

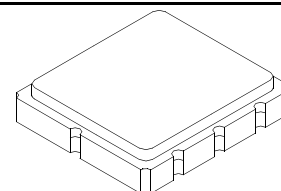


**THE DATASHEET OF
RF3336E**



RF3336E

868.35 MHz SAW Filter



SM3030-6 Case
3.0 x 3.0

- **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 RF3336E is a low-loss, compact, and economical surface-acoustic-wave (SAW) filter designed to provide front-end selectivity in 868.35 MHz receivers. Receivers using this filter include superheterodynes with 10.7 MHz or 500 kHz IFs, direct conversion receivers and superregenerative receivers. Typical applications of these receivers include wireless remote-control and security devices operating in Europe under ETSI I-ETS 300 220. 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. 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
Insertion Loss	IL			2.5	4.0	dB
3 dB Bandwidth	BW ₃		500	650	900	kHz
Attenuation: (relative to IL _{min})		10 - 700 MHz	50	55		dB
		700 - 830 MHz	40	45		
		830 - 850 MHz	35	40		
		850 - 864.4 MHz	20	25		
		870.4 - 877.4 MHz	21	26		
		877.4 - 882.4 MHz	15	19		
		882.4 - 900 MHz	28	35		
		900 - 1000 MHz	40	45		
Temperature Freq. Temp. Coefficient	FTC			0.032		ppm/°C ²
Frequency Aging Absolute Value during the First Year	fA			<±10		ppm/yr
Impedance @ f_c	$Z_{IN} = R_{IN} \parallel C_{IN}$	Z_{IN}	55 Ω 23.9 pF			
	$Z_{OUT} = R_{OUT} \parallel C_{OUT}$	Z_{OUT}	53 Ω 20.2 pF			
Lid Symbolization (in addition to Lot and/or Date Codes)	700, <u>YWWS</u>					
Standard Reel Quantity	Reel Size 7 Inch		500 Pieces/Reel			
	Reel Size 13 Inch		3000 Pieces/Reel			

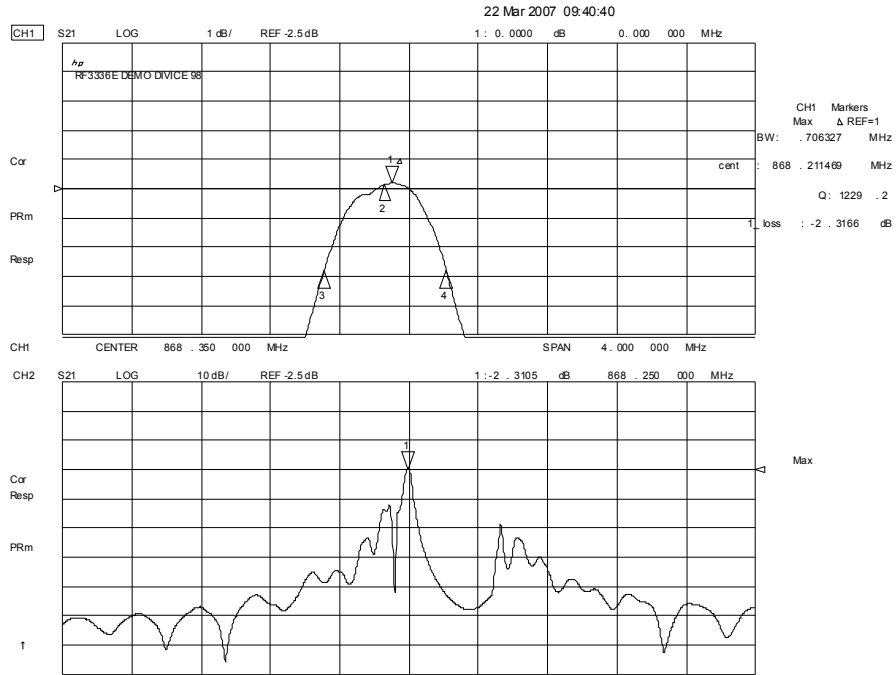


CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

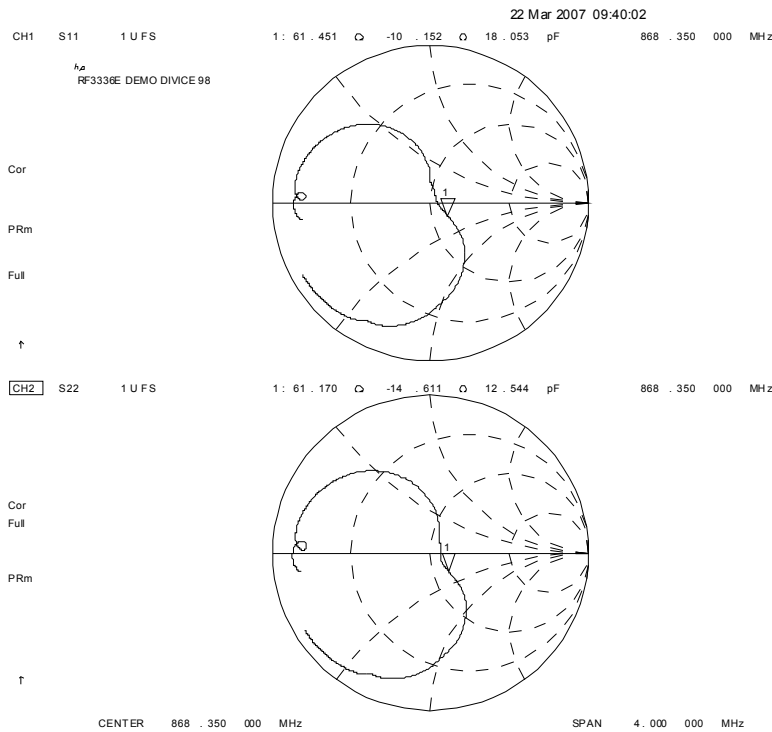
NOTES:

