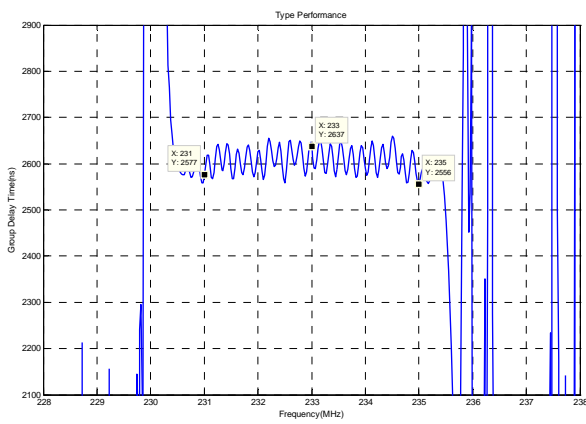
Horizontal: 2MHz/Div Vertical: 10dB/Div

Passband Respond



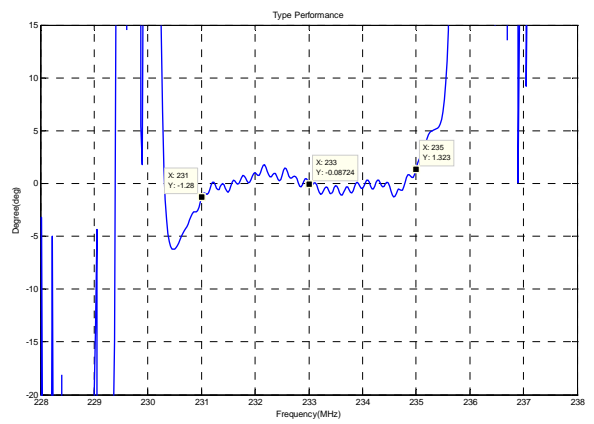
Horizontal: 1MHz/Div Vertical: 0.5dB/Div

Group Delay Variation($f_0 \pm 2\text{MHz}$)



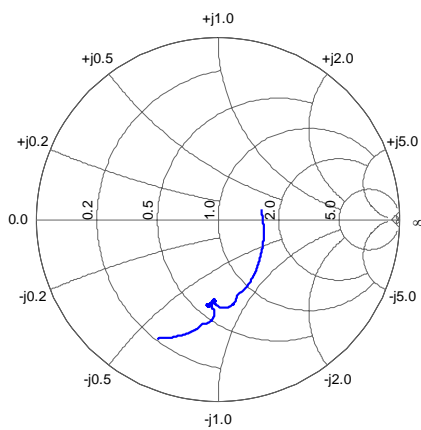
Horizontal: 1MHz/Div Vertical: 100ns/Div

Phase Linearity($f_0 \pm 2\text{MHz}$)

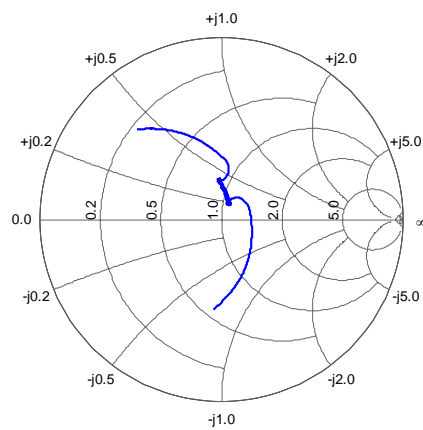


Horizontal: 1MHz/Div Vertical: 5deg/Div

Smith Chart S11



Smith Chart S22



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

Part Number	LBS23301	
Rev. Date	2007-11-15	
Ver.	1.0	Page 3/3