

## Specifications

Parameter	Unit	Minimum	Typical	Maximum
Center Frequency	MHz	-	500	-
Insertion Loss( $f_0 \pm 20\text{MHz}$ )	dB	-	21	24
1.5 dB Bandwidth	MHz	40	46.4	-
3 dB Bandwidth	MHz	45	48.34	-
35 dB Bandwidth	MHz	-	60.94	60
Passband Variation( $f_0 \pm 20\text{MHz}$ )	dB	-	1.1	1.5
Absolute Delay	usec	-	0.66	-
Group Delay Variation( $f_0 \pm 20\text{MHz}$ )	nsec	-	25	150
Ultimate Rejection	100~470MHz	dB	30	-
	530~550MHz	dB	30	-
	550~1000MHz	dB	30	-
Material Temperature coefficient	KHz/°C	-47		
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



**Source/Load Impedance=50 ohm**

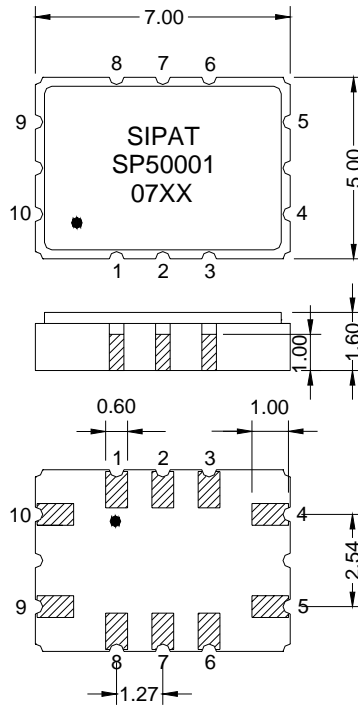
Notes - Component values may change depending on board layout.



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Part Number	SP50001		
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*Package Dimension*



- 1) ∴ Pad Number 1 Index
- 2) SIPAT: Manufacturer name
- 3) SP50001: 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**

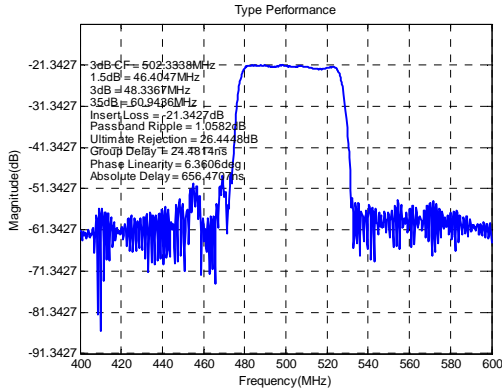


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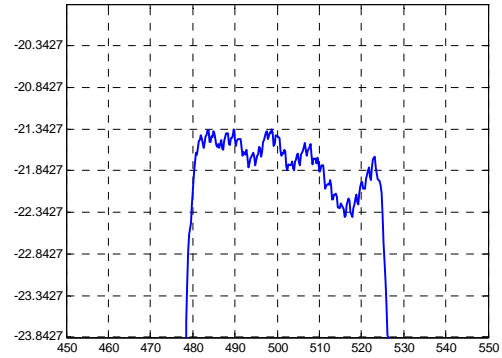
Typical Performance

Frequency Respond



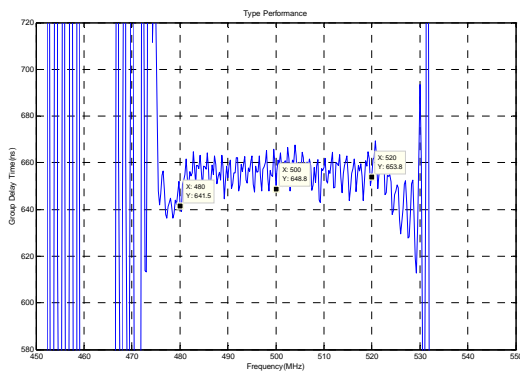
Horizontal: 20MHz/Div Vertical: 10dB/Div

Passband Respond



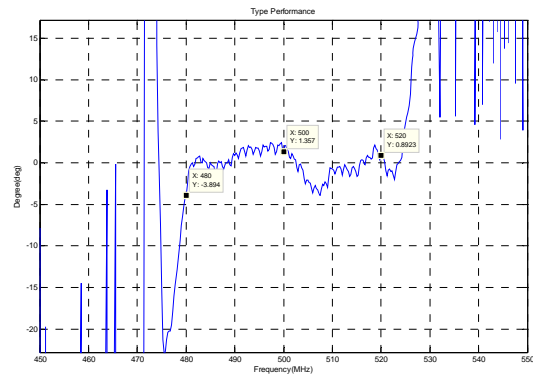
Horizontal: 10MHz/Div Vertical: 0.5dB/Div

Group Delay Variation (f0±20MHz)



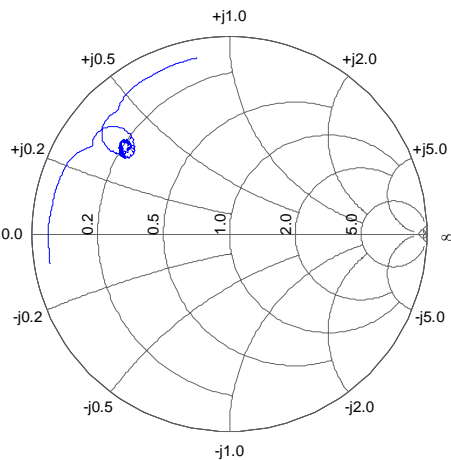
Horizontal: 10MHz/Div Vertical: 20ns/Div

Phase Linearity (f0±20MHz)

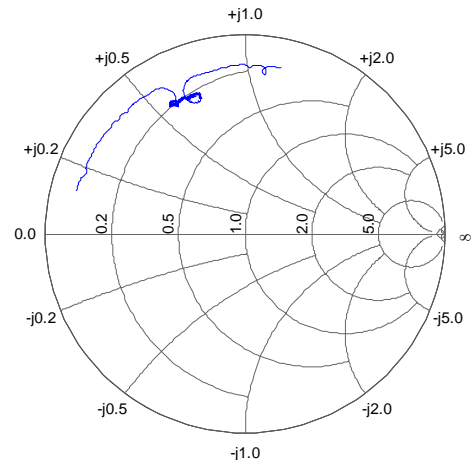


Horizontal: 10MHz/Div Vertical: 5deg/Div

Smith Chart S11



Smith Chart S22



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*Maximum Ratings*

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



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