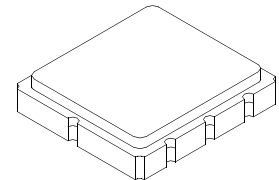


**RF3319E**

**868.95 MHz  
SAW Filter**



**SM3030-6 Case  
3.0 x 3.0**

- *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 RF3319E is a low-loss, compact, and economical surface-acoustic-wave (SAW) filter designed to provide front-end selectivity in 868.95 MHz receivers. Receiver designs using this filter include superheterodyne receivers with 10.7 MHz or lower intermediate frequencies, plus direct conversion and superregenerative receivers. Typical applications of these receivers are wireless remote-control and security devices operating in Europe under ETSI I-ETS 300 220 regulations.

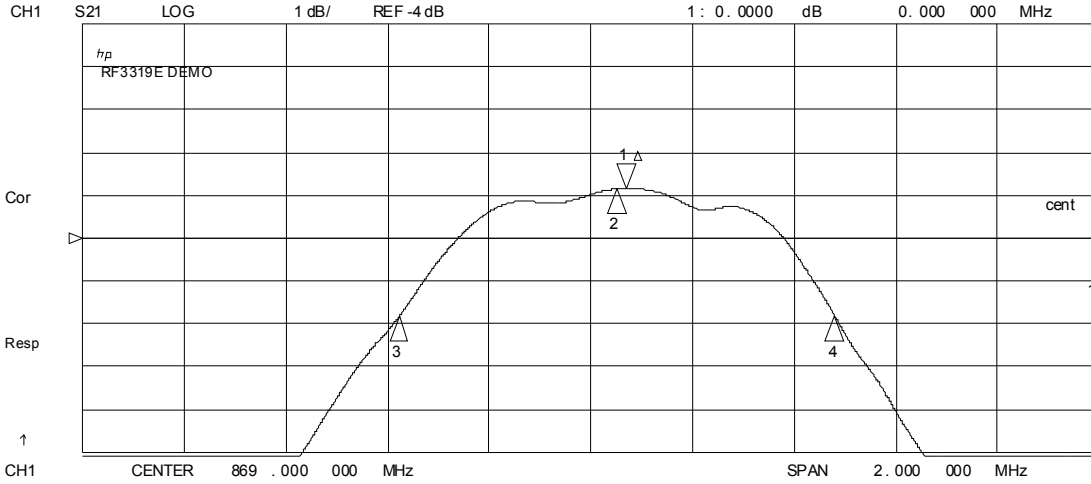
Characteristic	Sym	Notes	Minimum	Typical	Maximum	Units
Center Frequency @ 25°C	$f_c$		868.80	868.95	869.10	MHz
Insertion Loss	IL			2.4	4.0	dB
3 dB Bandwidth	BW <sub>3</sub>		800	900	1000	kHz
Passband Ripple, Fc ±300 kHz				1.2	2.0	dB <sub>P-P</sub>
Attenuation: (relative to IL <sub>MIN</sub> )	10 - 859 MHz		33	35		dB
	859 - 864 MHz		32	34		
	864 - 867.2 MHz		12	14		
	870.6 - 872 MHz		19	21		
	872 - 895 MHz		15	17		
	895 - 1030 MHz		38	40		
Temperature	Freq. Temp. Coefficient	FTC		0.032		ppm/ °C <sup>2</sup>
Frequency Aging	Absolute Value during the First Year	fA		<±10		ppm/yr
Impedance @ $f_c$	Input $Z_{IN} = R_{IN} \parallel C_{IN}$	$Z_{IN}$	84.13 $\Omega$    6.0 pF			
	Output $Z_{OUT} = R_{OUT} \parallel C_{OUT}$	$Z_{OUT}$	180.84 $\Omega$    4.0 pF			
Lid Symbolization (in addition to Lot and/or Date Codes)			695, <u>YWWS</u>			
Standard Reel Quantity	7 Inch Reel		500 Pieces/Reel			
Standard Reel Quantity	13 Inch Reel		3000 Pieces/Reel			

