

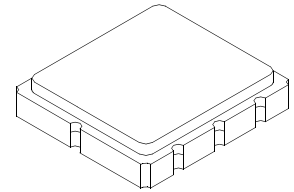


AEC-Q200

This component was always RoHS compliant from the first date of manufacture.

**RF3336C**

**868.35 MHz  
SAW Filter**



**SM5050-8 Case  
5 x 5**

- **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**



The RF3336C is a low-loss, compact, and economical surface-acoustic-wave (SAW) filter designed to provide front-end selectivity in 868.35 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 30 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.

Characteristic	Sym	Notes	Minimum	Typical	Maximum	Units
Center Frequency @ 25°C	Absolute Frequency	$f_c$		868.35		MHz
	Tolerance from 868.35 MHz	$\Delta f_c$			$\pm 125$	kHz
Insertion Loss	IL			2.6	4.0	dB
3 dB Bandwidth	$BW_3$		500	700	800	kHz
Rejection	at $f_c - 21.4$ MHz (Image)		30	40		dB
	at $f_c - 10.7$ MHz (LO)		15	30		
	Ultimate			80		
Temperature	Operating Case Temp.	$T_C$	-40		+85	°C
	Turnover Temperature	$T_O$	15	25	40	°C
	Turnover Frequency	$f_O$		$f_c$		MHz
	Freq. Temp. Coefficient	FTC		0.032		ppm/°C <sup>2</sup>
Frequency Aging	Absolute Value during the First Year	fA		< $\pm 10$		ppm/yr
External Impedance	Input Series Inductance	$L_1$		15		nH
	Input Shunt Capacitance	$C_1$		1.0		pH
	Output Series Inductance	$L_2$		10		nH
Standard Reel Quantity	Reel Size 7 inch		500 Pieces/Reel			
	Reel Size 13 inch		3000 Pieces/Reel			
Lid Symbolization (Y=year, WW=week, S=shift)			673// <u>Y</u> <u>WW</u> <u>S</u>			



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

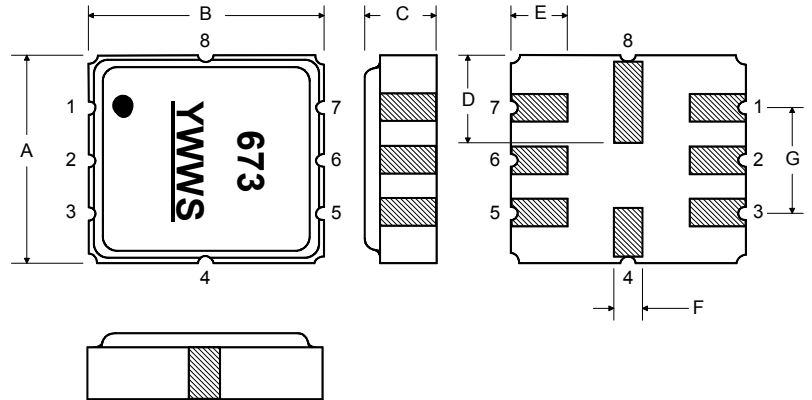
**NOTES:**

1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.

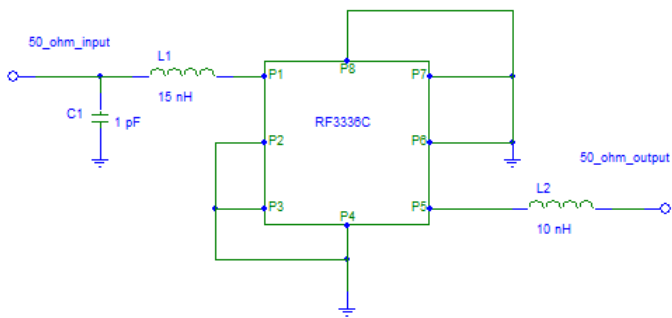
Rating	Value	Units
Input Power Level	10	dBm
DC Voltage	12	VDC
Storage Temperature	-40 to +85	°C
Soldering Temperature	(10 seconds / 5 cycles max.)	260 °C

