

- **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)**

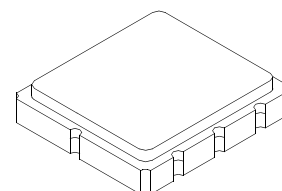


The RF1432C is a low-loss, compact and economical surface-acoustic-wave (SAW) filter designed to provide front-end selectivity in 319.500 MHz receivers. Receiver designs using this filter include superhet with 10.7 MHz or 500 kHz IF, direct conversion and superregen.

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). Quartz construction provides excellent frequency stability over a wide temperature range.

## RF1432C

## 319.500 MHz SAW Filter



**SM5050-8 Case  
5 x 5**

Characteristic	Sym	Notes	Minimum	Typical	Maximum	Units
Center Frequency at 25°C Absolute Frequency Tolerance from 319.500 MHz	$f_C$	1, 2	319.420		319.580	MHz
	$\Delta f_C$				$\pm 80$	kHz
Insertion Loss	IL	1		1.8	2.8	dB
3 dB Bandwidth	BW <sub>3</sub>	1, 2	500	600	800	kHz
Rejection at $f_C - 21.4$ MHz (Image) at $f_C - 10.7$ MHz (LO) Ultimate		1	40	50		dB
			40	50		
				80		
Temperature Operating Case Temperature Turnover Temperature Turnover Frequency Frequency Temperature Coefficient	$T_C$	3, 4	-40		+85	°C
	$T_O$		25	40	55	°C
	$f_O$			$f_C$		MHz
	FTC			0.032		ppm/°C <sup>2</sup>
Frequency Aging	Absolute Value during the First Year	5		$\leq 10$		ppm/yr
Impedance @ FC INPUT $Z_{IN} = R_{IN} // C_{IN}$ OUTPUT $Z_{OUT} = R_{OUT} // C_{OUT}$	$Z_{IN}$	1	3.97k $\Omega$ // 4.37pF			
	$Z_{OUT}$	1	2.56k $\Omega$ // 4.27pF			
Lid Symbolization (in addition to Lot and/or Date Codes)			621 // DATECODE			

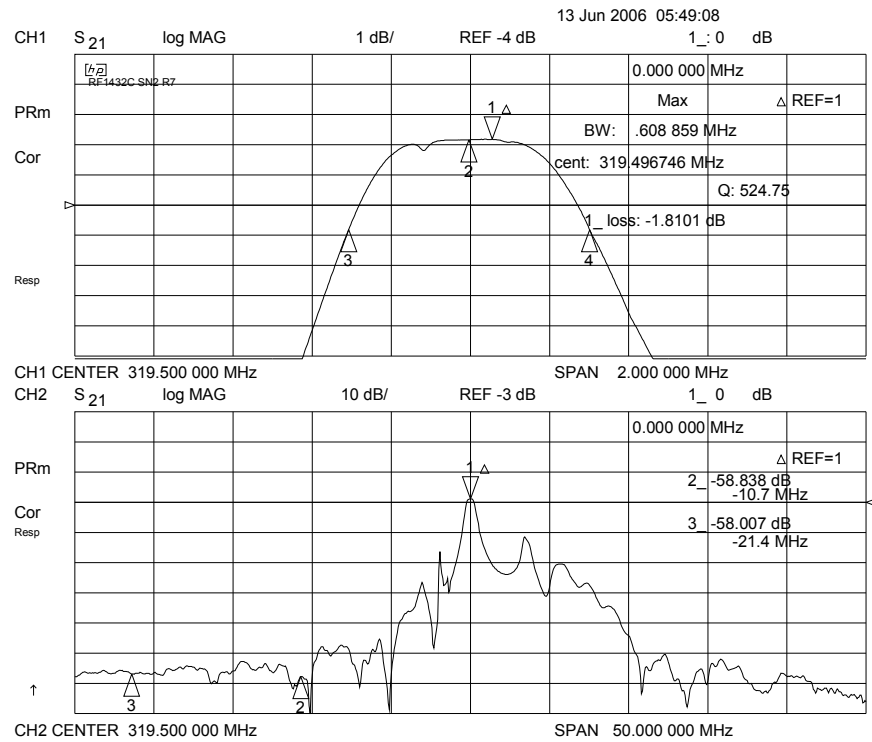
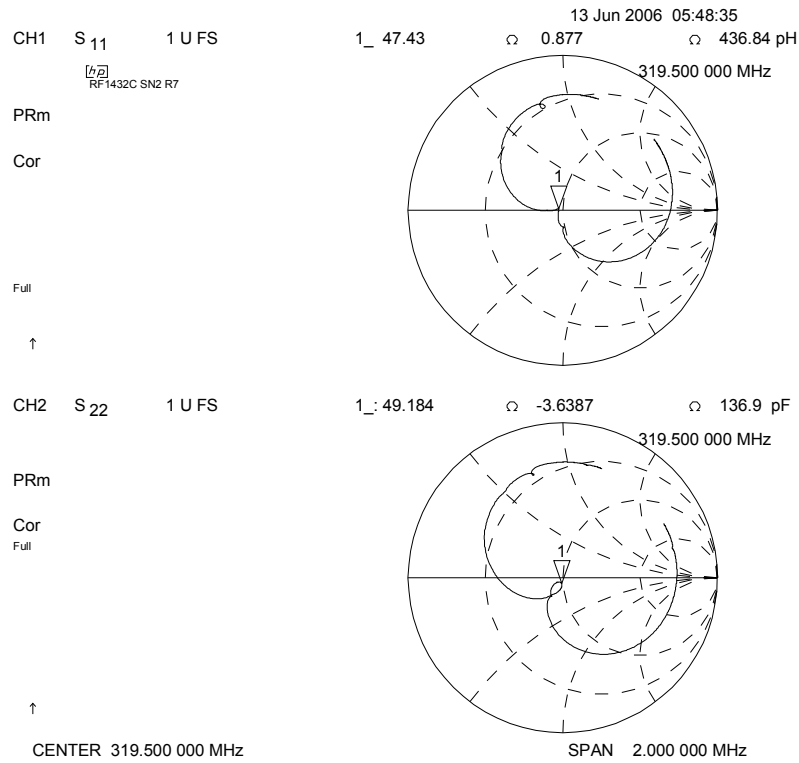


**CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

### NOTES:

- Unless noted otherwise, all measurements are made with the filter installed in the specified test fixture which is connected to a 50  $\Omega$  test system with VSWR  $\leq$  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, bandwidth, and passband shape are dependent on the impedance matching component values and quality.
- The frequency  $f_C$  is defined as the midpoint between the 3dB frequencies.
- Where noted, specifications apply over the entire specified operating temperature range.
- 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:  $f = f_O [1 - FTC (T_O - T_C)^2]$ .
- Frequency aging is the change in  $f_C$  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.
- The design, manufacturing process, and specifications of this device are subject to change without notice.
- One or more of the following U.S. Patents apply: 4,54,488, 4,616,197, and others pending.
- All equipment designs utilizing this product must be approved by the appropriate government agency prior to manufacture or sale.



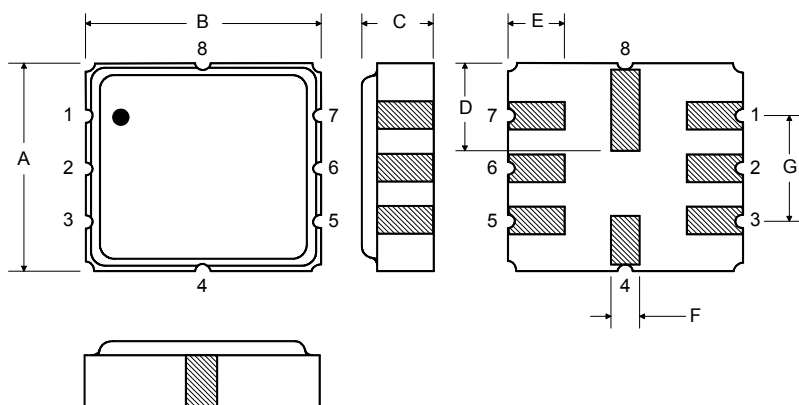




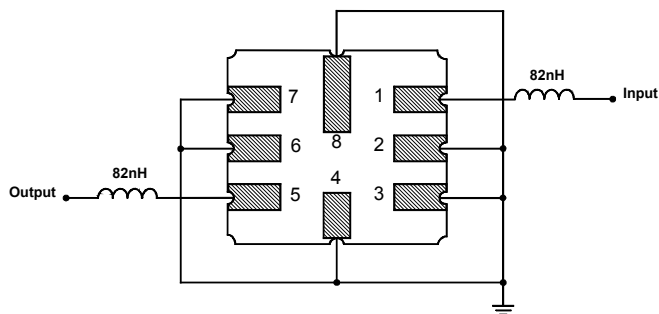
Rating	Value	Units
Input Power Level	10	dBm
DC Voltage	12	VDC
Storage Temperature <sup>5</sup>	-40 to +85	°C
Soldering Temperature	(10 seconds / 5 cycles max.)	260 °C

### Electrical Connections

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



### Matching Circuit to 50Ω



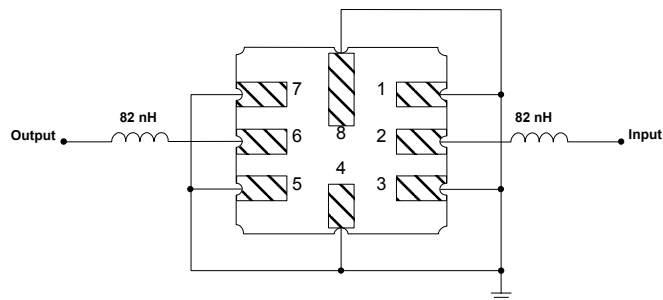
### Case Dimensions

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	1.30	1.50	1.7	0.050	0.060	0.067
D	1.98	2.08	2.18	0.078	0.082	0.086
E	1.07	1.17	1.27	0.042	0.046	0.05
F	0.50	0.64	0.70	0.020	0.025	0.028
G	2.39	2.54	2.69	0.094	0.100	0.106

### Optional Electrical Connections

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

### Matching Circuit to 50Ω





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