

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

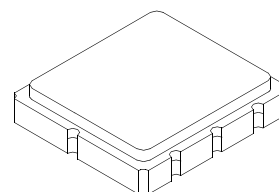


Absolute Maximum Ratings

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	

SF1174B

**374.00 MHz
SAW Filter**



SM5050-8

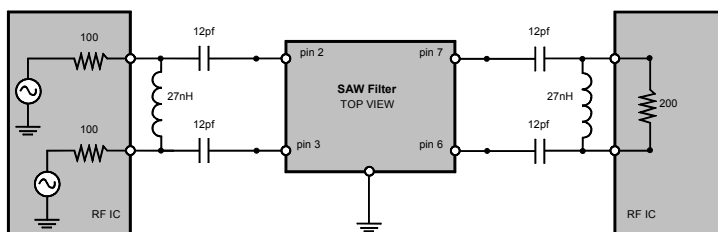
Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Nominal Center Frequency	f_c	1	374.000			MHz
Passband	Insertion Loss at f_c	IL		8.7	10.0	dB
	3 dB Passband	BW ₃	1, 2	17	23	MHz
	Amplitude Ripple over $f_c \pm 7.0$ MHz			0.8	1.0	dB _{P-P}
	Group Delay Variation over $f_c \pm 7.0$	GDV		61	100	ns _{P-P}
Rejection	$f_c - 100$ to $f_c - 33$ MHz	1, 2, 3	45	54		dB
	$f_c - 33$ to $f_c - 22$ MHz		40	53		
	$f_c - 22$ to $f_c - 16.5$ MHz		30	40		
	$f_c + 16.5$ to $f_c + 22$ MHz		30	44		
	$f_c + 22$ to $f_c + 43$ MHz		35	48		
	$f_c + 43$ to $f_c + 100$ MHz		40	49		
Operating Temperature Range	T_A	1	-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, <u>YYWW</u> S

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.

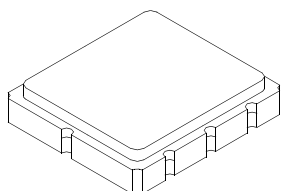
NOTES:

1. Unless noted otherwise, all specifications apply over the operating temperature range with filter soldered to the specified demonstration board with impedance matching to 50 Ω and measured with 50 Ω network analyzer.
2. Unless noted otherwise, all frequency specifications are referenced to the nominal center frequency, f_c .
3. Rejection is measured as attenuation below the minimum IL point in the passband. Rejection in final user application is dependent on PCB layout and external impedance matching design. See Application Note No. 42 for details.
4. "LRIP" or "L" after the part number indicates "low rate initial production"
5. and "ENG" or "E" indicates "engineering prototypes."
6. The design, manufacturing process, and specifications of this filter are subject to change.
7. Either Port 1 or Port 2 may be used for either input or output in the design. However, impedances and impedance matching may vary between Port 1 and Port 2, so that the filter must always be installed in one direction per the circuit design.
8. US and international patents may apply.
9. Murata, stylized Murata logo, and Murata N.A., Inc. are registered trademarks of Murata Manufacturing Co., Ltd.

