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Murata Electronics North America RF1432C

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Distributor of Murata Electronics North America: Excellent Integrated System Limited Datasheet of RF1432C - NARROWBAND SAW FILTER, SM5050-8

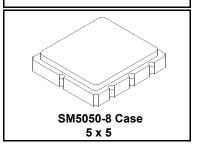
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RFM products are now Murata products.

RF1432C

319.500 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 RF1432C is a low-loss, compact and economical surface-acoustic-wave (SAW) filter designed to provide front-end selectivity in 319.500 MHz receivers. Recevier 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.

Characteristic		Sym	Notes	Minimum	Typical	Maximum	Units
Center Frequency at 25°C	Absolute Frequency	f _C	4.0	319.420		319.580	MHz
	Tolerance from 319.500 MHz	Δf_{C}	1, 2			±80	kHz
Insertion Loss		IL	1		1.8	2.8	dB
3 dB Bandwidth		BW ₃	1, 2	500	600	800	kHz
Rejection	at f _c - 21.4 MHz (Image)			40	50		
	at f _c - 10.7 MHz (LO)		1	40	50		dB
	Ultimate				80		
Temperature	Operating Case Temperature	T _C		-40		+85	°C
	Turnover Temperature	T _O		25	40	55	°C
	Turnover Frequency	f _O	3, 4		f _C		MHz
	Frequency Temperature Coefficent	FTC			0.032		ppm/°C ²
Frequency Aging	Absolute Value during the First Year	IfAI	5		≤10		ppm/yr
Impedance @ FC INPUT $Z_{IN} = R_{IN} // C_{IN}$		Z _{IN}	1	3.97kΩ // 4.37pF			
	OUTPUT $Z_{OUT} = R_{OUT} // C_{OUT}$	Z _{OUT}	1	2.56kΩ // 4.27pF			
Lid Symbolization (in addition to Lot and/or Date Codes)				621 // D	ATECODE		

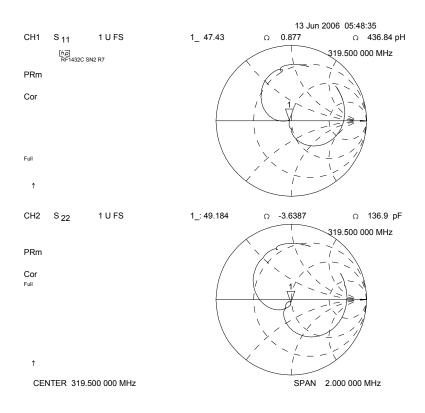


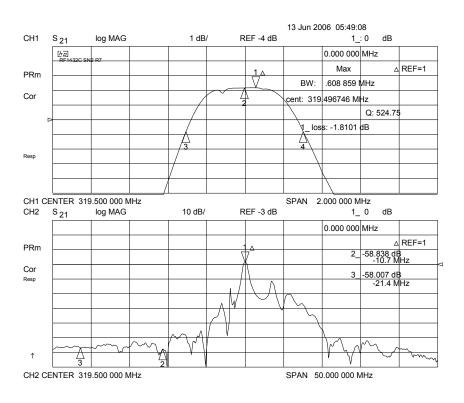
CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

NOTES:

- Unless noted otherwise, all measurements are made with the filter installed in the specified test fixture which is connected to a 50 Ω 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, fc. 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: $f = f_0 [1 FTC (T_0 T_0)^2]$. Erequency 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. 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.

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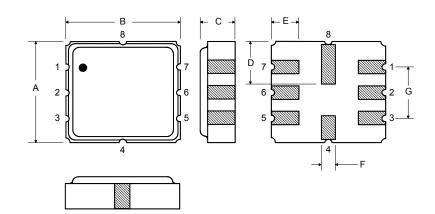
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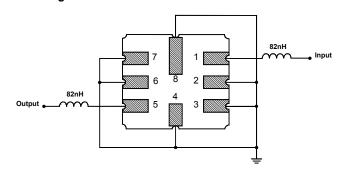
Rating		Value	Units
Input Power Level		10	dBm
DC Voltage		12	VDC
Storage Temperature ⁵		-40 to +85	°C
Soldering Temperature	(10 seconds / 5 cycles max.)	260	°C

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	
Α	4.8	5.0	5.2	0.189	0.197	0.205	
В	4.8	5.0	5.2	0.189	0.197	0.205	
С	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

