THE DATASHEET OF

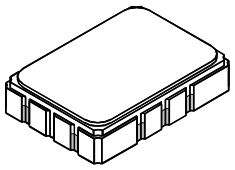
SF2039B-3

RFMi
A BRAND OF AKOUSTIS

SF2039B-3

72.540 MHz SAW Filter

- ***Designed for SDARS IF Receiver***
- ***Low Insertion Loss***
- ***5.0 X 7.0 mm Surface-Mount Case***
- ***Differential or Single Ended Input and Output***
- ***Complies with Directive 2002/95/EC (RoHS)***
- ***Tape and Reel Standard per ANSI/EIA-481***
- ***Moisture Sensitivity Level: 1***
- ***AEC-Q200 Qualified***



SMP-03-S

Absolute Maximum Ratings

Rating	Value	Units
Maximum Incident Power in Passband	+10	dBm
Max. DC voltage between any 2 terminals	30	VDC
Storage Temperature Range	-40 to +85	°C
Max Soldering Profile	265°C for 10 s	

Electrical Characteristics

Characteristic		Sym	Notes	Min	Typ	Max	Units
Nominal Center Frequency		f_C			72.540		MHz
Passband	Insertion Loss	IL			10.5	12.5	dB
	1dB Passband	BW_1		3.7	4.0		MHz
	15dB Bandwidth	BW_{15}			6.5	6.7	MHz
	30dB Bandwidth	BW_{30}			7.5	7.7	MHz
	Amplitude Ripple over fc ±1.85 MHz				0.5	1.3	dB_{P-P}
	Group Delay Variation over fc ±1.85 MHz	GDV			60	150	ns_{P-P}
Rejection	50 to 66.48 MHz			40	47		dB
	66.48 to 68.08 MHz			33.5	43		
	77.30 to 78.60 MHz			38	42		
	78.60 to 86.50 MHz			40	44		
	86.50 to 91.50 MHz			45	50		
	91.50 to 100.00 MHz			45	55		
Operating Temperature Range		T_A		-40		+85	°C
Frequency Temperature Coefficient		FTC			-18		ppm/°C
Differential Input		175 ohms					
Differential Output		1000 ohms					
Case Style				SMP-03-S 5 x 7 mm Nominal Footprint			
Lid Symbolization (YY=year, WW=week, S=shift, ## = Sequence Code)				RFM, SF2039B-3, YYWWS##			

Electrical Connections

Connection	Port 1 Hot	Port 1 Ground Return or Hot	Port 2 Hot	Port 2 Ground Return or Hot	Case Ground
Terminals	10	1	5	6	All Others

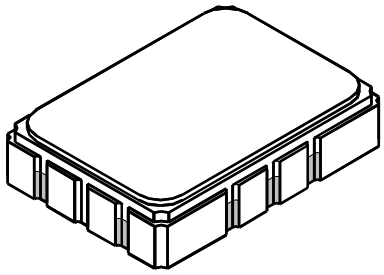
CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

NOTES:

