172.2MHz IF SAW Filter
4MHz Bandwidth

Part Number: LBS17204

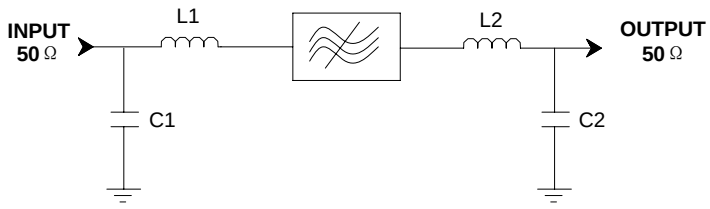
Specifications

Parameter	Unit	Minimum	Typical	Maximum
Center Frequency	MHz	172.05	172.2	172.35
Insertion Loss	dB	-	27	28
1 dB Bandwidth	MHz	3.6	3.66	-
3 dB Bandwidth	MHz	-	3.84	-
35 dB Bandwidth	MHz	-	4.44	4.5
40 dB Bandwidth	MHz	-	4.48	-
45dB Bandwidth	MHz	-	4.51	-
50 dB Bandwidth	MHz	-	4.54	5.7
55 dB Bandwidth	MHz	-	4.57	13.7
Passband Variation	dB	-	0.6	1
Absolute Delay	usec	-	4.17	4.5
Ultimate Rejection(f0±15MHz)	dB	55	70	-
Material Temperature coefficient	KHz/°C	0.17		
Ambient Temperature	°C	25		
Package Size	DIP3512 (35.0x12.8x4.7mm3)			

Notes:

1. All specifications are based on the test circuit shown
2. In production, devices will be tested at room temperature to a guardbanded specification to ensure electrical compliance over 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

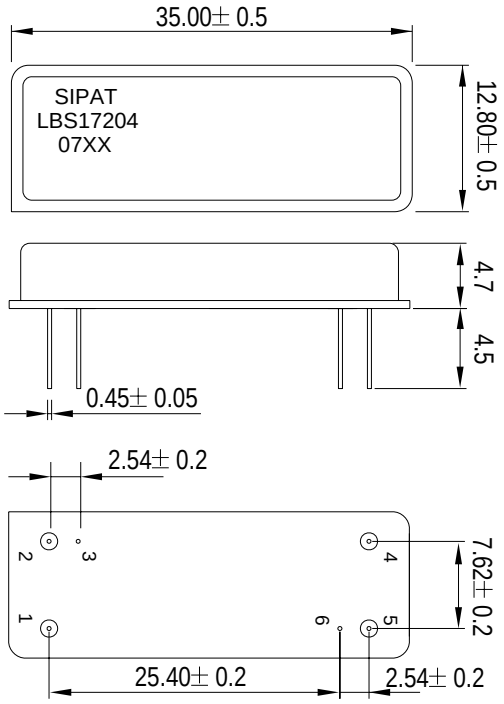
Matching Configuration



L1=47nH L2=33nH
C1=47pF C2=36pF
Source/Load Impedance=50 ohm

Notes - Component values may change depending on board layout.

Package Dimension



1) ·: Pad Number 1 Index
2) SIPAT: Manufacturer name
3) LBS17204: Part Number
4) 07XX: Date Code

