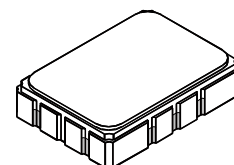


SF2039B-3

72.540 MHz
SAW Filter



SMP-03-S

- *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*

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 $f_c \pm 1.85$ MHz			0.5	1.3	dB _{P,P}
Group Delay Variation over $f_c \pm 1.85$ 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.

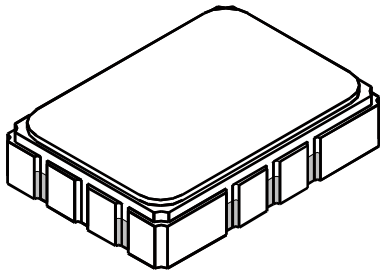
NOTES:

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

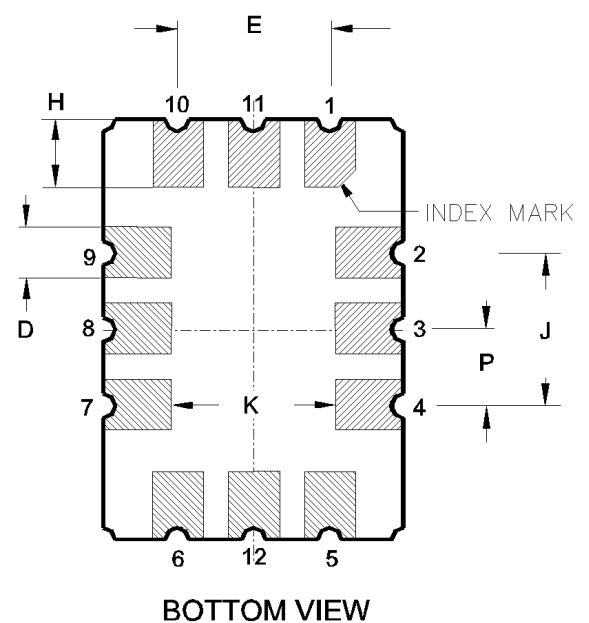
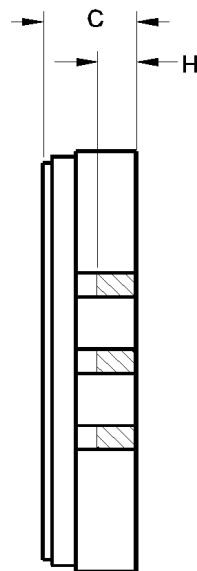
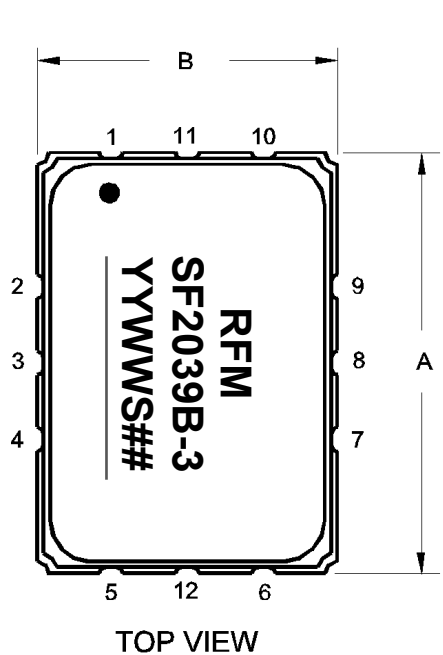


12-Terminal Ceramic Surface-Mount Case 5 x 7 mm Nominal Footprint

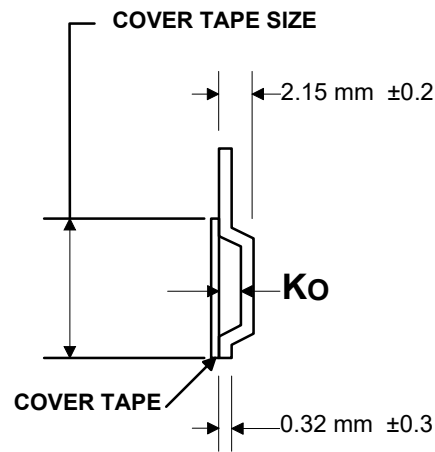
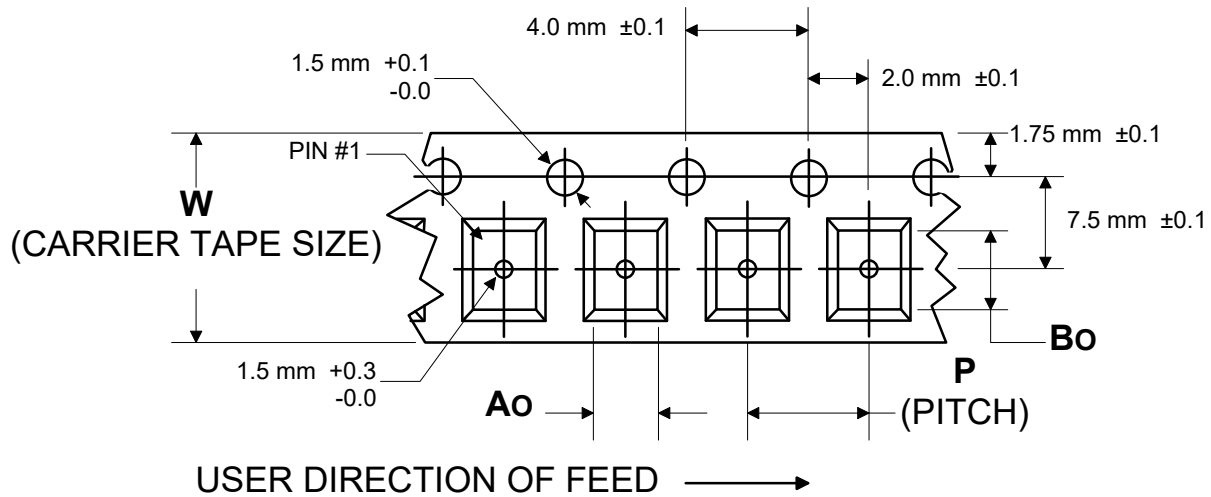


Case Dimensions						
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	6.80	7.00	7.20	0.268	0.276	0.283
B	4.80	5.00	5.20	0.189	0.197	0.205
C		1.65	2.00		0.065	0.079
D		0.80				
E	2.41	2.54	2.67	0.095	0.100	0.105
H	0.87	1.1	1.13	0.034	0.039	0.044
J		2.54				
K	2.87	3.00	3.13	0.113	0.118	0.123
P	1.14	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 ₂ O ₃ Ceramic



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.

