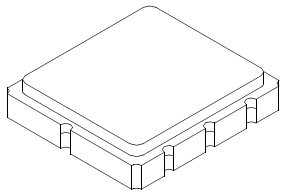
RFMi
A BRAND OF AKOUSTIS

RoHS compliant

SF1174B

374.00 MHz SAW Filter

- ***Designed for WLAN IF Applications***
- ***Low Insertion Loss***
- ***5.0 x 5.0 x 1.7 mm Suface-Mount Case***
- ***Differential or Single Ended Input and Output***
- ***Complies with Directive 2002/95/EC (RoHS)***
- ***Moisture Sensitivity Level: 1***



SM5050-8

Absolute Maximum Ratings

Rating	Value	Units
Maximum Incident Power in Passband	+10	dBm
Maximum DC Voltage Between any Two Terminals	30	VDC
Operable Temperature Range	-45 to +125	°C
Specification Temperature Range	-10 to +85	°C
Storage Temperature Range	-40 to +85	°C
Suitable for lead-free soldering - Maximum Soldering Profile	260°C for 30 s	

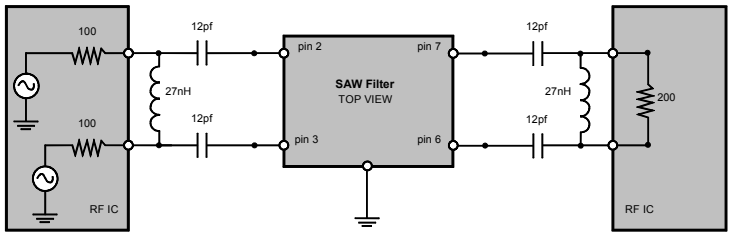
Electrical Characteristics

Characteristic		Sym	Notes	Min	Typ	Max	Units
Nominal Center Frequency		f_C			374.000		MHz
Passband	Insertion Loss at fc	IL			8.7	10.0	dB
	3 dB Passband	BW_3		17	23		MHz
	Amplitude Ripple over fc ±7.0 MHz				0.8	1.0	dB_{P-P}
	Group Delay Variation over fc ±7.0	GDV			61	100	ns_{P-P}
Rejection	fc -100 to fc -33 MHz			45	54		dB
	fc -33 to fc -22 MHz			40	53		
	fc -22 to fc -16.5 MHz			30	40		
	fc +16.5 to fc +22 MHz			30	44		
	fc +22 to fc +43 MHz			35	48		
	fc +43 to fc +100 MHz			40	49		
Operating Temperature Range		T_A		-10		+85	°C

Differential Input / Output Impedance Match	External L-C
Case Style	SM5050-8 5 X 5 mm Nominal Footprint
Lid Symbolization (YY=year, WW=week, S=shift)	447, YWWS

Electrical Connections

Connection	Terminals
Port 1 Hot	2
Port 1 Gnd Return	3
Port 2 Hot	6
Port 2 Gnd Return	7
Case Ground	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.

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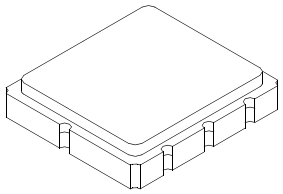
SM5050-8 Case

8-Terminal Ceramic Surface-Mount Case

5.0 X 5.0 mm Nominal Footprint



Case Dimensions

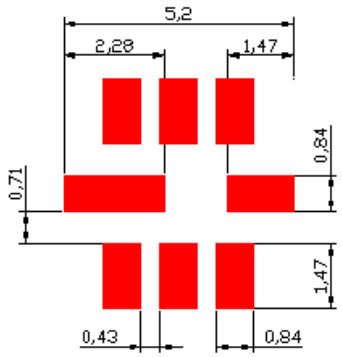
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	4.8	5.0	5.2		0.1968	
B	4.8	5.0	5.2		0.1968	
C			1.7			0.0669
D		2.08			0.0818	
E		1.17			0.046	
F		0.64			0.0252	
G	2.39	2.54	2.69		0.100	

Electrical Connections

Connection		Terminals
Port 1	Differential Input	2,3
Port 2	Differential Output	6,7
	Ground	All others
Single Ended Operation		**Return is ground**
Differential Operation		**Return is hot**
Dot indicates Pin 1		