### Electrical Connections

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



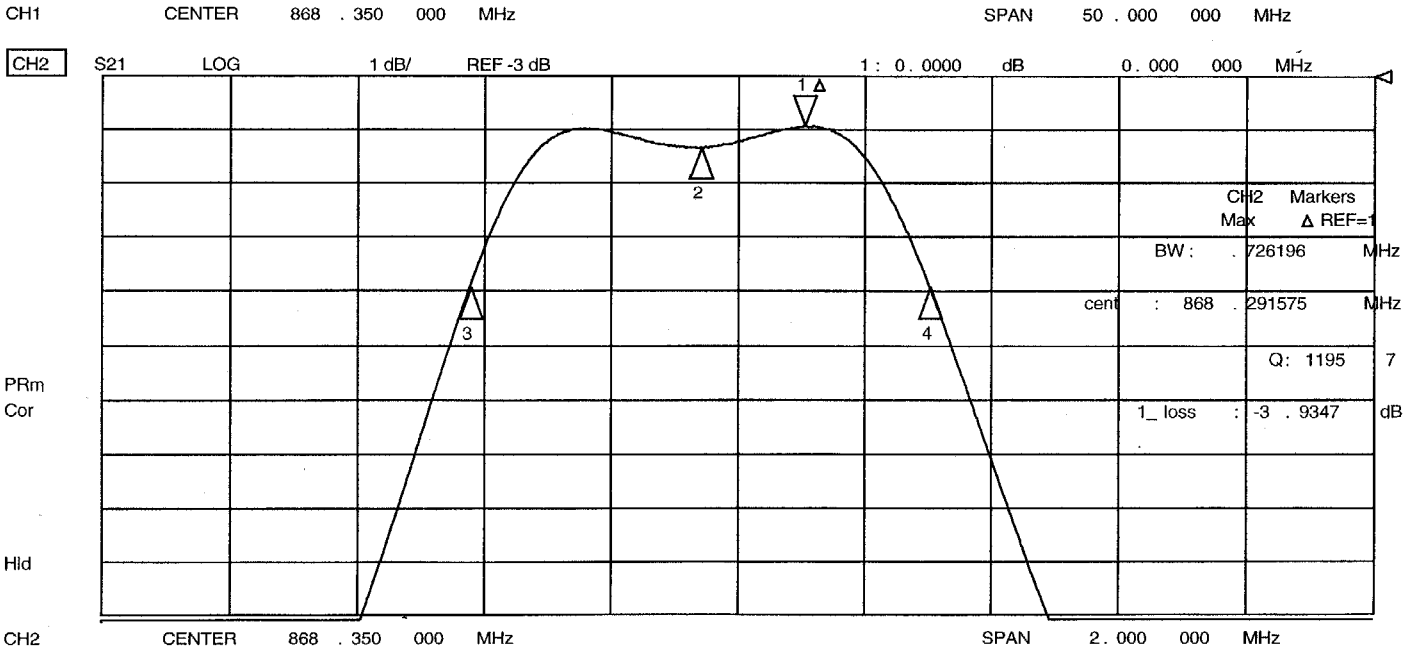
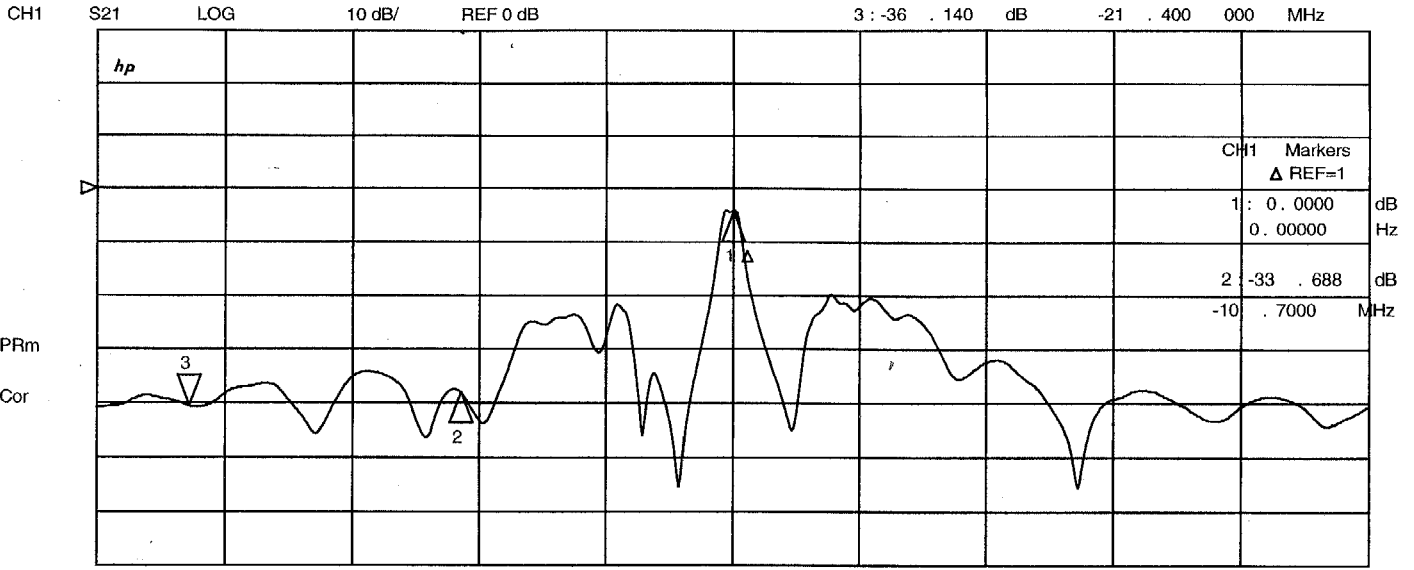
### Matching Circuit to 50Ω