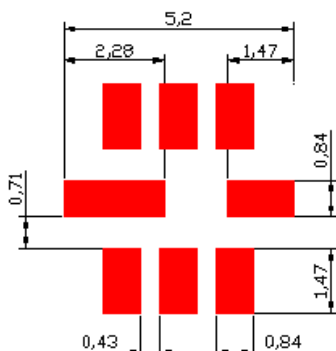
SM5050-8 Case

8-Terminal Ceramic Surface-Mount Case

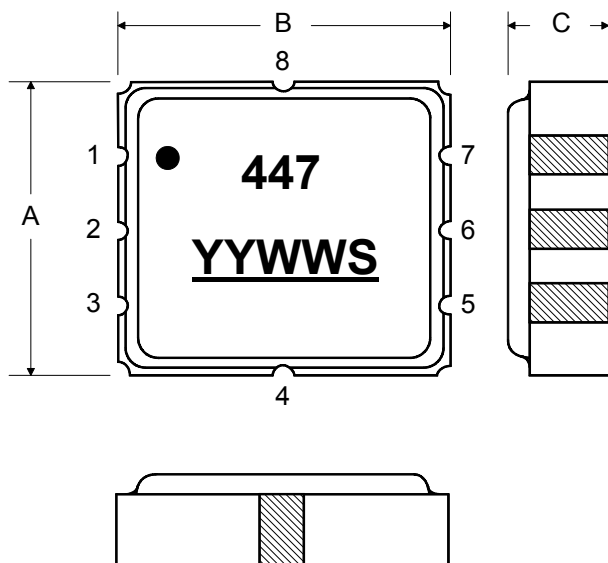
5.0 X 5.0 mm Nominal Footprint



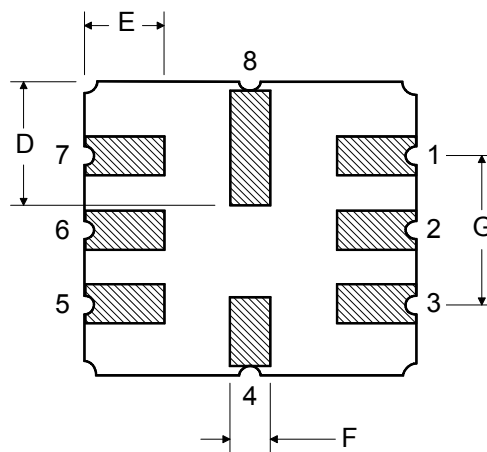
PCB FOOTPRINT



TOP VIEW



BOTTOM VIEW



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	

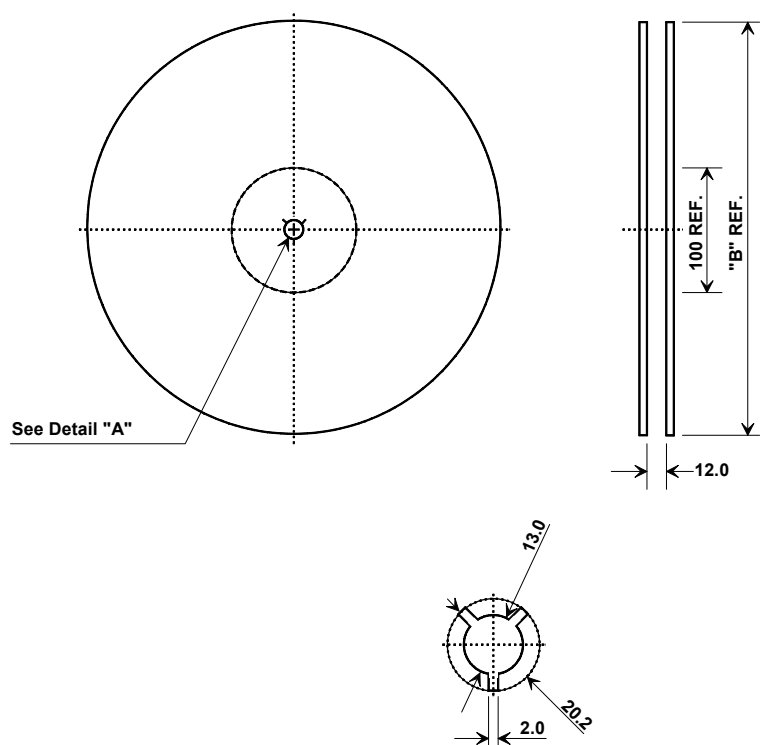
Electrical Connections

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 μ inches (76.2-152 μ m) over 80-200 μ inches (203-508 μ m) Ni.
Lid	Fe-Ni-Co Alloy Electroless Nickel Plate (8-11% Phosphorus) 100-200 μ inches Thick
Body	Al ₂ O ₃ Ceramic
Pb Free	

Tape and Reel Specifications



“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

