BSFSD-1030M-HLAT – SAW Filter

bliley technologies

FEATURES

- ✓ Extended Operating Range (-40 to 95°C)
- ✓ SMD Construction
- ✓ Standard 3x3mm Package
- ✓ RoHS Compliant

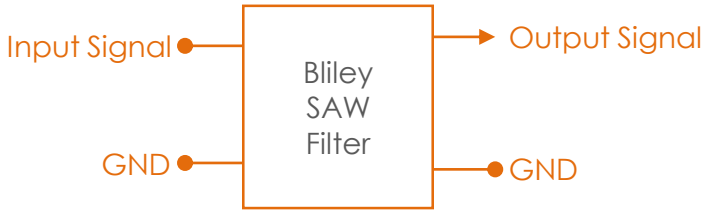
Surface Acoustic Wave Filter

#blileytakesyoufurther

Description

Bliley Surface Acoustic Wave (SAW) filters use Inter-Digital Transducers (IDTs) which enable highly miniaturized filters that can be used for Radio Frequency (RF) signal processing. Bliley rigorous Quality Control Standards provides the framework to provide consistent lot to lot product performance. Bliley SAW Filters are utilized in applications consisting of: Avionics, Instrumentation, Military, SATCOM and DATACOM.

Block Diagram



Part Number Configuration

BSFSD – 1030 M – H L A T

Center Frequency	Bandwidth	Operating Temperature	Termination Impedance
1030MHz	H: ±20MHz	L: -40°C to +95°C	A: 50Ω

Bliley Technologies, Inc. • 2545 W. Grandview Blvd, Erie, PA 16506 • 1-814-838-3571 • bliley.com • info@bliley.com

Performance Specifications

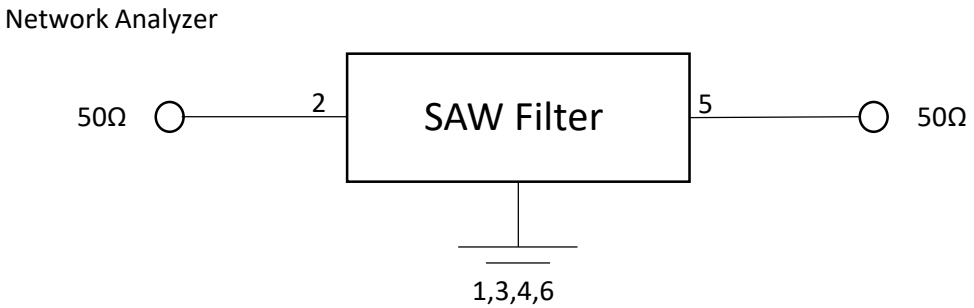
Parameter	Conditions	Values			Unit
General		MIN	TYP	MAX	
Center Frequency		1029	1030	1031	MHz
Bandwidth	@3dB	±20			MHz
Bandwidth	@20dB			±33	MHz
Amplitude Ripple	In passband		0.1	1.5	dB
Insertion Loss	In passband		3.0	3.5	dB
Group Delay Variation	In Passband		5	12	nSec
Attenuation	Reference Level from 0 dB: 0-910 MHz	25	28		dB
	Reference Level from 0 dB: 980-1080 MHz	45			dB
VSWR	@ Fo over entire Temp Range		1.5	1.7	
Termination Impedance (Source and Load)	Zin = Zout	47.5	50	52.5	Ω
Input Power			10	20	dBm
Out of Band Power	960-1008MHz (7µS pulses @ 50% duty cycle)			23	dBm

Note: Electrical parameters valid over the full operating temperature

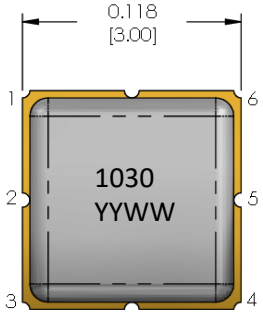
Environmental Compliance

Parameter	Conditions	Values			Unit
		MIN	TYP	MAX	
Operating Temp Range		-40		+95	°C
Storage Temp Range		-55		+105	°C
Shock	MIL-STD-202 Method 213 Test Condition A				
Vibration	MIL-STD-202 Method 214 Test Condition 1C				
Thermal Shock	MILD-STD-202 Method 107 Test Condition A-1				
Altitude	Mean Sea Level			50,000	ft
Moisture Resistance	MIL-STD-202 Method 106 Test Condition C	90%		98%	RH

