



AEC-Q200

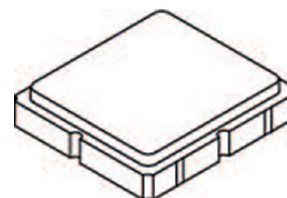
This component was always RoHS compliant from the first date of manufacture.

- **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**



RF3396E

**434.420 MHz
SAW Filter**



**SM3030-6 Case
3.0 x 3.0**

The RF3396E is a low-loss, compact, and economical surface-acoustic-wave (SAW) filter designed to provide front-end selectivity in 434.42 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.

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 at 25°C Absolute Frequency	f_c			434.42		MHz
Tolerance from MHz	Δf_c			± 100		kHz
Insertion Loss (433.760 - 434.080)	IL_{MIN}			1.8	2.5	dB
3 dB Bandwidth	BW_3		850	900	950	kHz
Rejection Attenuation: (relative to IL_{min})						dB
10 - 420 MHz			47	52		
420 - 427 MHz			38	43		
427 - 431 MHz			29	34		
431 - 433.2 MHz			8	18		
435.92 - 439 MHz			8	16		
439 - 447 MHz			19	28		
447 - 1000 MHz			37	44		
Turnover Temperature	T_o		10	25	40	°C
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 Input $Z_{IN} = R_{IN} C_{IN}$	Z_{IN}			TBD		
Output $Z_{OUT} = R_{OUT} C_{OUT}$	Z_{OUT}			TBD		
Lid Symbolization (Y=year WW=week S=shift)				841, YWWS		
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.

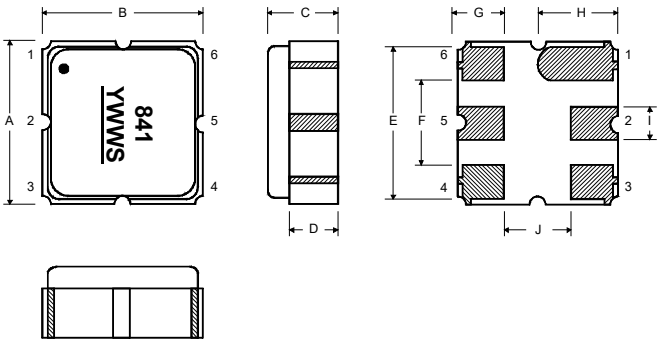
NOTES:

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

Rating	Value	Units
Input Power Level	10	dBm
DC Voltage	12	VDC
Storage Temperature	-40 to +125	°C
Operable Temperature Range	-40 to +105	°C
Soldering Temperature (10 seconds/5 cycles Max..)	260	°C

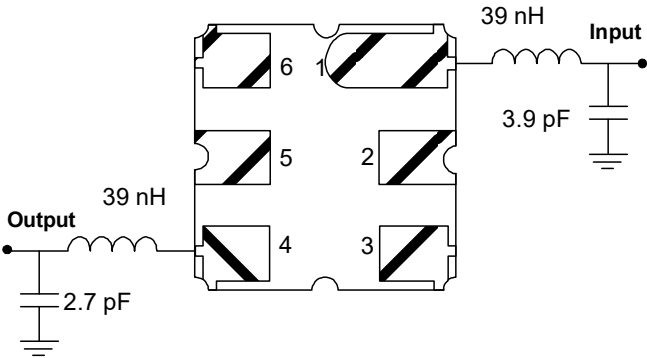
Electrical Connections

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



Case Dimensions

Matching Circuit to 50Ω



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

11 Jan 2008 06:46:14
 CH1 S11 1 UFS 1: 51.947 Ω 3.0938 Ω 1.1347 nH 433.920000 MHz

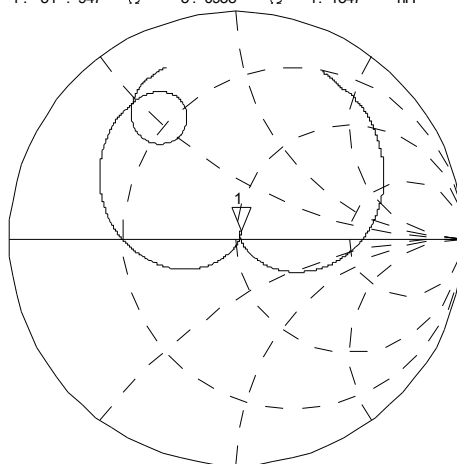
hp
 RF3404E DEMO
 USING 401-1564-001 PCB.

