RFM products are now Murata products.

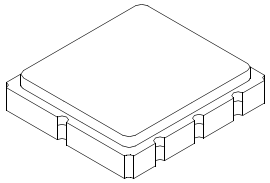
RF3414E

372.5 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)***

The RF3414E is a low-loss, compact, and economical surface-acoustic-wave (SAW) filter designed to provide front-end selectivity in 372.5 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, in Germany under FTZ 17 TR 2100, in the United Kingdom under DTI MPT 1340 (for automotive only), in France under PTT Specifications ST/PAA/TPA/AGH/1542, and in Scandinavia.

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 (not included).



SM3030-6 Case
3.0 x 3.0

Characteristic		Sym	Notes	Minimum	Typical	Maximum	Units
Center Frequency @ 25°C	Absolute Frequency	f_C	1, 2, 3	372.420	372.5	372.580	MHz
Insertion Loss		IL	1		2.4	3.0	dB
3 dB Bandwidth		BW_3	1, 3	300	400	500	kHz
Rejection	0 - 354 MHz		1, 3, 10, 11	40	43		dB
	354 - 364 MHz			35	38		
	364 - 369 MHz			25	28		
	369 - 370 MHz			14	17		
	374 - 378 MHz			25	28		
	378 - 380 MHz			15	18		
	380 - 382 MHz			20	23		
	382 - 389 MHz			25	28		
	389 - 1000 MHz			40	43		
Temperature	Freq. Temp. Coefficient	FTC	3, 4		0.032		ppm/°C^2
Frequency Aging	Absolute Value during the First Year	|fA|	5		<±10		ppm/yr
Impedance @ f_C	Input $Z_{IN} = R_{IN}/C_{IN}$	Z_{IN}	1	887Ω // 4.7pF			
	Output $Z_{OUT} = R_{OUT}/C_{OUT}$	Z_{OUT}		908Ω // 4.0pF			
Lid Symbolization (in addition to Lot and/or Date Codes)		720 // YWWS					
Standard Reel Quantity	7 Inch Reel		9	500 Pieces/Reel			
Standard Reel Quantity	13 Inch Reel			3000 Pieces/Reel			

CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

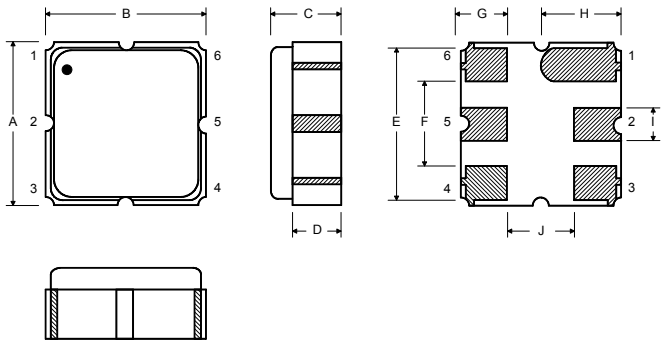
NOTES:

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 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 of -40 to 90°C.
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.
9. Tape and Reel Standard for ANSI / EIA 481.
10. These values are attainable by using the optional pin out.
11. Typical rejection is defined as the typical rejection at the worst frequency in the band.

Rating		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

Electrical Connections

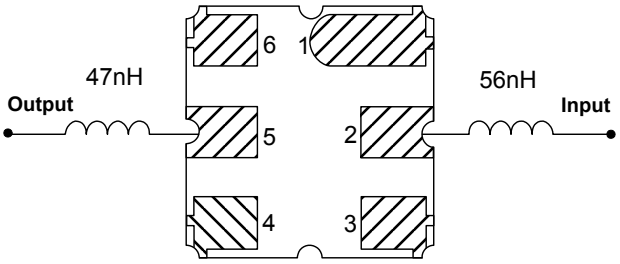
Pin	Connection
1	Input Ground
2	Input
3	Ground
4	Output Ground
5	Output
6	Ground



Case Dimensions

Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	2.87	3.0	3.13	0.113	0.118	0.123
B	2.87	3.0	3.13	0.113	0.118	0.123
C	1.12	1.25	1.38	0.044	0.049	0.054
D	0.77	0.90	1.03	0.030	0.035	0.040
E	2.67	2.80	2.93	0.105	0.110	0.115
F	1.47	1.6	1.73	0.058	0.063	0.068
G	0.72	0.85	0.98	0.028	0.033	0.038
H	1.37	1.5	1.63	0.054	0.059	0.064
I	0.47	0.60	0.73	0.019	0.024	0.029
J	1.17	1.30	1.43	0.046	0.051	0.056

Matching Circuit to 50Ω



OPTIONAL **Electrical Connections**

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

Matching Circuit to 50Ω