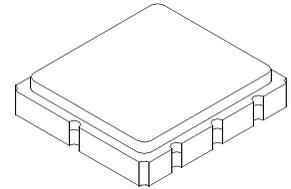


RF3336C

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**
- **Moisture Sensitivity Level: 1**
- **AEC-Q200 Qualified**

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	Δf_c				±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 ²
Frequency Aging	Absolute Value during the First Year	fA			<±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/YWWS			



CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

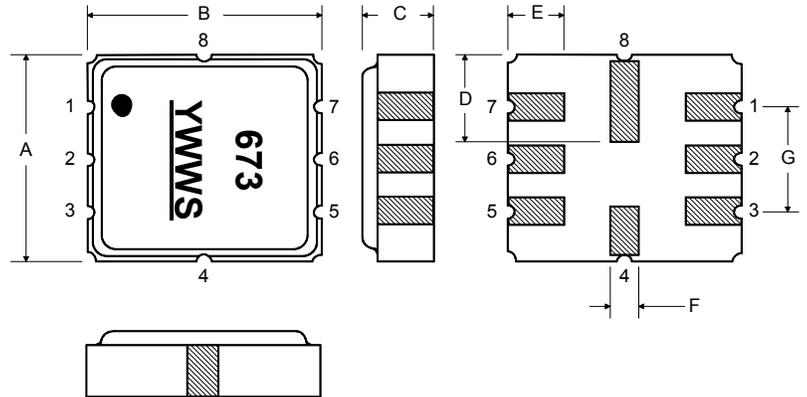
NOTES:

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.

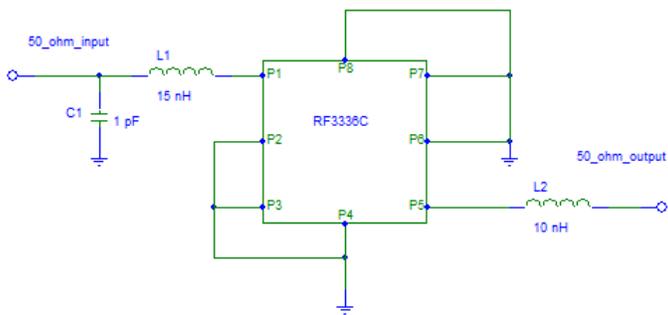
Rating	Value	Units
Input Power Level	10	dBm
DC Voltage	12	VDC
Storage Temperature	-40 to +85	°C
Soldering Temperature	(10 seconds / 5 cycles max.)	°C