Cor

PRm

Full

↑



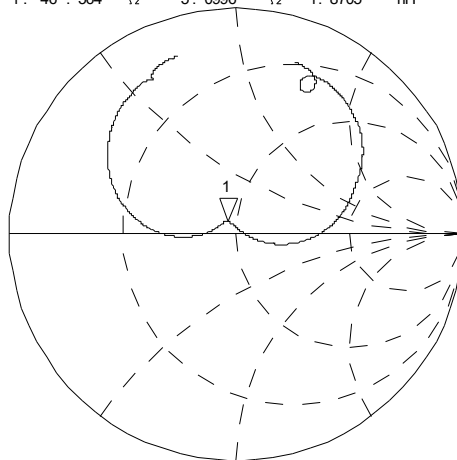
CH2 S22 1 UFS 1: 46.564 Ω 5.0996 Ω 1.8705 nH 433.920000 MHz

Cor

Full

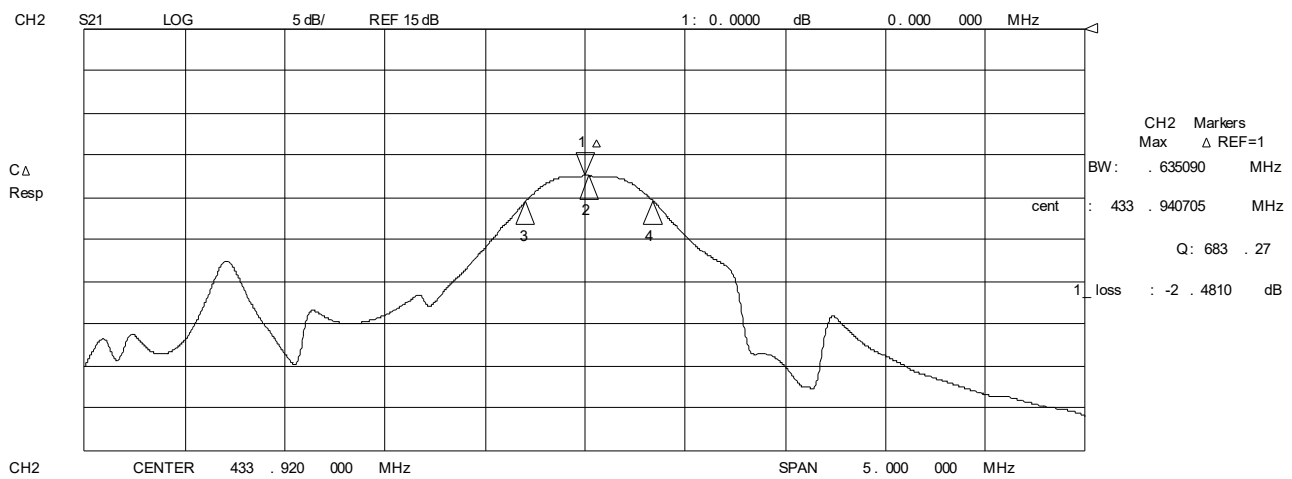
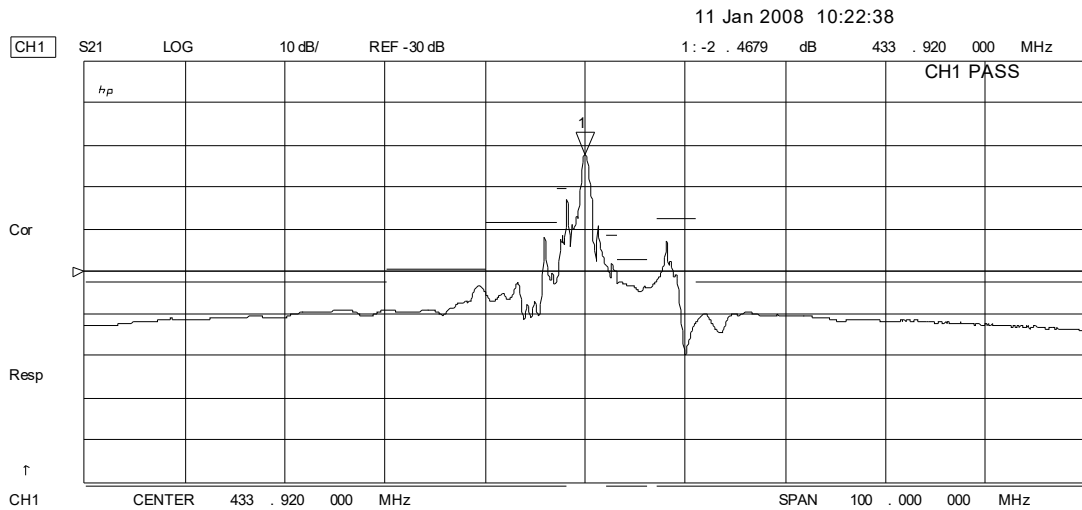
PRm

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CENTER 433.920000 MHz

SPAN 2.000000 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.



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