

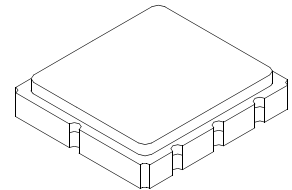
- **Medical Band (402-405 MHz) Front-End Filter**
- **Low-Loss, Coupled-Resonator (Lithium Tantalate) LiTaO<sub>3</sub> Design**
- **Complies with Directive 2002/95/EC (RoHS)<sup>10</sup>**



The RF1419D is a surface-acoustic-wave (SAW) filter designed to provide front-end selectivity in the 402-405 MHz band. This filter is ideal for short range wireless medical data applications where small size and low power consumption are required features. Receiver designs using this filter include superhet, direct conversion or superregen. Murata's advanced SAW design and fabrication technology is utilized to achieve high performance and optimum loss with simple external impedance matching.

**RF1419D**

**403.5 MHz  
SAW Filter**



**SM3838-8 Case  
3.8 x 3.8**

Characteristic	Sym	Notes	Minimum	Typical	Maximum	Units
Center Frequency at 25°C Absolute Frequency	$f_c$	1, 2, 3		403.5		MHz
Insertion Loss	$IL_{MIN}$	1, 3		1.60	2.5	dB
Passband Ripple (Relative to $IL_{MIN}$ ) 402-405 MHz		1, 3		1.10	1.25	dB
3 dB Bandwidth	$BW_3$	1, 3	3.0	7.5		MHz
Rejection Attenuation: (relative to $IL_{min}$ )		1, 3	358.5 MHz	40	65	dB
			358.5 - 384 MHz	35	50	
			415 - 423 MHz	25	35	
			423 - 503 MHz	40	50	
Temperature	Freq. Temp. Coefficient	FTC		-37		ppm/k
Frequency Aging	Absolute Value during the First Year	$ fA $		≤10		ppm/yr
Impedance Match	Input/Output			50 Ohms		
Lid Symbolization (Y=year WW=week S=shift)			560 // YWWS			
Standard Reel Quantity	Reel Size 7 Inch	9	500 Pieces/Reel			
	Reel Size 13 Inch		3000 Pieces/Reel			



**CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

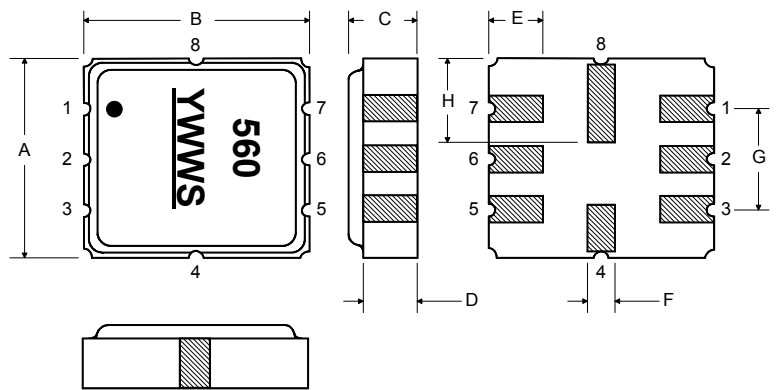
**NOTES:**

1. Unless noted otherwise, all measurements are made with the filter installed in the specified test fixture which is connected to a 50 Ω test system.
2. The frequency  $f_c$  is defined as the midpoint between the 3dB frequencies.
3. Where noted specifications apply over the entire specified operating temperature range of -10°C to +60°C.
4. Frequency aging is the change in  $f_c$  with time and is specified at +65°C or less. Aging may exceed the specification for prolonged temperatures above +65°C. Typically, aging is greatest the first year after manufacture, decreasing significantly in subsequent years.
5. The design, manufacturing process, and specifications of this device are subject to change.
6. One or more of the following U.S. Patents apply: 4,54,488, 4,616,197, and others pending.
7. All equipment designs utilizing this product must be approved by the appropriate government agency prior to manufacture or sale.
8. Tape and Reel Standard Per ANSI / EIA 481.
9. This product complies with Directive 2002/95/EC of the European Parliament and of the Council of 27 January 2003 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

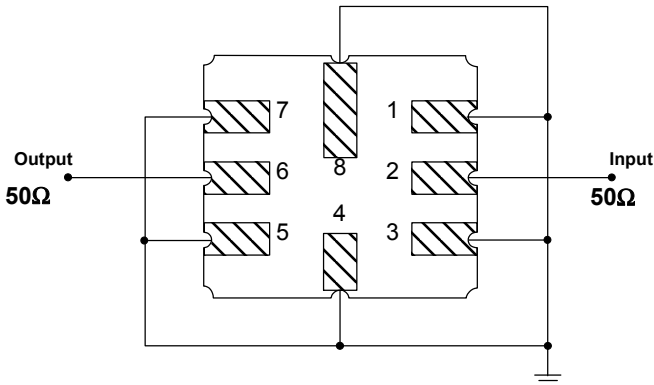
Rating	Value	Units
Input Power Level	10	dBm
DC Voltage	3	VDC
Storage Temperature	-40 to +85	°C
Soldering Temperature	(10 seconds / 5 cycles max.)	°C

### Electrical Connections

Pin	Connection
1	Ground
2	Input
3	Ground
4	Ground
5	Ground
6	Output
7	Ground
8	Ground



### Matching Circuit to 50Ω



### Case Dimensions

Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	3.6	3.8	4.0	0.14	0.15	0.16
B	3.6	3.8	4.0	0.14	0.15	0.16
C	1.00	1.20	1.40	0.04	0.05	0.055
D	0.95	1.10	1.25	0.033	0.043	0.05
E	0.90	1.0	1.10	0.035	0.04	0.043
F	0.50	0.6	0.70	0.020	0.024	0.028
G	2.39	2.54	2.69	0.090	0.100	0.110
H	1.40	1.75	2.05	0.055	0.069	0.080

15 Aug 2005 09:03:19