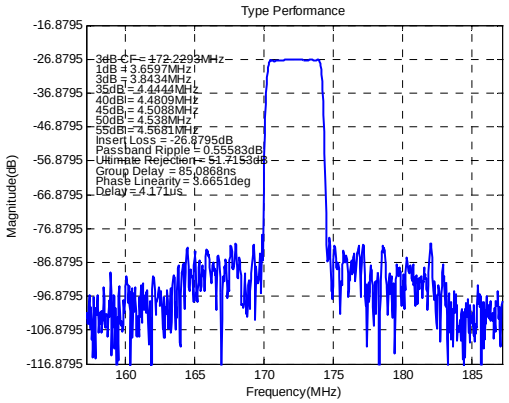
Input	1
Output	5
Ground	All Others

Package: DIP3512

Unit: mm

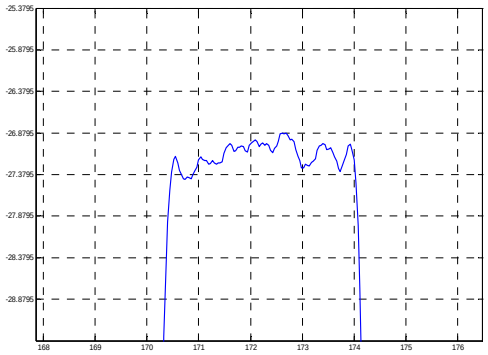
Typical Performance

Frequency Respond



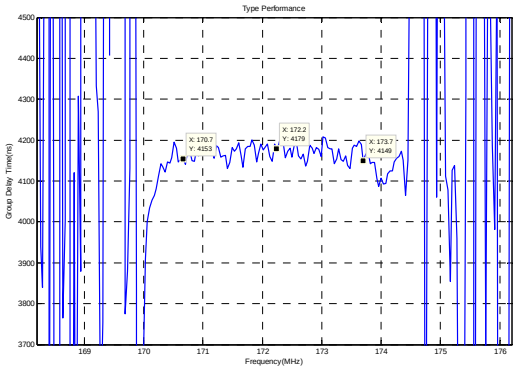
Horizontal: 5MHz/Div Vertical: 10dB/Div

Passband Respond



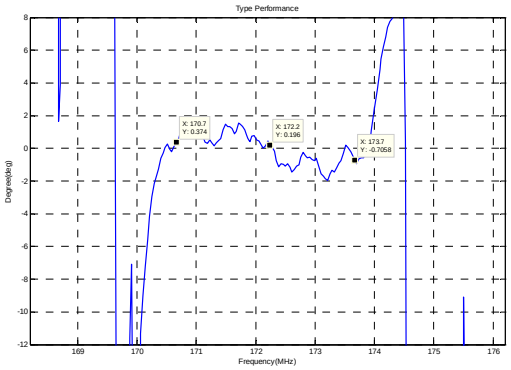
Horizontal: 1MHz/Div Vertical: 0.5dB/Div

Group Delay Variation(f0±1.5MHz)



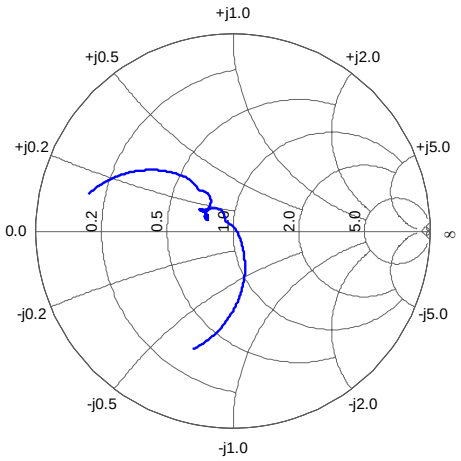
Horizontal: 1MHz/Div Vertical: 100ns/Div

Phase Linearity(f0±1.5MHz)

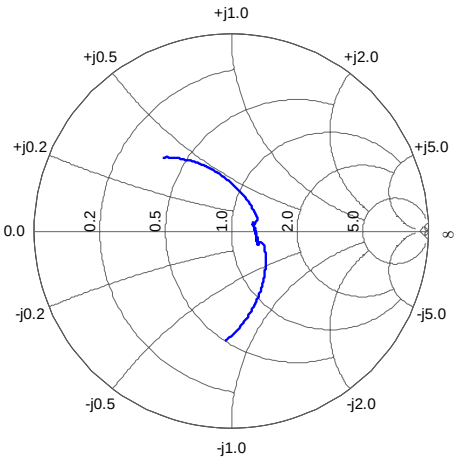


Horizontal: 1MHz/Div Vertical: 2deg/Div

Smith Chart S11



Smith Chart S22



Maximum Ratings

Operating Temperature Range	°C	[-40°C;+85°C]
Storage Temperature Range	°C	[-40°C;+105°C]
DC Voltage	V	0
Input Power	dBm	10 max
ESD Class		1