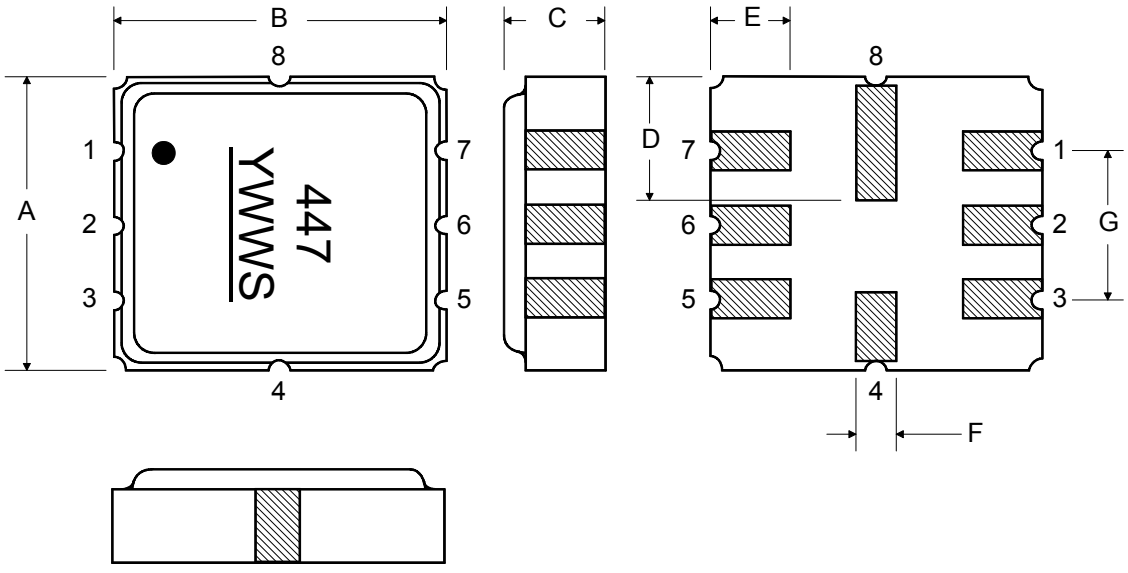
Materials	
Solder Pad Termination	Au plating 30 - 60 µnches (76.2-152 µM) over 80-200 uInches (203-508 µM) Ni.
Lid	Fe-Ni-Co Alloy Electroless Nickel Plate (8-11% Phospho-rus) 100-200 µInches Thick
Body	Al_2O_3 Ceramic