### 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			1.7			0.067
D		2.08			0.082	
E		1.17			0.046	
F		0.64			0.025	
G	2.39	2.54	2.69	0.094	0.100	0.106

8 Nov 2002 14:28:52



8 Nov 2002 14:30:59

CH1 S11 1 UFS

1: 22.673  $\Omega$  4.6221  $\Omega$  847.15 pF

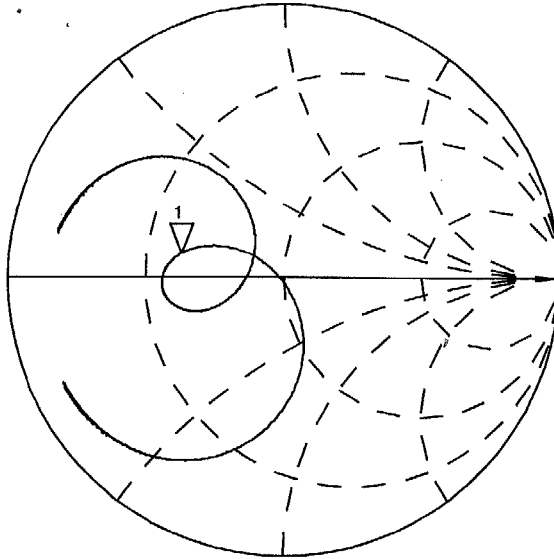
868.350 000 MHz

*hp*

PRm

Cor

Hld



CH2 S22 1 UFS

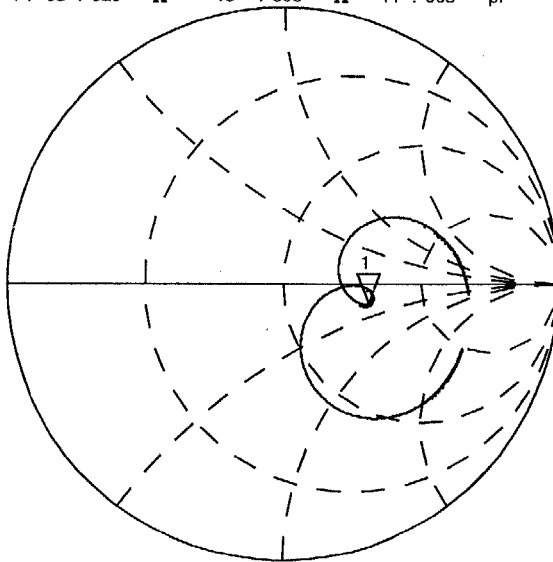
1: 93.020  $\Omega$  -15.398  $\Omega$  11.903 pF

868.350 000 MHz

PRm

Cor

Hld



CENTER 868.350 000 MHz

SPAN 2.000 000 MHz

## 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.

