

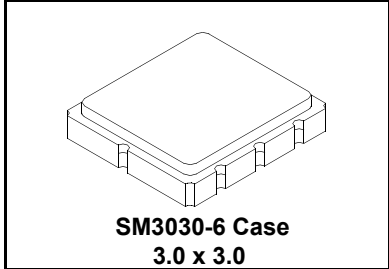


**THE DATASHEET OF
RF3414E**



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

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. RFMi's advanced SAW design and fabrication technology is utilized to achieve high performance and very low loss with simple external impedance matching (not included).

Characteristic	Sym	Notes	Minimum	Typical	Maximum	Units
Center Frequency @ 25°C Absolute Frequency	f_c		372.420	372.5	372.580	MHz
Insertion Loss	IL			2.4	3.0	dB
3 dB Bandwidth	BW ₃		300	400	500	kHz
Rejection		0 - 354 MHz	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			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}	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			500 Pieces/Reel			
Standard Reel Quantity 13 Inch Reel			3000 Pieces/Reel			

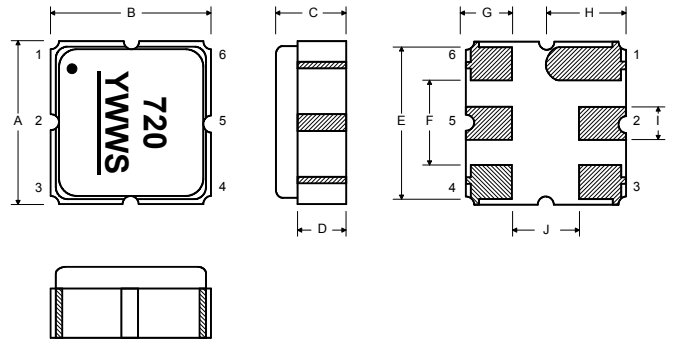
 **CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**
NOTES:

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 +125	°C
Operable Temperature Range	-40 to +125	°C
Soldering Temperature	(10 seconds / 5 cycles max.)	260 °C

Electrical Connections

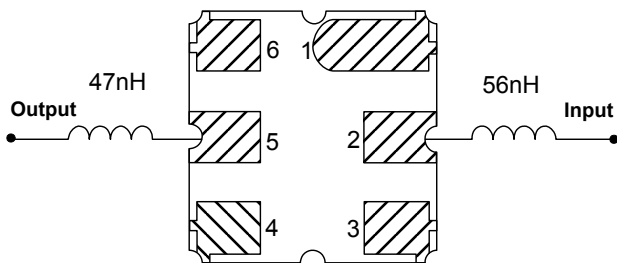
Pin	Connection
1	Input Ground
2	Input
3	Ground
4	Output Ground
5	Output
6	Ground



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

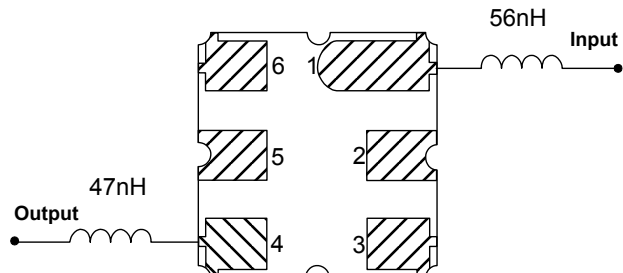


OPTIONAL

Electrical Connections

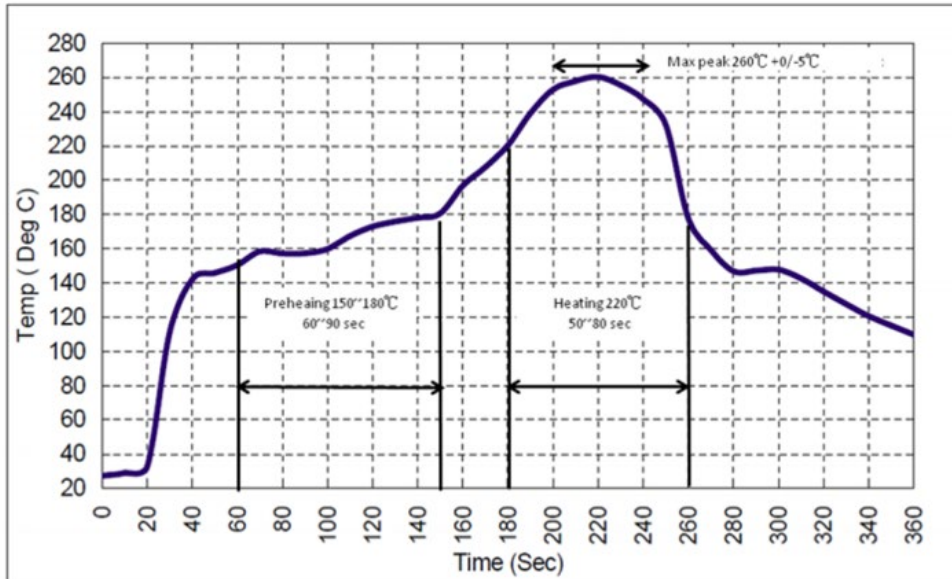
Pin	Connection
1	Input
2	Input Ground
3	Ground
4	Output
5	Output Ground
6	Ground

Matching Circuit to 50Ω





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.



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