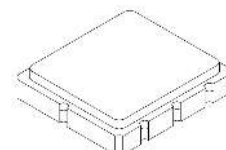


# RF3396D

## 434.420 MHz SAW Filter



**SM3838-8 Case**  
**3.8 x 3.8**

- *RF Front-end Filter for European Wireless Receivers*
- *Low-Loss, Coupled-Resonator Quartz Design*
- *Simple External Impedance Matching*
- *Complies with Directive 2002/95/EC (RoHS)*
- *Tape and Reel Standard per ANSI/EIA-481*
- *Moisture Sensitivity Level: 1*
- *AEC-Q200 Qualified*

The RF3396D is a low-loss, compact, and economical surface-acoustic-wave (SAW) filter designed to provide front-end selectivity in 434.42 MHz receivers. Receiver designs using this filter include superhet with 10.7 MHz or 500 kHz IF, direct conversion and superregen. Typical applications of these receivers are wireless remote-control and security devices operating in Europe under ETSI I-ETS 300 220.

This coupled-resonator filter (CRF) uses selective null placement to provide suppression, typically greater than 40 dB, of the LO and image spurious responses of superhet receivers with 10.7 MHz IF. RFMi's advanced SAW design and fabrication technology is utilized to achieve high performance and very low loss with simple external impedance matching.

Characteristic	Sym	Notes	Minimum	Typical	Maximum	Units
Center Frequency at 25°C Absolute Frequency	$f_c$			434.420		MHz
Insertion Loss	$IL_{MIN}$			1.8	2.5	dB
Passband Ripple (Relative to $IL_{MIN}$ ) $F_c \pm 200$ kHz				0.5	1.0	dB
3 dB Bandwidth	$BW_3$		850	900	950	kHz
Rejection Attenuation: (relative to $IL_{min}$ )	10 - 420 MHz		40	43		dB
	420 - 427 MHz		33	36		
	427 - 431 MHz		27	30		
	431 - 433.2 MHz		10	13		
	435.92 - 439 MHz		6	10		
	439 - 447 MHz		20	23		
447 - 1000 MHz		34	37			
Temperature Freq. Temp. Coefficient	FTC			0.032		ppm/ °C <sup>2</sup>
Frequency Aging Absolute Value during the First Year	$ fA $			≤10		ppm/yr
Impedance @ $f_c$	Input $Z_{IN} = R_{IN}    C_{IN}$	$Z_{IN}$		TBD		
	Output $Z_{OUT} = R_{OUT}    C_{OUT}$	$Z_{OUT}$		TBD		
Lid Symbolization (Y=year WW=week S=shift)			842, YWWS			
Standard Reel Quantity	Reel Size 7 Inch			500 Pieces/Reel		
	Reel Size 13 Inch			3000 Pieces/Reel		

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

**NOTES:**

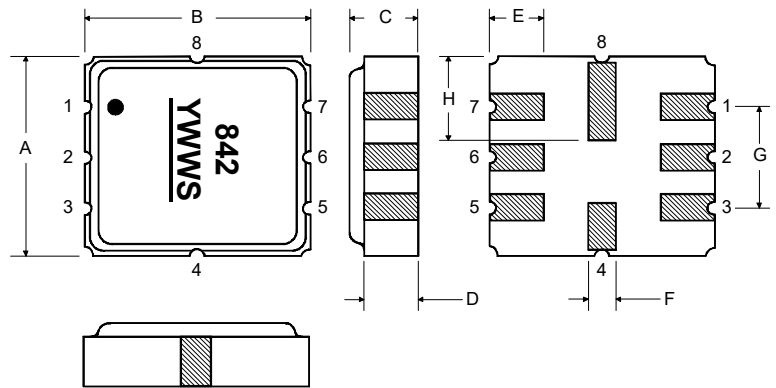
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

Characteristic	Value	Units
Input Power Level	10	dBm
DC Voltage	12	VDC
Storage Temperature	-40 to +125	°C
Operable Temperature Range	-40 to +125	°C
Soldering Temperature (10 seconds / 5 cycles max.)	260	°C

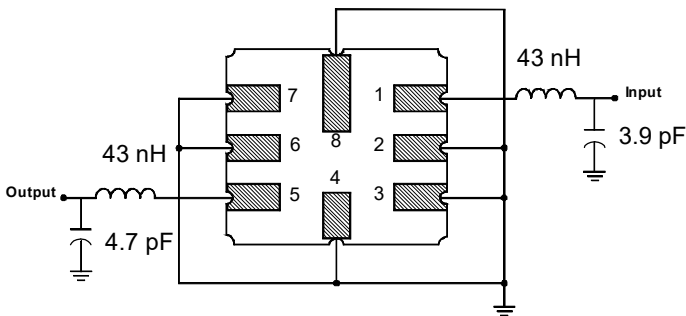
PRIMARY

Electrical Connections

Pin	Connection
1	Input
2	Input Ground
3	Ground
4	Case Ground
5	Output
6	Output Ground
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.

