



## SAW Bandpass Filter Specifications

Unit Name	SAW Bandpass Filter
Part Name	SY270451B
Date	June 9, 2004

Written by	Checked by	Approved by



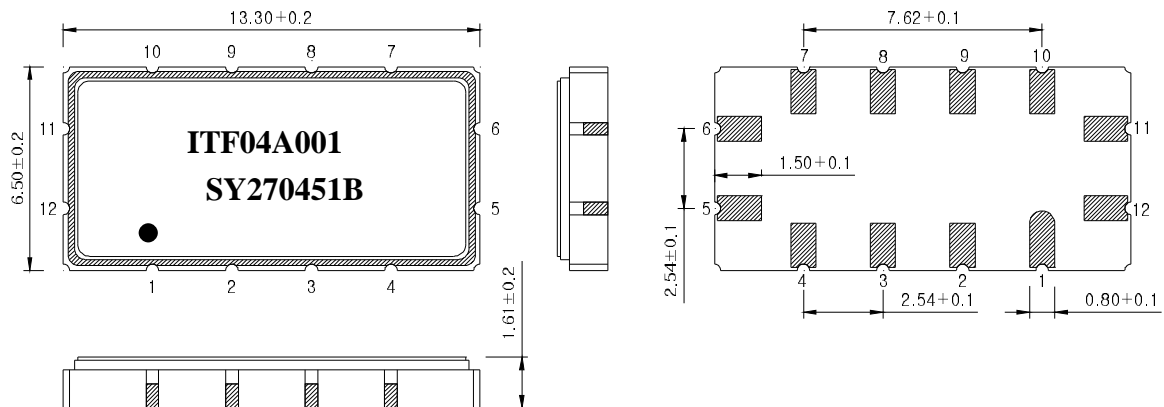
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## 1. Features

- IF Bandpass Filter
- Low-Loss Filter
- Single-Ended Operation
- Ceramic Surface Mount Device (SMD) Package
- Maximum Storage Temperature Range : -40 °C ~ 85 °C
- Electrostatics Sensitive Device (ESD)

## 2. Package Dimensions



### Package : S1365

Dimensions shown are nominal in millimeters

Body : Al<sub>2</sub>O<sub>3</sub> Ceramic

Lid : Kovar, Ni Plated

Terminations : Au plating 0.3 ~ 1.0 um, Over a 1.27 ~ 8.89 um Ni Plating

Pad Configuration	
11	Input
5	Output
6, 12	Ground
Other	Case ground

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### 3. Specifications

Fo = 70.0 MHz

Terminating source impedance : 50Ω and matching network

Terminating load impedance : 50Ω and matching network

Operating Temperature Range : -40°C ~ +85°C		Minimum	Typical	Maximum
Center Frequency	MHz	69.5	70.0	70.5
Insertion Loss	dB	-	7.3	9.5
1dB Bandwidth	MHz	4.0	4.3	-
3dB Bandwidth	MHz	4.6	4.9	-
40dB Bandwidth	MHz	-	7.2	7.6
Amplitude Ripple (Fo +/- 1.5 MHz)	dB	-	0.5	1.0
Group Delay Variation (Fo +/- 1.5 MHz)	nsec	-	70	120
Phase Linearity(Fo +/- 1.225 MHz)	degree	-	3.5	5.0
Absolute Delay	usec	-	1.27	-
Relative Attenuation				
at 0.1 to 66.0 MHz	dB	45	50	-
at 68.0 to 72.0 MHz	dB	-	2.0	3.0
at 74.0 to 120.0 MHz	dB	35	41	-
Temperature Coefficient of Frequency	ppm/°C	-	-86	-

#### Notes :

- 1) All specifications are based on the matching schematic shown below
- 2) All specifications are measured by Agilent Network analyzer and full 2 port calibration
- 3) Electrical margin has been built into the design to account for the variations due to temperature drift and manufacturing tolerances
- 4) All attenuation measurements are measured relative to insertion loss

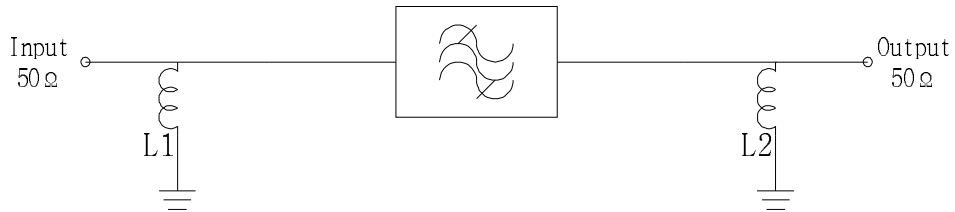
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Ambient temperature range : 25°C		Minimum	Typical	Maximum
Center Frequency	MHz	69.85	70.0	70.15
Insertion Loss	dB	-	7.3	8.0
1dB Bandwidth	MHz	4.0	4.3	-
3dB Bandwidth	MHz	4.6	4.9	-
40dB Bandwidth	MHz	-	7.2	7.6
Amplitude Ripple (Fo +/- 1.85 MHz)	dB	-	0.5	1.0
Group Delay Variation (Fo +/- 1.85 MHz)	nsec	-	70	120
Phase Linearity(Fo +/- 1.575 MHz)	degree	-	3.5	5.0
Absolute Delay	usec	-	1.27	-
Relative Attenuation				
at 0.1 to 66.0 MHz	dB	45	50	-
at 68.0 to 72.0 MHz	dB	-	2.0	3.0
at 74.0 to 120.0 MHz	dB	35	41	-
Temperature Coefficient of Frequency	ppm/°C	-	-86	-

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## 4. Matching Schematic

( Actual matching values may vary due to PCB layout and parasitics )



L1 = 120 nH,      L2 = 82 nH

## 5. Marking Configuration

ITF04A001<sup>1)</sup>

SY270451B<sup>2)</sup>

●<sup>3)</sup>

1) Lot Number

2) Part Number

3) Pad Number 1 Index

## 6. Typical Performance ( at +25°C )