Electrical Connections

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



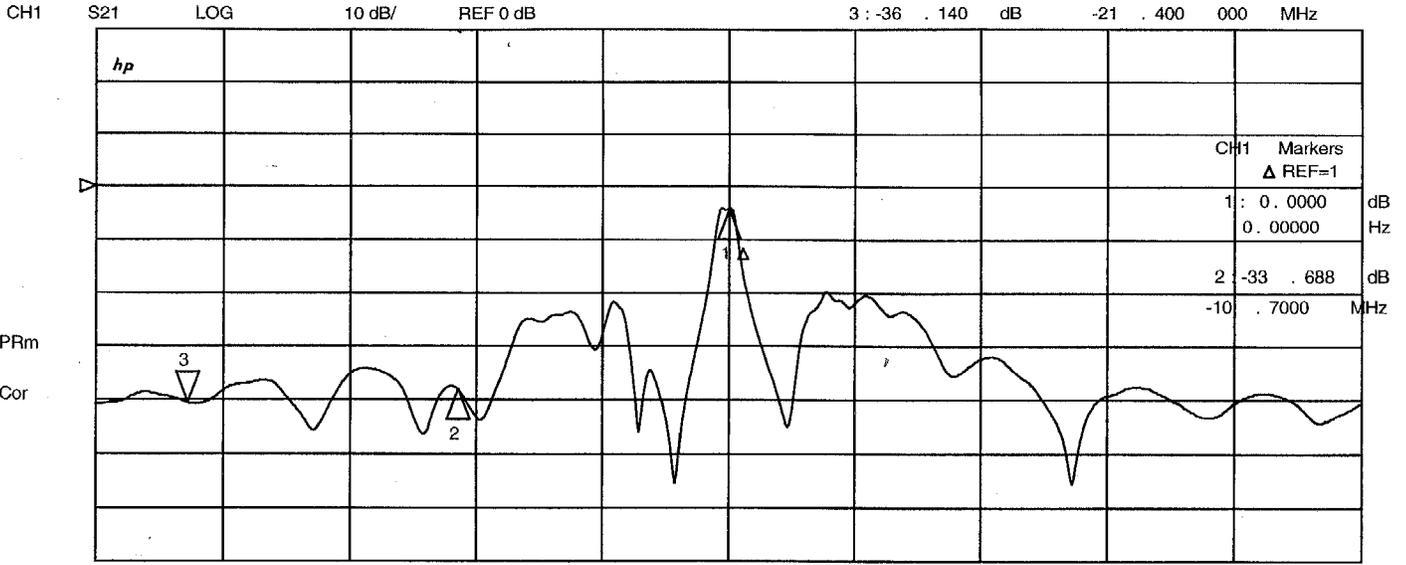
Matching Circuit to 50Ω



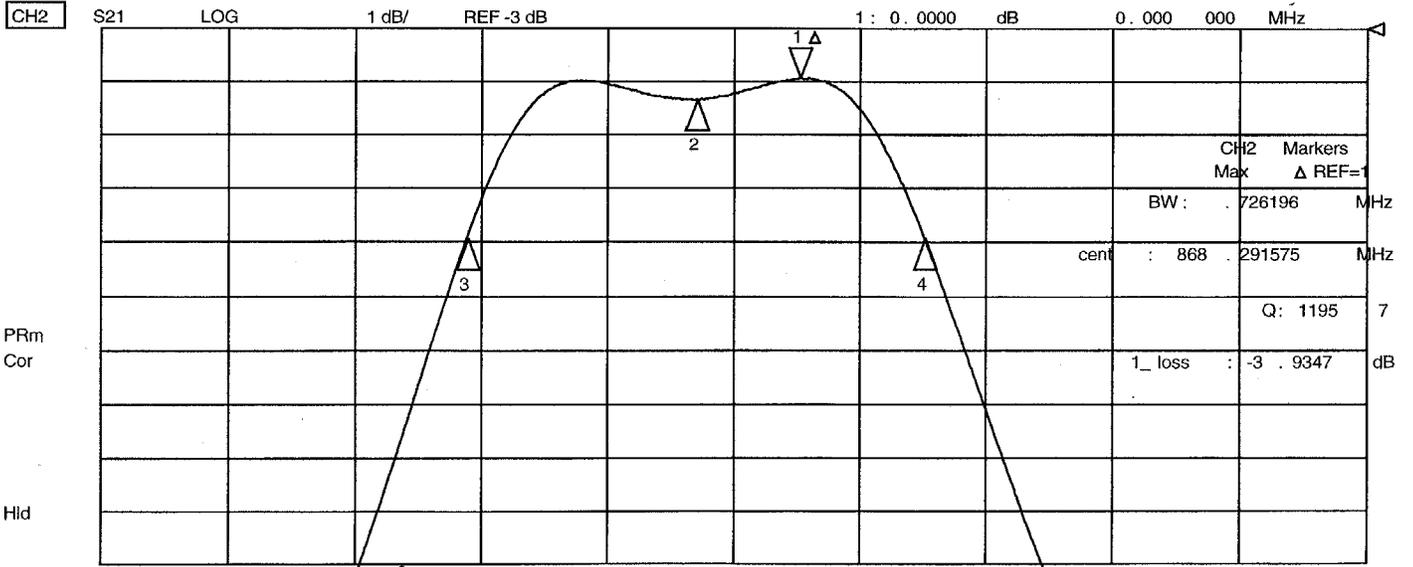
Case Dimensions

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

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CH1 CENTER 868.350000 MHz SPAN 50.000000 MHz



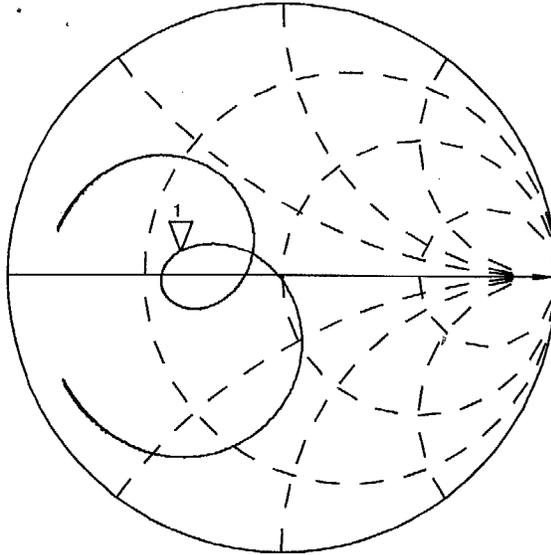
CH2 CENTER 868.350000 MHz SPAN 2.000000 MHz

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CH1 S11 1 UFS
hp

1: 22.673 Ω 4.6221 Ω 847.15 pF 868.350 000 MHz

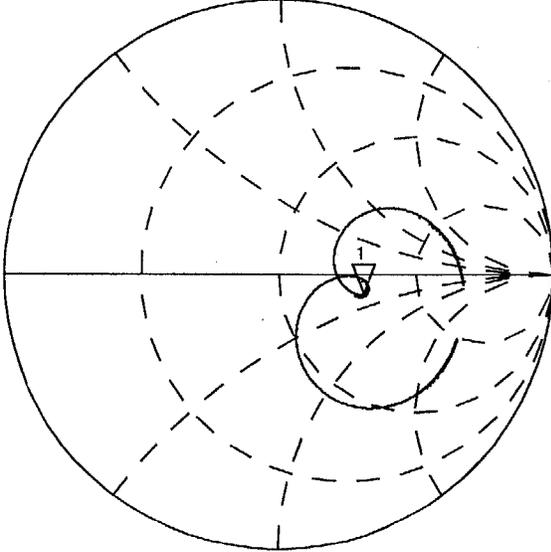
PRm
Cor
Hld



CH2 S22 1 UFS

1: 93.020 Ω -15.398 Ω 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.