1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

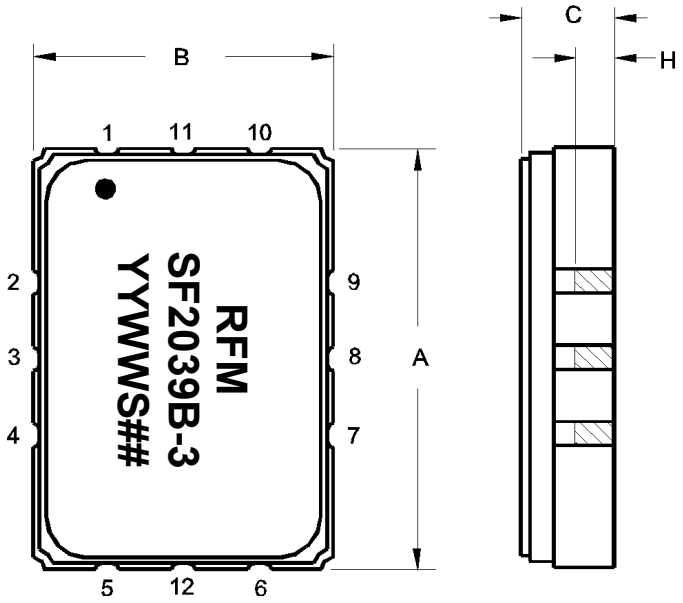
SMP-03-S Case

12-Terminal Ceramic Surface-Mount Case
5 x 7 mm Nominal Footprint

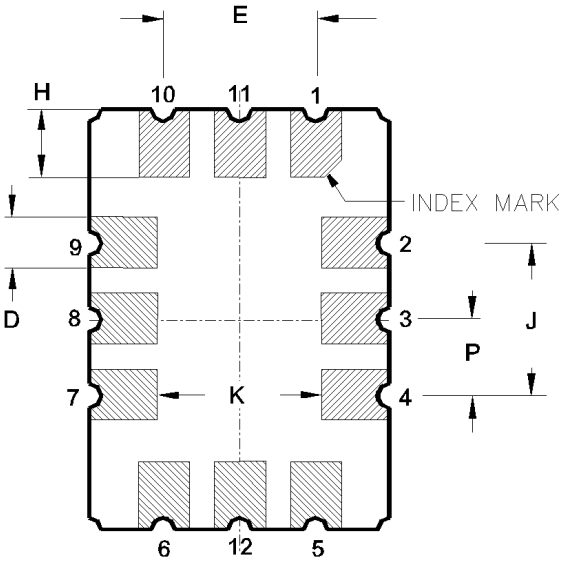


Case Dimensions						
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	6.80	7.00	7.20	0.268	0.276	0.283
B	4.80	5.00	5.20	0.189	0.197	0.205
C		1.65	2.00		0.065	0.079
D		0.80				
E	2.41	2.54	2.67	0.095	0.100	0.105
H	0.87	1.1	1.13	0.034	0.039	0.044
J		2.54				
K	2.87	3.00	3.13	0.113	0.118	0.123
P	1.14	1.27	1.40	0.045	0.050	0.055

Materials	
Solder Pad Termination	Au plating 30 - 60 µinches (76.2-152 µm) over 80-200 µinches (203-508 µm) Ni.
Lid	Fe-Ni-Co Alloy Electroless Nickel Plate (8-11% Phosphorus) 100-200 µinches Thick
Body	Al_2O_3 Ceramic

