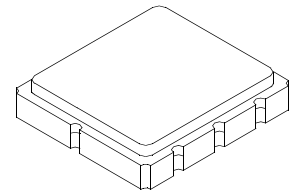


RF1385D

**869.85 MHz
SAW Filter**



SM3838-8

- **Ideal Front-End Filter for Wireless Receivers**
- **Low-Loss, Coupled-Resonator Quartz Design**
- **Simple External Impedance Matching**
- **Complies with Directive 2002/95/EC (RoHS)**
- **Moisture Sensitivity Level: 1**

The RF1385D is a low-loss, compact, and economical surface-acoustic-wave (SAW) filter designed to provide front-end selectivity in 869.85 MHz receivers.

Electrical Characteristics

Characteristic		Sym	Notes	Minimum	Typical	Maximum	Units
Center Frequency @ 25°C	Absolute Frequency	f_c			869.85		MHz
	Tolerance from 869.85	Δf_c			± 150		kHz
Insertion Loss		IL			5.0	8.5	dB
3 dB Bandwidth		BW_3		600	900	1200	kHz
Rejection	at $f_c - 21.4$ MHz (Image)			37	44		dB
	at $f_c - 10.7$ MHz (LO)			15	30		
	Ultimate				80		
Temperature	Operating Case Temp.	T_C		-40		+85	°C
	Turnover Temperature	T_O		25	35	50	°C
	Turnover Frequency	f_O			f_c		MHz
	Freq. Temp. Coefficient	FTC			0.032		ppm/°C ²
Frequency Aging	Absolute Value during the First Year	fA			< ± 10		ppm/yr
Impedance @ f_c	Input $Z_{IN} = R_{IN}/C_{IN}$	Z_{IN}		88.8 // 4.78pf			
	Output $Z_{OUT} = R_{OUT}/C_{OUT}$	Z_{OUT}		29.16 // 4.98pf			
Lid Symbolization (Y= Year, WW = Week, S = Shift)		502, YWWS					
Standard Reel Quantity	Reel Size 7 Inch	500 Pieces/Reel					
Standard Reel Quantity	Reel Size 13 Inch	3000 Pieces/Reel					

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

NOTES:

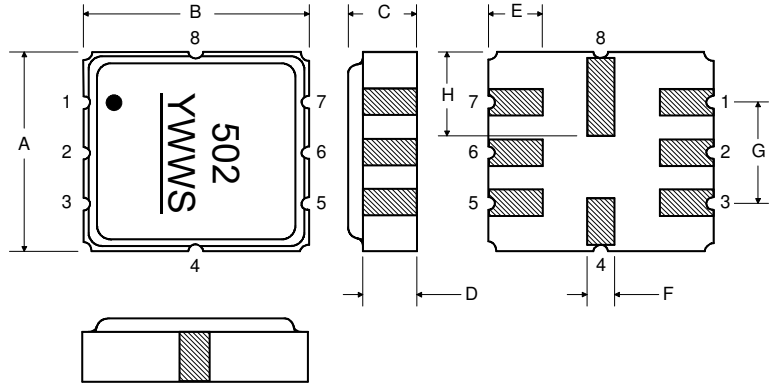
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

Absolute Maximum Ratings

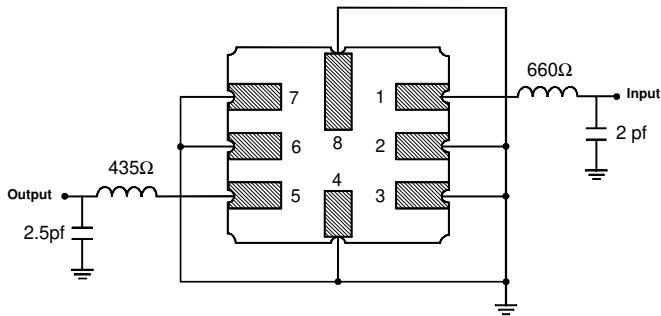
Rating	Value	Units
Input Power Level	10	dBm
DC Voltage	12	VDC
Storage Temperature	-40 to +85	°C
Soldering Temperature (10 seconds / 5 cycles MAX.)	260	°C

Electrical Connections

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

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.

