RFMi
A BRAND OF AKOUSTIS

RoHS compliant

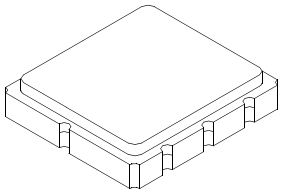
RF1396C

434.42 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)***
- ***Tape and Reel Standard per ANSI/EIA-481***
- ***Moisture Sensitivity Level: 1***
- ***AEC-Q200 Qualified***

The RF1396C is a low-loss, compact, and economical surface-acoustic-wave (SAW) filter designed to provide front-end selectivity in 434.420 MHz receivers. Receiver designs using this filter include superheterodynes with 10.7 MHz or 500 kHz IF, direct conversions and super-regeneratives. 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.



SM5050-8 Case
5 x 5

Characteristic		Sym	Notes	Minimum	Typical	Maximum	Units
Center Frequency at 25°C	Absolute Frequency	f_c			434.420		MHz
	Tolerance from 434.420 MHz	Δf_C				±160	kHz
Insertion Loss		IL			3.0	5.0	dB
3 dB Bandwidth		BW_3		500	700	800	kHz
Rejection	at f_c - 21.4 MHz (Image)			40	-		dB
	at f_c - 10.7 MHz (LO)			30	-		
	Ultimate				-		
Temperature	Operating Case Temp.	T_C		-40		+85	°C
	Turnover Temperature	T_O		15	25	35	°C
	Turnover Frequency	f_O			f_c		MHz
	Frequency Temperature Coefficient	FTC			0.032		ppm/°C^2
Frequency Aging	Absolute Value during the First Year	|fA|			≤10		ppm/yr
Impedance @ fc	Input $Z_{IN} = R_{IN} \parallel C_{IN}$	Z_{IN}		227 Ω || 3.3 pF			
	Output $Z_{OUT} = R_{OUT} \parallel C_{OUT}$	Z_{OUT}		227 Ω || 3.3 pF			
Lid Symbolization (Y=year WW=week S=Shift)		427 YWWS					
Standard Reel Quantity	7 Incn Reel	500 Pieces/Reel					
Standard Reel Quantity	13 Inch Reel	3000 Pieces/Reel					

CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

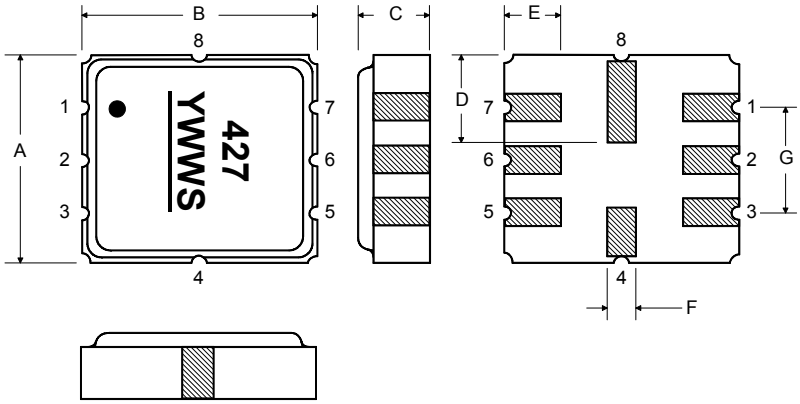
NOTES:

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.

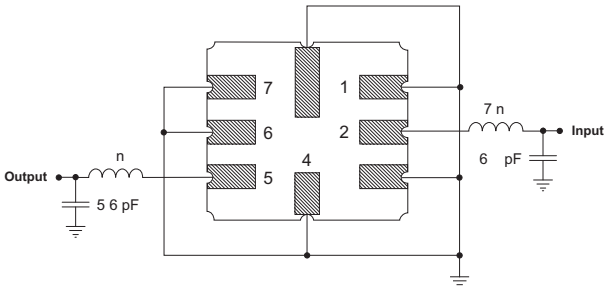
Rating		Value	Units
Input Power Level		10	dBm
DC Voltage		12	VDC
Storage Temperature		-40 to +85	°C
Soldering Temperature	(10 seconds / 5 cycles max.)	260	°C

Electrical Connections

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



Matching Circuit to 50Ω



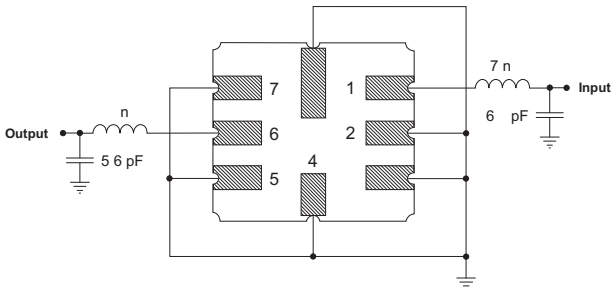
Case Dimensions

Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	4.8	5.0	5.2	0.189	0.197	0.205
B	4.8	5.0	5.2	0.189	0.197	0.205
C			1.7			0.067
D		2.08			0.082	
E		1.17			0.046	
F		0.64			0.025	
G	2.39	2.54	2.69	0.094	0.100	0.106

Optional
Electrical Connections

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

Matching Circuit to 50Ω



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.