![Chipsmall logo]

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

RF1391C

433.42 MHz SAW Filter

SM5050-8 Case
5 x 5

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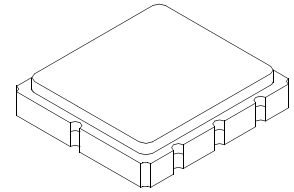- *Complies with Directive 2002/95/EC (RoHS)*

The RF1391C 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.

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. Murata's advanced SAW design and fabrication technology is utilized to achieve high performance and very low loss with simple external impedance matching.

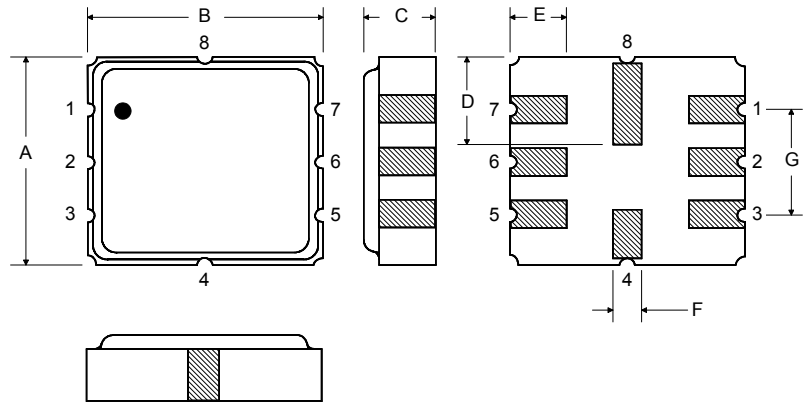| Characteristic		Sym	Notes	Minimum	Typical	Maximum	Units
Center Frequency at 25°C	Absolute Frequency	f_C	1, 2		433.42		MHz
	Tolerance from 433.42 MHz	Δf_C				-120/+200	kHz
Insertion Loss		IL	1		3.0	5.0	dB
3 dB Bandwidth		BW_3	1, 2	500	600	750	kHz
Rejection	at f_C - 21.4 MHz (Image)			40	50		
	at f_C - 10.7 MHz (LO)		1	30	40		dB
	Ultimate				80		
Temperature	Operating Case Temp.	T_C		-40		+85	°C
	Turnover Temperature	T_O	3, 4	15	25	35	°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|	5		≤10		ppm/yr
Impedance @ fc	Input $Z_{IN} = R_{IN}//C_{IN}$	Z_{IN}	1	212 Ω // 3.1 pF			
	Output $Z_{OUT} = R_{OUT}//C_{OUT}$	Z_{OUT}		212 Ω // 3.1 pF			
Lid Symbolization (Y=year WW=week S=Shift)		415 YWWS					
Standard Reel Quantity	7 Inch Reel	500 pieces/reel					
Standard Reel Quantity	13 Inch Reel	3000 pieces/reel					

CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

NOTES:

1. Unless noted otherwise, all measurements are made with the filter installed in the specified test fixture which is connected to a 50 Ω test system with VSWR ≤ 1.2:1. The test fixture L and C are adjusted for minimum insertion loss at the filter center frequency, f_C. Note that insertion loss and bandwidth and passband shape are dependent on the impedance matching component values and quality.
2. The frequency f_C is defined as the midpoint between the 3dB frequencies.
3. Where noted specifications apply over the entire specified operating temperature range.
4. The turnover temperature, T_O, is the temperature of maximum (or turnover) frequency, f_o. The nominal frequency at any case temperature, T_c, may be calculated from: $f = f_o [1 - FTC (T_O - T_c)^2]$.
5. Frequency aging is the change in fc with time and is specified at +65°C or less. Aging may exceed the specification for prolonged temperatures above +65°C. Typically, aging is greatest the first year after manufacture, decreasing significantly in subsequent years.
6. The design, manufacturing process, and specifications of this device are subject to change without notice.
7. One or more of the following U.S. Patents apply: 4,54,488, 4,616,197, and others pending.
8. All equipment designs utilizing this product must be approved by the appropriate government agency prior to manufacture or sale.
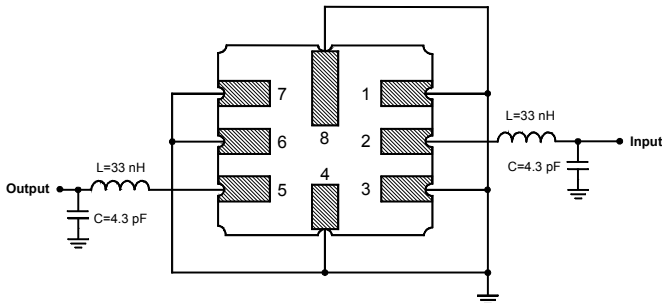
Rating		Value	Units
Input Power Level		10	dBm
DC Voltage		12	VDC
Storage Temperature		-40 to +85	°C
Soldering Temperature	(10 seconds / 5 cycles max.)	260	°C

Electrical Connections

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

Matching Circuit to 50Ω

L=33 nH

L=33 nH

C=4.3 pF

Output

C=4.3 pF

Input

Optional

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

33 nH

33 nH

4.3 pF

Output

4.3 pF

Input

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

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