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

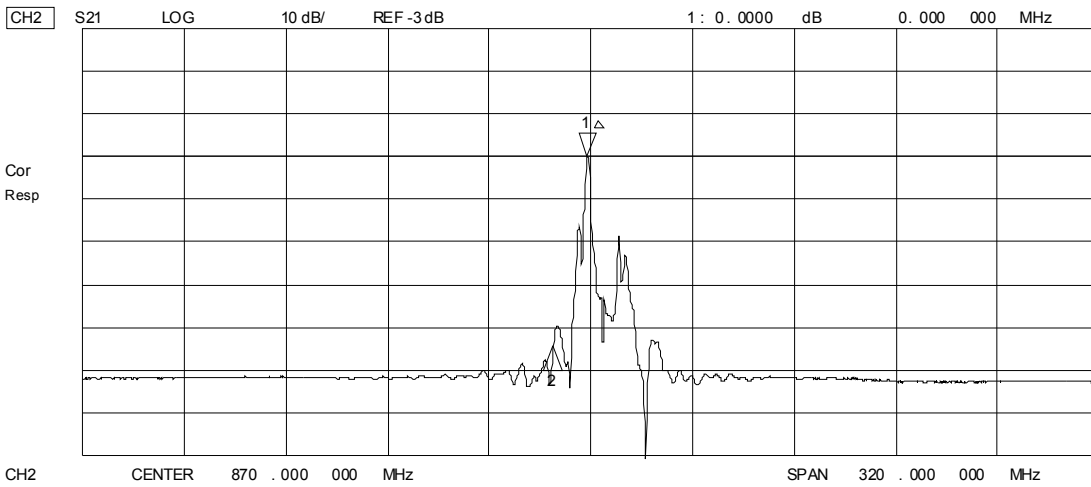
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

# RF3319E Passband and Broadband Amplitude Response

9 Feb 2009 15:29:57



CH1 Markers  
Max  $\Delta$  REF=1  
BW: .857449 MHz  
cent : 869.051576 MHz  
Q: 1013.5  
1\_loss : -2.8273 dB

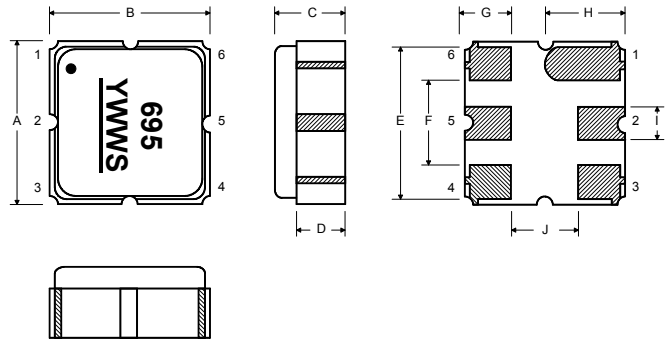


CH2 Markers  
 $\Delta$  REF=1  
2 : -44.220 dB  
-10 : 7000 MHz

Rating	Value	Units
Input Power Level	10	dBm
DC Voltage	12	VDC
Storage Temperature	-40 to +125	°C
Operating Temperature Range	-40 to +125	°C
Soldering Temperature, 10 seconds / 5 cycles maximum	260	°C

### Electrical Connections

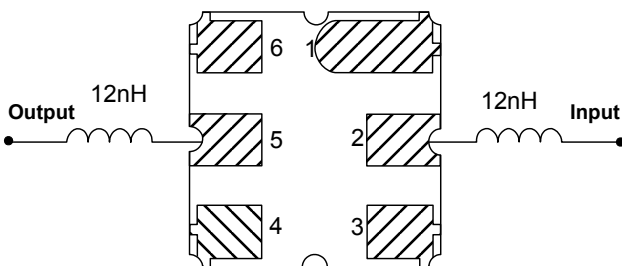
Pin	Connection
1	Input Ground
2	Input
3	Ground
4	Output Ground
5	Output
6	Ground



### Case Dimensions

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

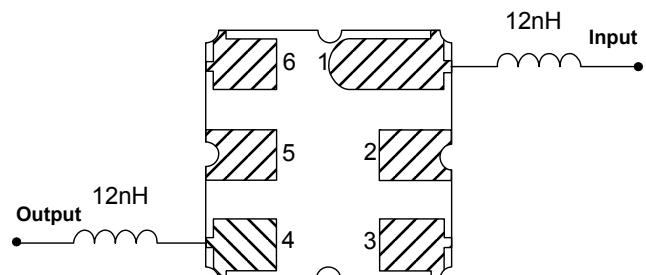
### Matching Circuit to 50Ω



### OPTIONAL Electrical Connections

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

### 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.

