



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	69.95	70	70.05	
Insertion Loss	dB	-	25	27	
3 dB Bandwidth	MHz	1.75	1.79	-	
Passband Variation	dB	-	0.4	1	
Absolute Delay	usec	-	2.76	4	
Ultimate Rejection	$f_0 \pm 1.3\text{MHz}$	dB	35	38	-
	$f_0 \pm 1.5\text{MHz}$	dB	45	50	-
	$f_0 \pm 1.9\text{MHz}$	dB	50	54	-
	$f_0 \pm 5.9\text{MHz}$	dB	50	55	-
	$f_0 \pm 15\text{MHz}$	dB	55	57	-
Material Temperature coefficient	KHz/°C	0.07			
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	DIP2212 (22.2x12.8x4.7mm 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	LBS70A33	
		Rev. Date	2008-03-18	
		Ver.	2.0	Page

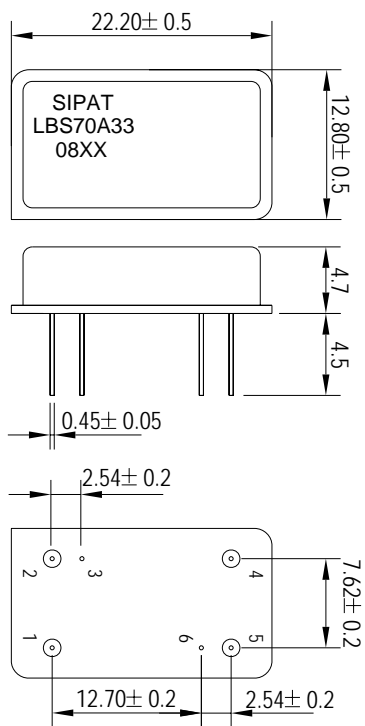
Matching Configuration



L1=L2=270nH
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) LBS70A33: Part Number
- 3) 08XX: Date Code

Package: DIP2212

Unit: mm

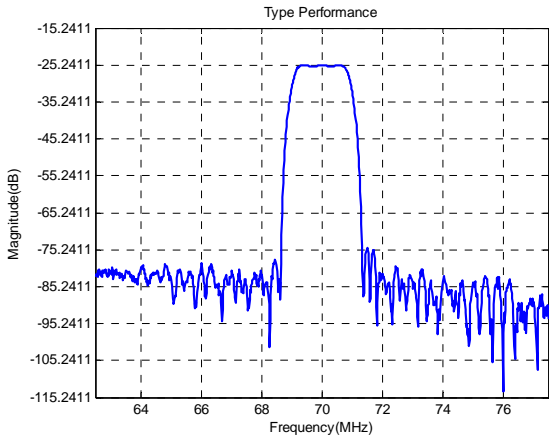


SIPAT Co., Ltd.
(CETC No.26 Research Institute)
#14 Nanping Huayuan Road,
Chongqing, China, 400060

Part Number	LBS70A33	
Rev. Date	2008-03-18	
Ver.	2.0	Page 2/3

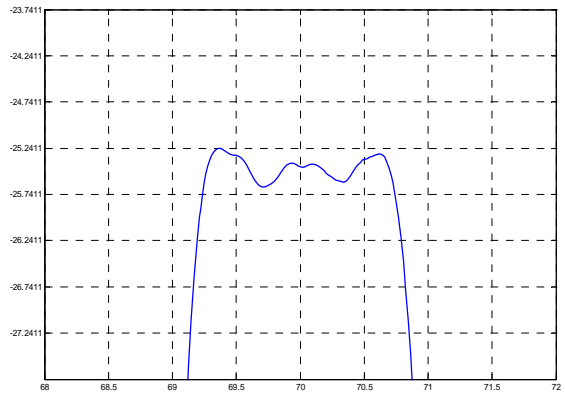
Typical Performance

Frequency Respond



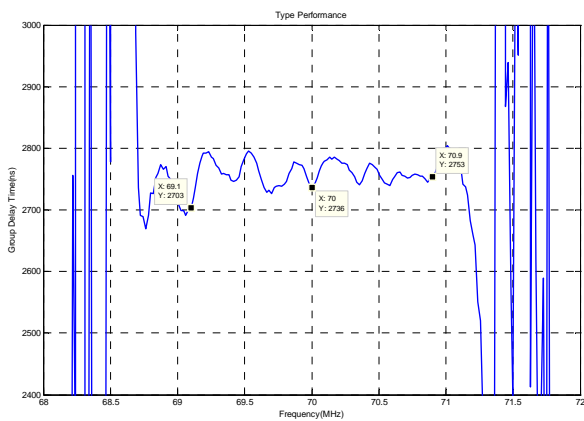
Horizontal: 2MHz/Div Vertical: 10dB/Div

Passband Respond



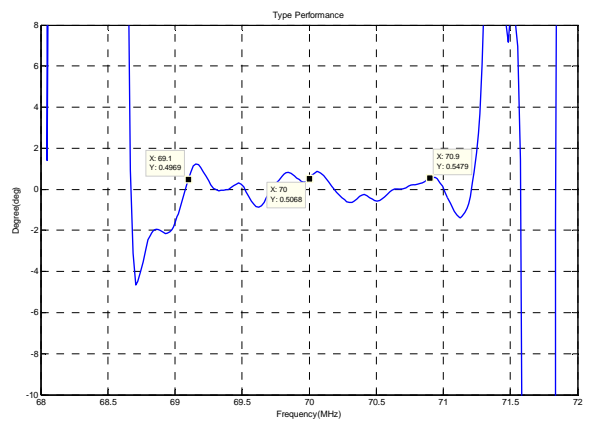
Horizontal: 0.5MHz/Div Vertical: 0.5dB/Div

Group Delay Variation($f_0 \pm 0.9$ MHz)



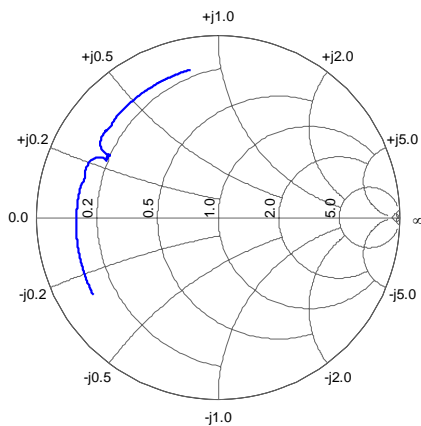
Horizontal: 0.5MHz/Div Vertical: 100ns/Div

Phase Linearity($f_0 \pm 0.9$ MHz)

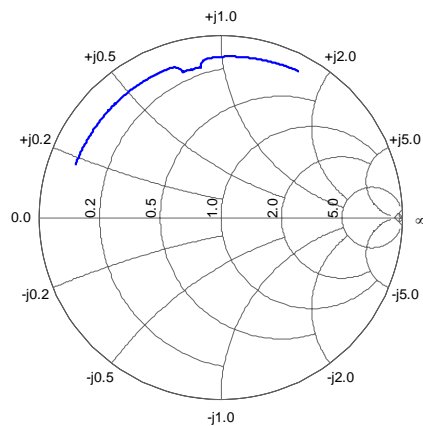


Horizontal: 0.5MHz/Div Vertical: 2deg/Div

Smith Chart S11



Smith Chart S22



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

Part Number	LBS70A33	
Rev. Date	2008-03-18	
Ver.	2.0	Page 3/3