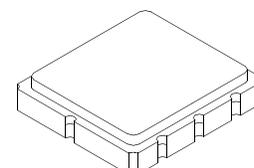


# RF1211C

## 315.0 MHz SAW Filter



**SM5050-8 Case  
5 x 5**

- **Ideal Front-End Filter for Domestic 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**
- **AEC-Q200 Qualified**
- **Moisture Sensitivity Level: 1**

The RF1211C is a low-loss, compact, and economical surface-acoustic-wave (SAW) filter designed to provide front-end selectivity in 315.0 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 (especially for automotive keyless entry) operating in the USA under FCC Part 15, in Canada under RSS-210, and in Italy

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

Item	Minimum	Typical	Maximum	Note
Center Frequency @ 25°C $F_C$ (MHz)	-	315	-	
Minimum I.L. (314.82~315.22 MHz) (dB) $IL_{min}$	-	2.0	5.0	
Pass band (relative to $IL_{min}$ )				
314.77~315.2 MHz (dB)	-	1.5	3.0	
314.71~315.26 MHz (dB)	-	2.0	6.0	
Pass bandwidth (relative to $IL_{min}$ ) $BW_3$ (KHz)	800	860	-	
Attenuation: (relative to $IL_{min}$ ) (dB)				
10~270 MHz (dB)	45	55	-	
270~309 MHz (dB)	30	35	-	
309~313.94 MHz (dB)	15	20	-	
316~335 MHz (dB)	10	15	-	
335~400 MHz (dB)	35	42	-	
400~1000 MHz (dB)	45	60	-	
Impedance at $F_C$ ; Input $Z_{IN}=R_{IN}/C_{IN}$		344Ω // 4.9 pF		
Output $Z_{OUT}=R_{OUT}/C_{OUT}$		344Ω // 4.9 pF		
Turnover To (deg.C)		25 typ.		
Frequency Aging Absolute Value During the First Year		≤10 ppm/yr Typical		
Lid Symbolization (in addition to Lot and/or Date Codes)		410 <u>YWWS</u>		
Standard Reel Quantity	Reel Size 7 Inch	500 Pieces/Reel		
	Reel Size 13 Inch	3000 Pieces/Reel		

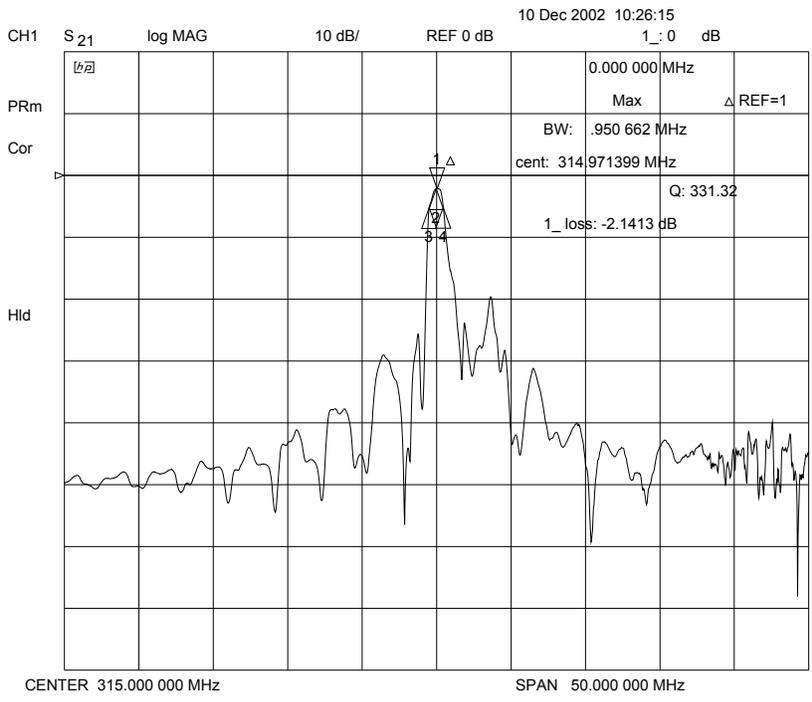
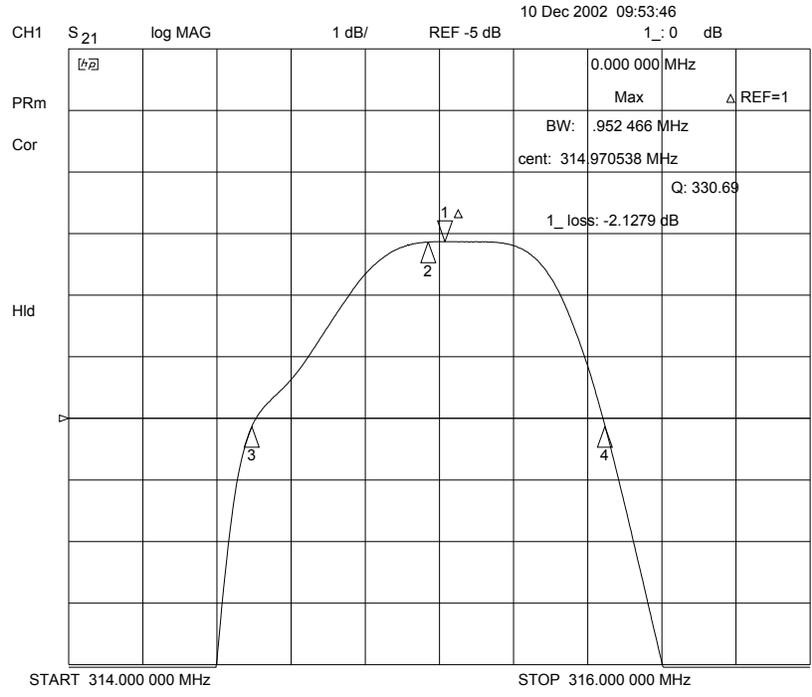


**CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

**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.

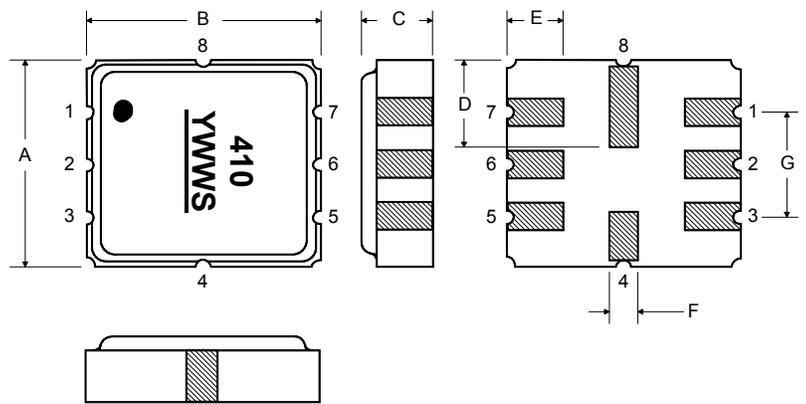
Frequency Characteristics:



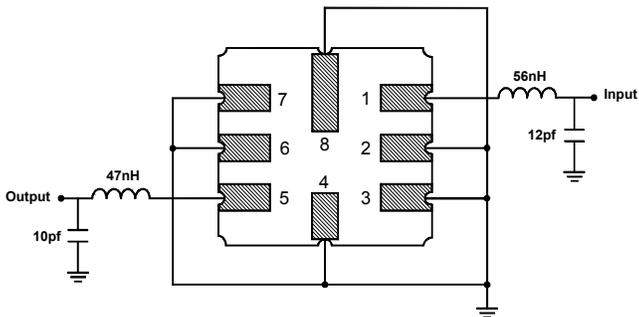
Rating	Value	Units
Input Power Level	10	dBm
DC Voltage	12	VDC
Storage Temperature <sup>5</sup>	-40 to +85	°C
Soldering Temperature	(10 seconds / 5 cycles max.)	°C
Operating Temperature	-40 to +85	°C

### Electrical Connections

Pin	Connection
1	Input
2	Input Ground
3	to be Grounded
4	Case Ground
5	Output
6	Output Ground
7	to be Grounded
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		0.1968	
B	4.8	5.0	5.2		0.1968	
C			1.7			0.0669
D		2.08			0.0818	
E		1.17			0.046	
F		0.64			0.0252	
G	2.39	2.54	2.69		0.100	

## 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.