PCB FOOTPRINT



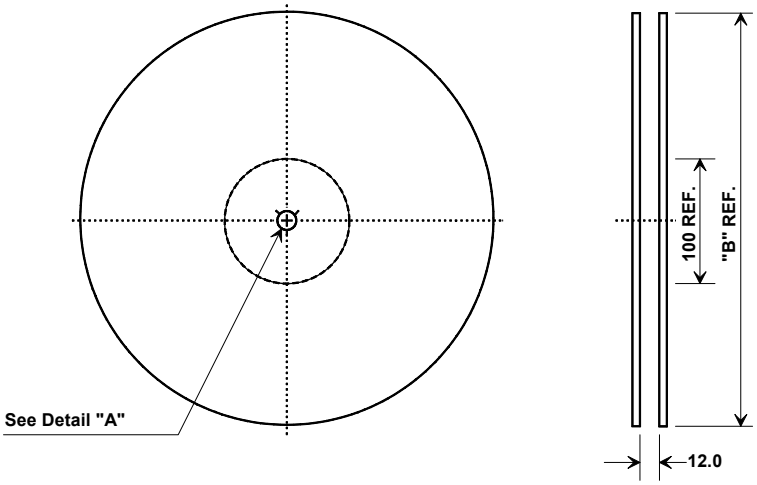
TOP VIEW

BOTTOM VIEW

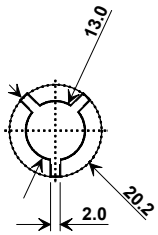


Tape and Reel Specifications

Tape and Reel Standard per ANSI/EIA-481

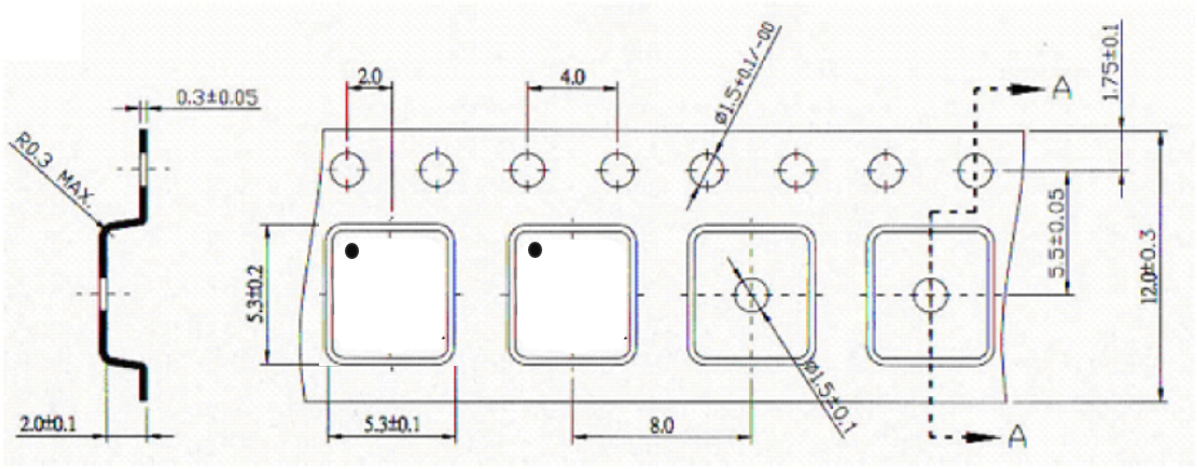


"B " Nominal Size		Quantity Per Reel
Inches	millimeters	
7	178	500
13	330	2000

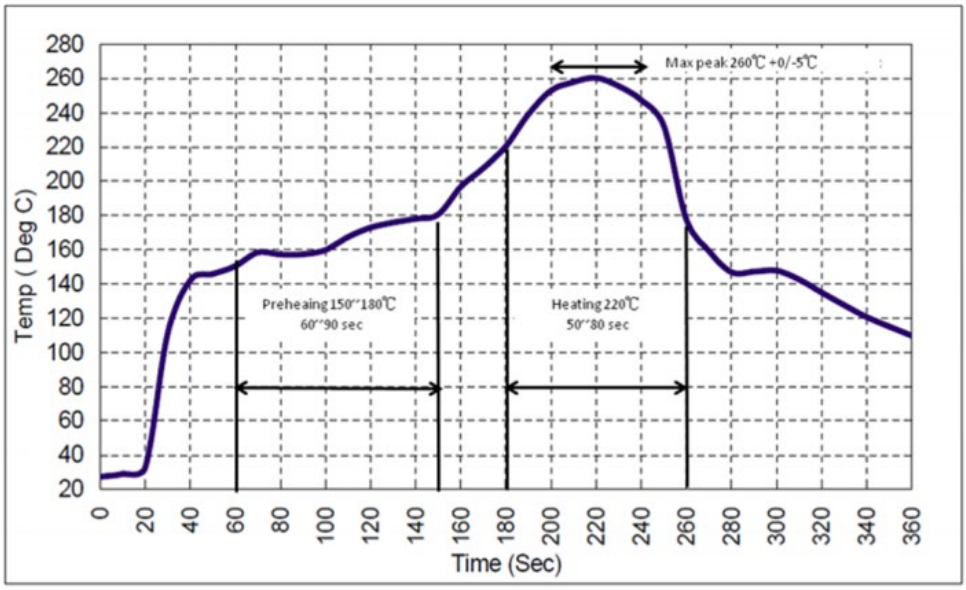


COMPONENT ORIENTATION and DIMENSIONS

Carrier Tape Dimensions	
Ao	5.3 mm
Bo	5.3 mm
Ko	2.0 mm
Pitch	8.0 mm
W	12.0 mm



USER DIRECTION OF FEED

Recommended Reflow Profile

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