

- **Ideal Front-End Filter for European Wireless Receivers**
- **Low-Loss, Coupled-Resonator Quartz Design**
- **Simple External Impedance Matching**
- **Complies with Directive 2002/95/EC (RoHS)¹⁰**

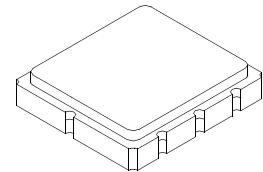


The RF3391D is a low-loss, compact, and economical surface-acoustic-wave (SAW) filter designed to provide front-end selectivity in 433.42 MHz receivers. Receiver designs using this filter include superhet with 10.7 MHz or 500 kHz IF, direct conversion and superregen. Typical applications of these receivers are wireless remote-control and security devices operating in Europe under ETSI I-ETS 300 220.

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

RF3391D

**433.42 MHz
SAW Filter**



**SM3838-8 Case
3.8 x 3.8**

Electrical Characteristics

Characteristic	Sym	Notes	Minimum	Typical	Maximum	Units
Center Frequency at 25°C	f_c			433.42		MHz
Insertion Loss	IL_{MIN}			2.8	3.5	dB
Passband Ripple (Relative to IL_{MIN}) $f_c \pm 200$ kHz				1.2	1.8	dB
3 dB Bandwidth	BW_3		500	600	800	kHz
Rejection relative to IL_{MIN}	10 - 415 MHz		40	43	dB	
	415 - 425 MHz		30	33		
	425 - 431 MHz		20	23		
	435 - 440 MHz		10	13		
	445 - 450 MHz		30	33		
450 - 1000 MHz		40	43			
Temperature 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}	137.18 Ω 7.58 pF			
	Output $Z_{OUT} = R_{OUT} C_{OUT}$	Z_{OUT}	126.97 Ω 7.87 pF			
Lid Symbolization (Y=year WW=week S=shift)	739, <u>YWWS</u>					
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.

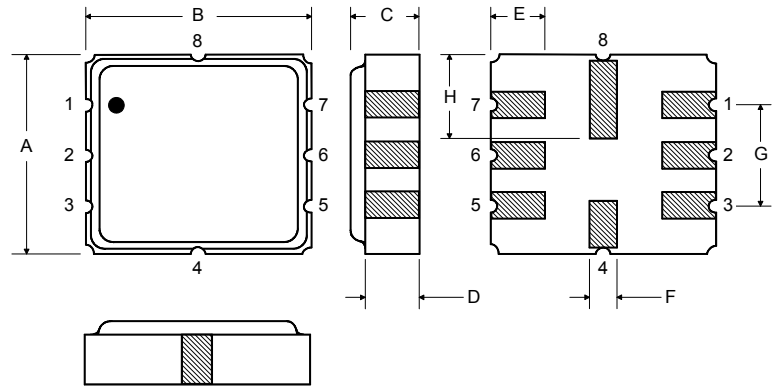
NOTES:

1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.

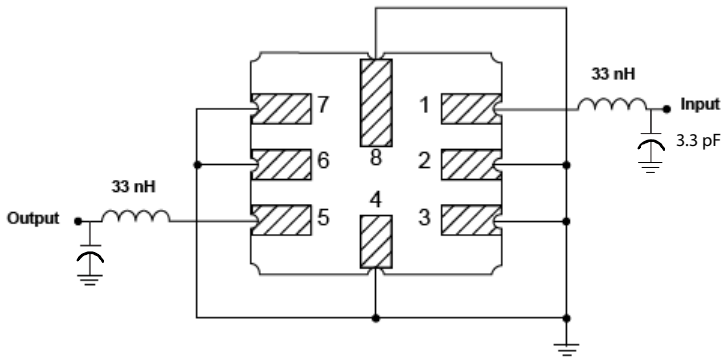
PRIMARY

Electrical Connections

Pin	Connection
1	Input Ground
2	Input
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.