Measurement Circuit

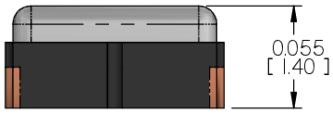


Physical Specifications

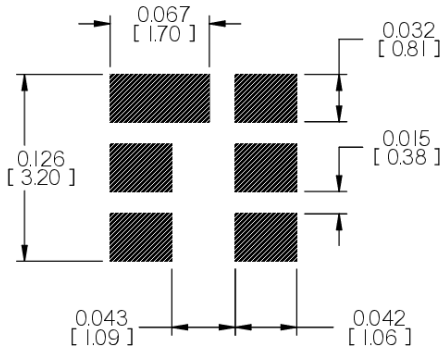


Top

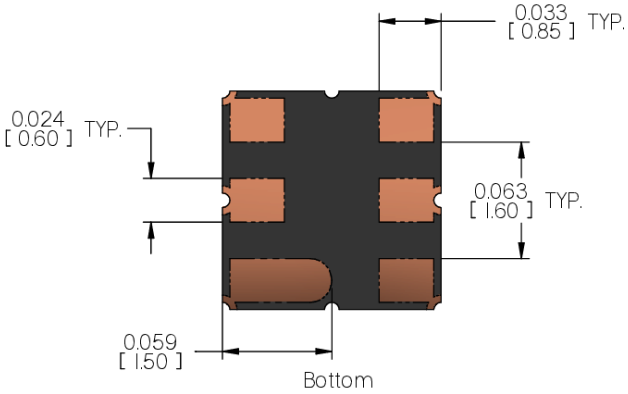
Iso Bottom



Side



Recommended Landing Pattern



Bottom

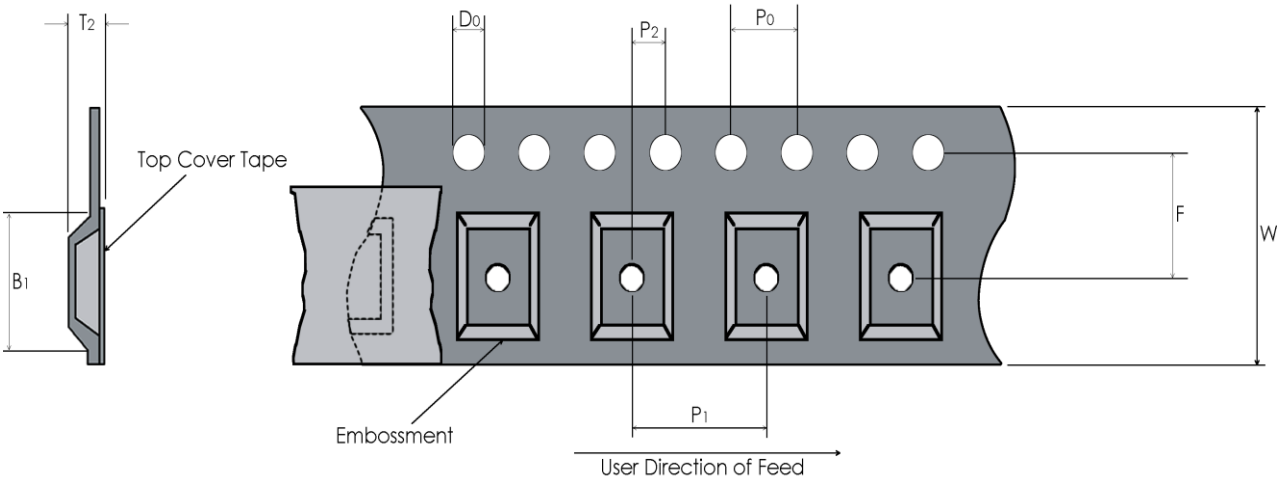
Pin Connections	
1	Ground
2	Input
3	Ground
4	Ground
5	Output
6	Ground

Tolerances (mm) .X = ±0.5, .XX = ±0.2 unless otherwise specified

Notes:

Tape and Reel

Embosed Carrier Dimensions (8mm, 12mm, 16mm, 24mm Tape Only)



Tape Dimensions (mm)								Reel Dimensions (mm)	
W	F	Do	Po	P1	P2	B1	T2	Outside Dia.	Parts / Reel
12	5.5	1.5	4	8	2	3.3	1.4	330	5000

Recommended Reflow Profile

Reflow Profile: in accordance to IPC/JEDEC J-STD-020 (Latest Revision)

Additional Notes:

- This part has been designed for pick and place reflow soldering
- This part may be reflowed once
- This part should not be reflowed in the inverted position

Packaging

Packaging: All packaging must conform to ESD Controls detailed in ANSI/ESD S20.20 (Latest Revision)