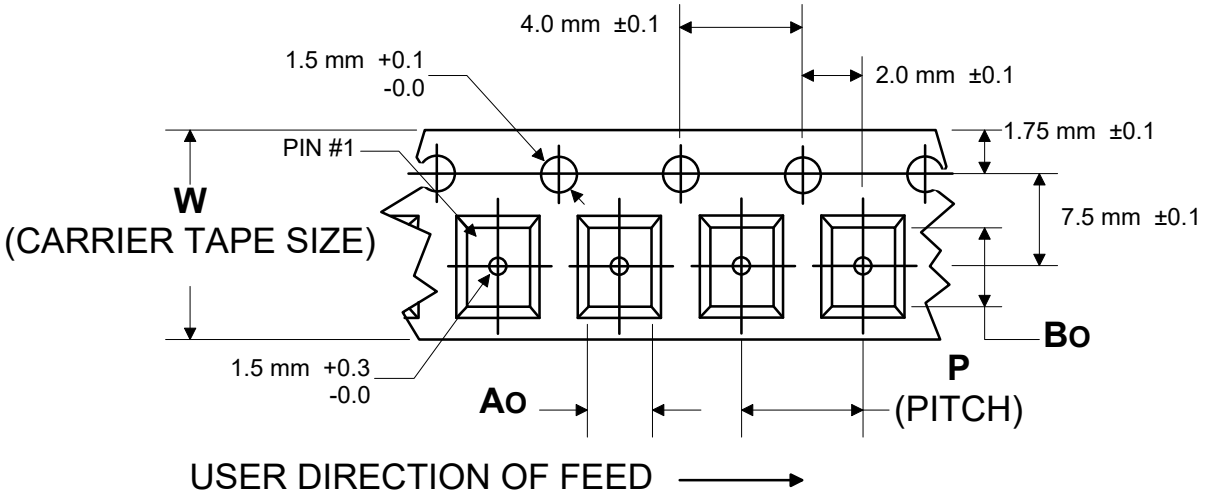


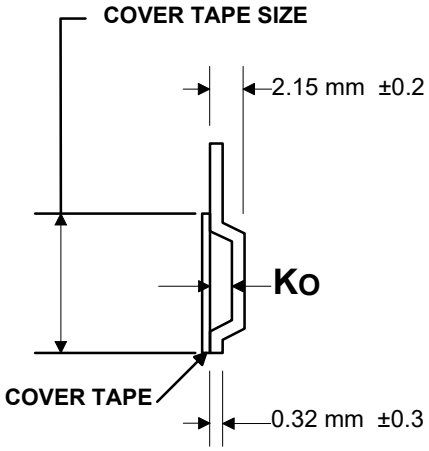
TOP VIEW



BOTTOM VIEW

COMPONENT ORIENTATION and DIMENSIONS

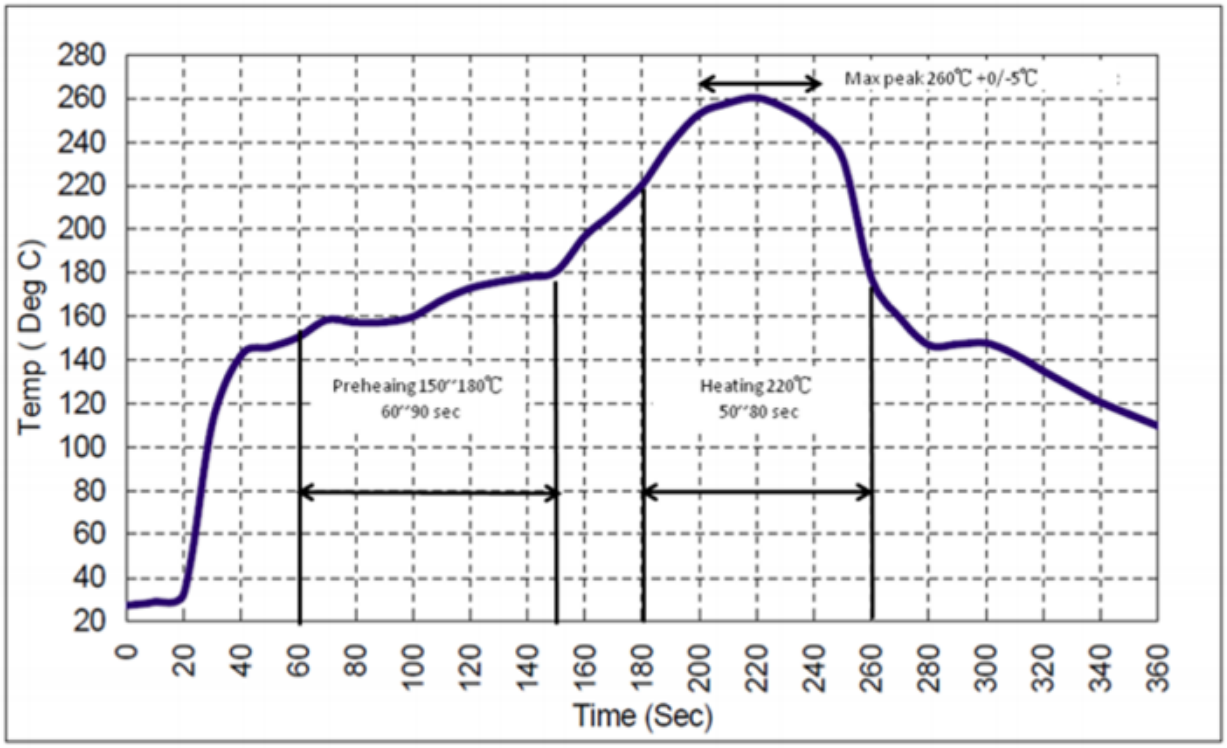




Carrier Tape Dimensions		
Ao	5.5 mm	±0.1
Bo	7.5 mm	±0.1
Ko	2.0 mm	±0.1
Pitch	8.0 mm	±0.1
W	16.0 mm	±0.3

Recommended Reflow Profile

1. Preheating shall be fixed at 150~180°C for 60~90 seconds.
2. Ascending time to preheating temperature 150°C shall be 30 seconds min.
3. Heating shall be fixed at 220°C for 50~80 seconds and at 260°C+0/-5°C peak (10 seconds).
4. Time: 5 times maximum.



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