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 Response Plots



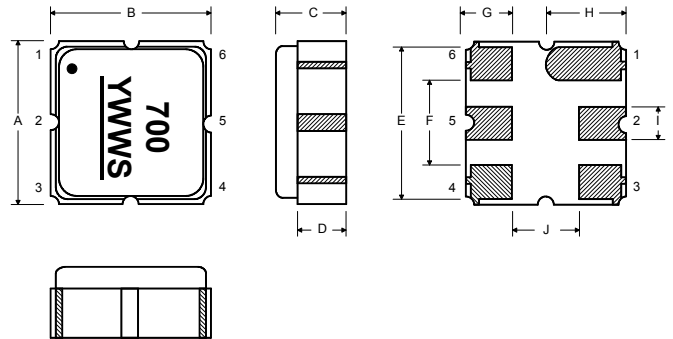
Impedance Plots



Rating	Value	Units
Input Power Level	10	dBm
DC Voltage on any non-ground Terminal	12	VDC
Storage Temperature	-40 to +125	°C
Operable Temperature Range	-40 to +125	°C
Soldering Temperature (10 seconds / 5 cycles Max.)	260	°C

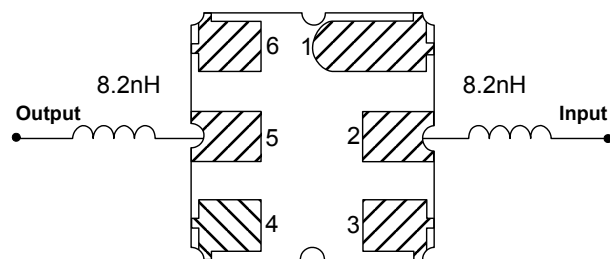
Electrical Connections

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



Case Dimensions

Matching Circuit to 50Ω



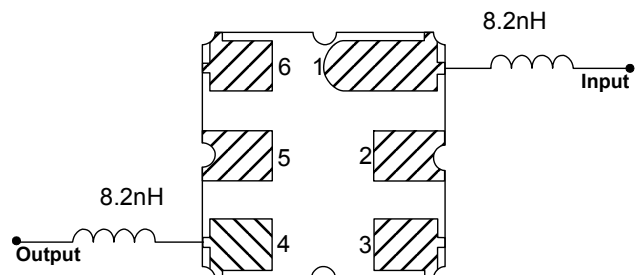
Optional

Electrical Connections

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

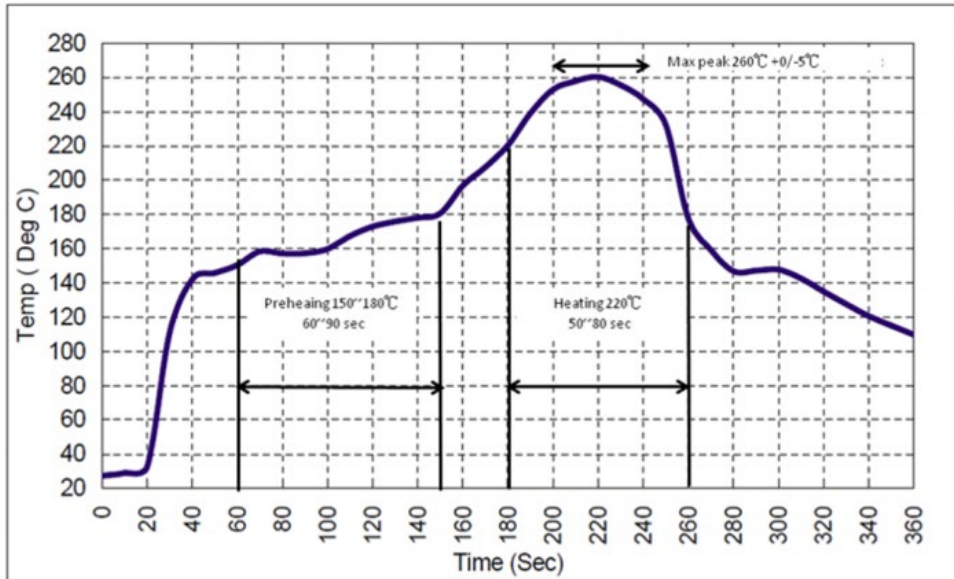
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	2.87	3.0	3.13	0.113	0.118	0.123
B	2.87	3.0	3.13	0.113	0.118	0.123
C	1.12	1.25	1.38	0.044	0.049	0.054
D	0.77	0.90	1.03	0.030	0.035	0.040
E	2.67	2.80	2.93	0.105	0.110	0.115
F	1.47	1.6	1.73	0.058	0.063	0.068
G	0.72	0.85	0.98	0.028	0.033	0.038
H	1.37	1.5	1.63	0.054	0.059	0.064
I	0.47	0.60	0.73	0.019	0.024	0.029
J	1.17	1.30	1.43	0.046	0.051	0.056

Matching Circuit to 50Ω





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.



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