RFMi
A BRAND OF AKOUSTIS

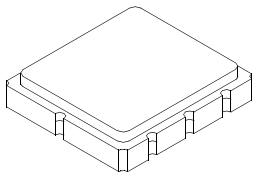
RoHS compliant

RF3391D

433.42 MHz SAW Filter

- ***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)***
- ***Moisture Sensitivity Level: 1***
- ***AEC-Q200 Qualified***

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.



SM3838-8 Case
3.8 x 3.8

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

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 ±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/°C²
Frequency Aging	Absolute Value during the First Year	|fA|			≤10		ppm/yr
Impedance @ fc	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, 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.

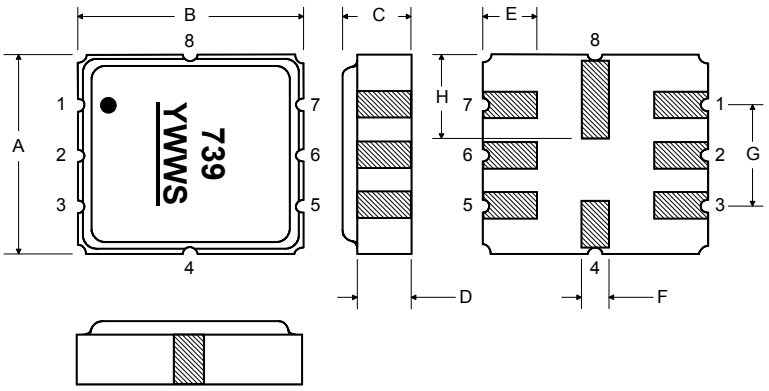
NOTES:

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.

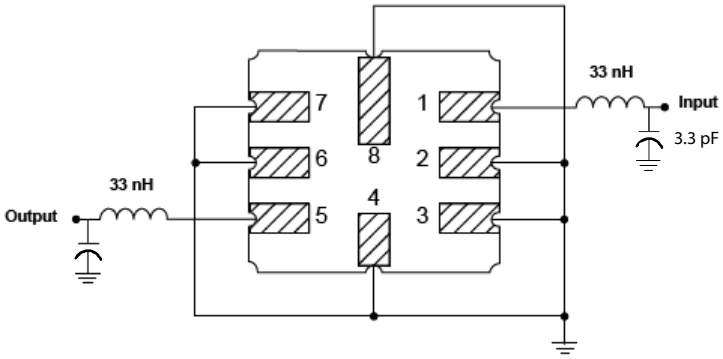
PRIMARY

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 150~180ºC for 60~90 seconds.
2. Ascending time to preheating temperature 150ºC shall be 30 seconds min.
3. Heating shall be fixed at 220ºC for 50~80 seconds and at 260ºC +0/-5ºC peak (10 seconds).
4. Time: 5 times maximum.