



SAW Bandpass Filter Specifications

Unit Name	SAW Bandpass Filter
Part Name	SY271451B
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Written by	Checked by	Approved by



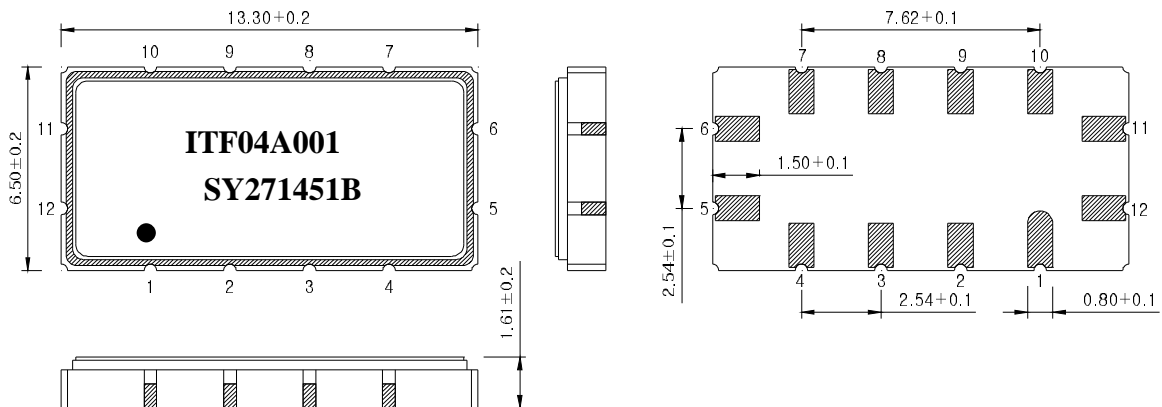
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1. Features

- 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 : Al₂O₃ 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

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	-	12.0	13.5
1dB Bandwidth	MHz	13.3	13.6	-
3dB Bandwidth	MHz	14.2	14.5	-
40dB Bandwidth	MHz	-	18.9	19.8
Amplitude Ripple (Fo +/- 5.75 MHz)	dB	-	0.5	1.0
Group Delay Variation (Fo +/- 5.75 MHz)	nsec	-	30	100
Phase Linearity(Fo +/- 5.75 MHz)	degree	-	30	50
Absolute Delay	usec	-	0.85	-
Relative Attenuation				
at 0.1 to 55.0 MHz	dB	50	55	-
at 55.0 to 60.0 MHz	dB	40	50	-
at 63.35 to 76.65 MHz	dB	-	1.0	3.0
at 80.0 to 85.0 MHz	dB	40	45	
at 85.0 to 110.0 MHz	dB	50	55	-
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

Ambient temperature range : 25 °C		Minimum	Typical	Maximum
Center Frequency	MHz	69.85	70.0	70.15
Insertion Loss	dB	-	12.0	12.7
1dB Bandwidth	MHz	13.3	13.6	-
3dB Bandwidth	MHz	14.2	14.5	-
40dB Bandwidth	MHz	-	18.9	19.8
Amplitude Ripple (Fo +/- 6.1 MHz)	dB	-	0.5	1.0
Group Delay Variation (Fo +/- 6.1 MHz)	nsec	-	30	100
Phase Linearity(Fo +/- 6.1 MHz)	degree	-	10	15
Absolute Delay	usec	-	0.85	-
Relative Attenuation				
at 0.1 to 55.0 MHz	dB	50	55	-
at 55.0 to 60.35 MHz	dB	40	50	-
at 63.0 to 77.0 MHz	dB	-	2.0	3.0
at 79.65 to 85.0 MHz	dB	40	45	
at 85.0 to 110.0 MHz	dB	50	55	-
Temperature Coefficient of Frequency	ppm/°C	-	-86	-

4. Matching Schematic

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



L1 = 180 nH, L2 = 150 nH

5. Marking Configuration

ITF04A001¹⁾

SY271451B²⁾

● ³⁾

1) Lot Number

2) Part Number

3) Pad Number 1 Index

6. Typical Performance (at +25°C)

