

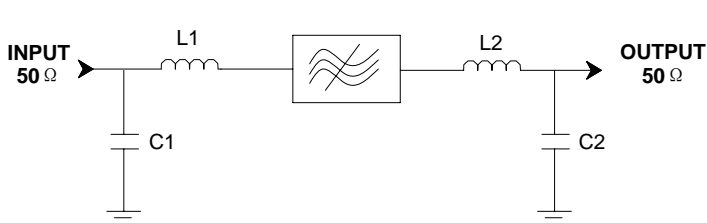
Specifications

Parameter	Unit	Minimum	Typical	Maximum
Center Frequency	MHz	-	300	-
Insertion Loss($f_0 \pm 20\text{MHz}$)	dB	-	16.5	18
1.5 dB Bandwidth	MHz	40	44.68	-
3 dB Bandwidth	MHz	45	45.54	-
35 dB Bandwidth	MHz	-	51.2	56
Passband Variation($f_0 \pm 20\text{MHz}$)	dB	-	0.7	1.5
Absolute Delay	usec	-	0.6	-
Group Delay Variation($f_0 \pm 20\text{MHz}$)	nsec	-	50	150
Ultimate Rejection	100~270MHz	dB	30	48
	330~500MHz	dB	25	29
	500~1000MHz	dB	30	35
Material Temperature coefficient	KHz/°C	-28.2		
Ambient Temperature	°C	25		
Package Size	SMD7.0*5.0			

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 = 18nH L2 = 22nH
C1 = 15pF C2 = 18pF
Source/Load Impedance = 50 ohm

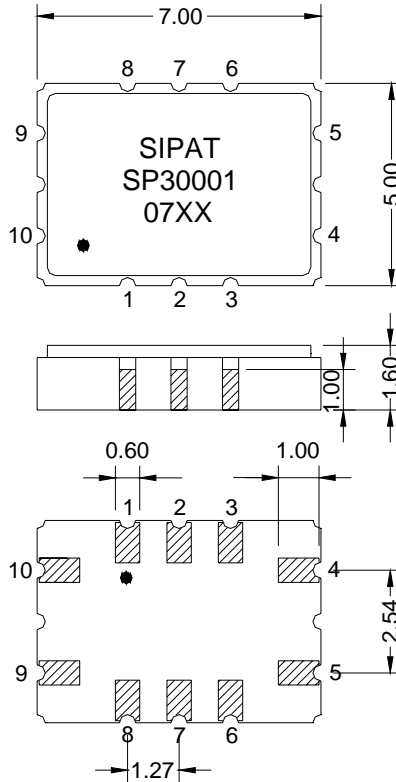
Notes - Component values may change depending on board layout.



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Part Number	SP30001		
Rev. Date	2007-04-25		
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Package Dimension



- 1) ∴ Pad Number 1 Index
- 2) SIPAT: Manufacturer name
- 3) SP30001: Part Number
- 4) 07XX: Date Code

Input	9
Output	4
Ground	1,2,3,5,6,7,8,10

Package: SMD7.0*5.0

Unit: mm

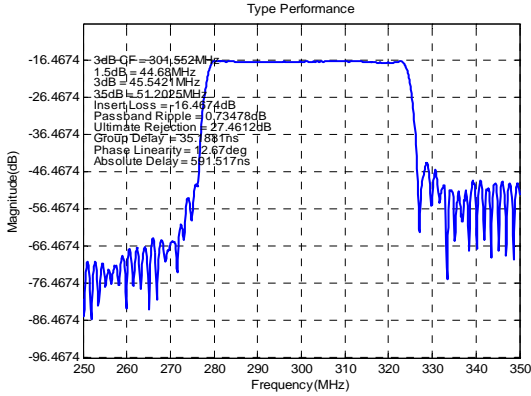


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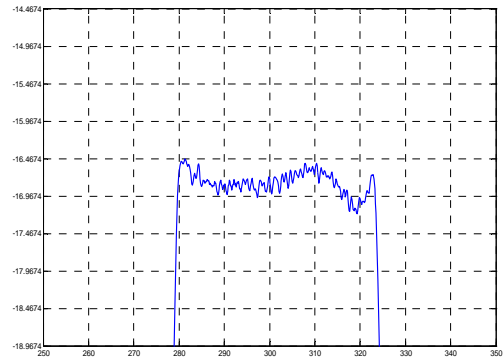
Typical Performance

Frequency Response



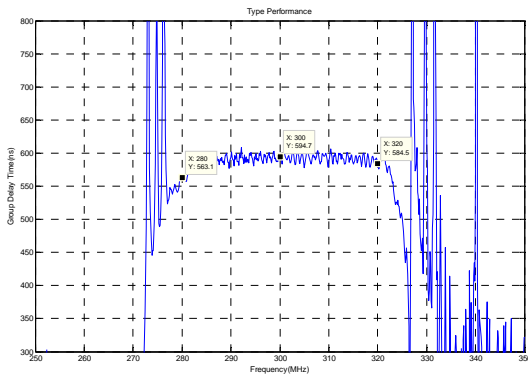
Horizontal: 10MHz/Div Vertical: 10dB/Div

Passband Response



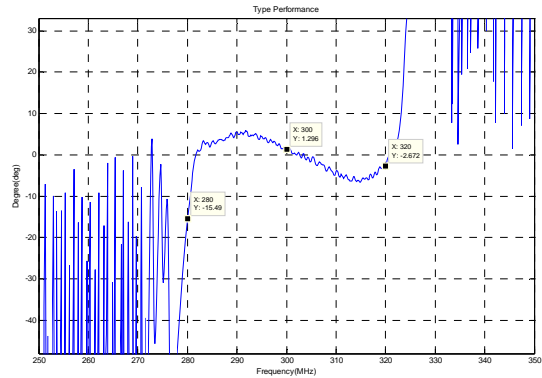
Horizontal: 10MHz/Div Vertical: 0.5dB/Div

Group Delay Variation (f0±20MHz)



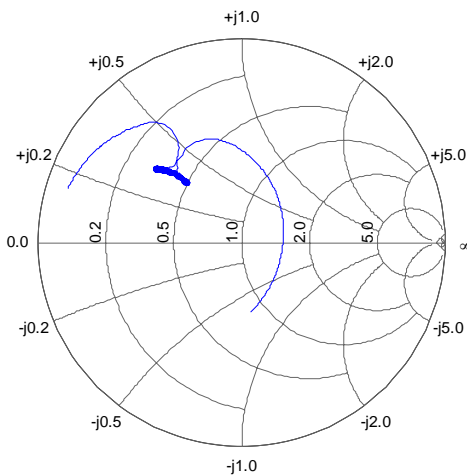
Horizontal: 10MHz/Div Vertical: 50ns/Div

Phase Linearity (f0±20MHz)

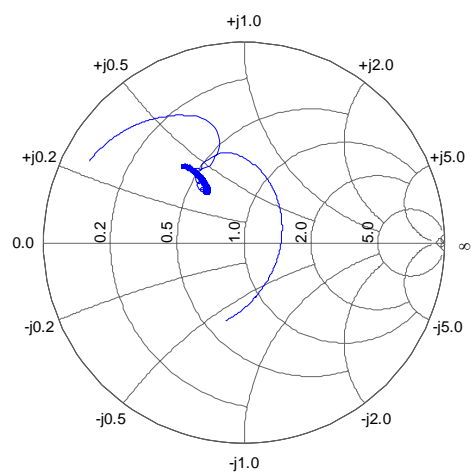


Horizontal: 10MHz/Div Vertical: 10deg/Div

Smith Chart S11



Smith Chart S22



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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



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