

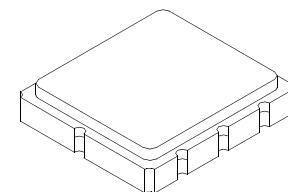


- **Ideal Front-End Filter for European Wireless Receivers**
- **Low-Loss, Coupled-Resonator Quartz Design**
- **Simple External Impedance Matching**
- **Complies with Directive 2002/95/EC (RoHS)**
- **Tape and Reel Standard per ANSI/EIA-481**
- **Moisture Sensitivity Level: 1**
- **AEC-Q200 Qualified**

RoHS  
Compliant

**RF1411D**

**869.2625 MHz  
SAW Filter**



**SM3838-8 Case  
3.8 x 3.8**

The RF1411D is a low-loss, compact, and economical surface-acoustic-wave (SAW) filter designed to provide front-end selectivity in 869.2625 MHz receivers. Receiver designs using this filter include superhet 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 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 (not included).

Characteristic	Sym	Notes	Minimum	Typical	Maximum	Units
Center Frequency @ 25°C	$f_C$			869.2625		MHz
I.L.				3.3	4.5	dB
PassBand (relative to IL <sub>min</sub> )	868.9125 -869.6125			0.4	1.0	dB
Pass Bandwidth (relative to IL <sub>min</sub> )	$BW_3$			1250		kHz
Rejection (relative to IL <sub>min</sub> )	10-700 MHz 700-842 MHz 842-864 MHz 864-866 MHz 872-879 MHz 879-909 MHz 909-1000 MHz		50 35 25 15 8 15 40	55 40 28 24 13 20 45		dB
Temperature Coeff				0.032		ppm/ °C <sup>2</sup>
Operating Temperature Range			-45		+85	°C
Impedance @ fc	Input $Z_{IN} = R_{IN} \parallel C_{IN}$	$Z_{IN}$		117Ω $\parallel$ 3.7pf		
	Output $Z_{OUT} = R_{OUT} \parallel C_{OUT}$	$Z_{OUT}$		117Ω $\parallel$ 3.7pf		
Lid Symbolization (in addition to Lot and/or Date Codes)				512 , YWWS		
Standard Reel Quantity	7 Inch Reel 13 Inch Reel			500 Pieces/Reel 3000 Pieces/Reel		



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

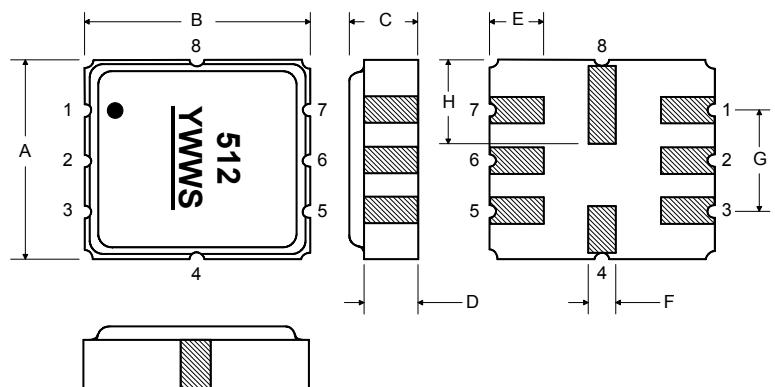
**NOTES:**

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.

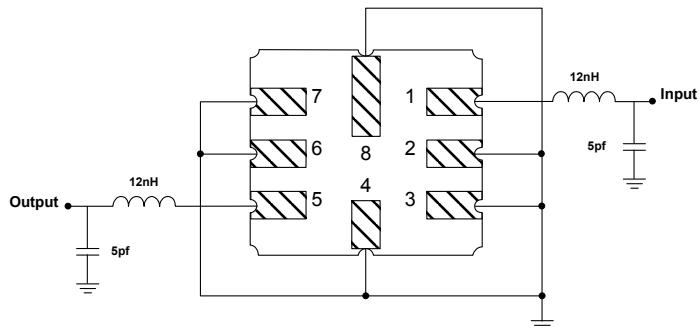
Rating	Value	Units
Input Power Level	+10	dBm
DC Voltage	12	VDC
Storage Temperature	-45 to +85	°C
Soldering Temperature (10 seconds / 5 cycles max.)	260	°C

### Electrical Connections

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

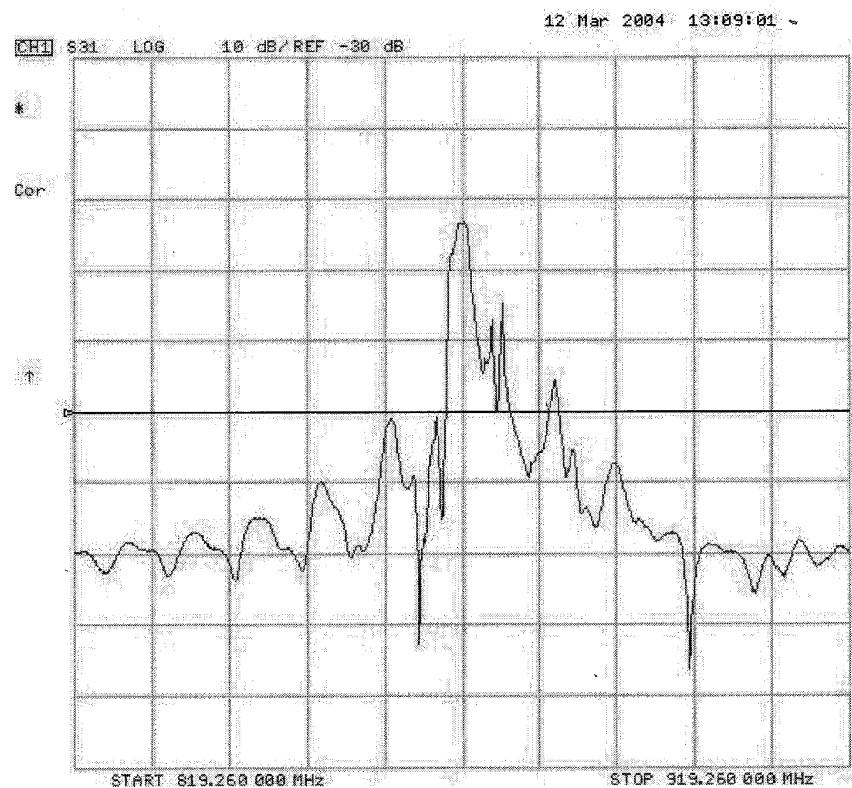
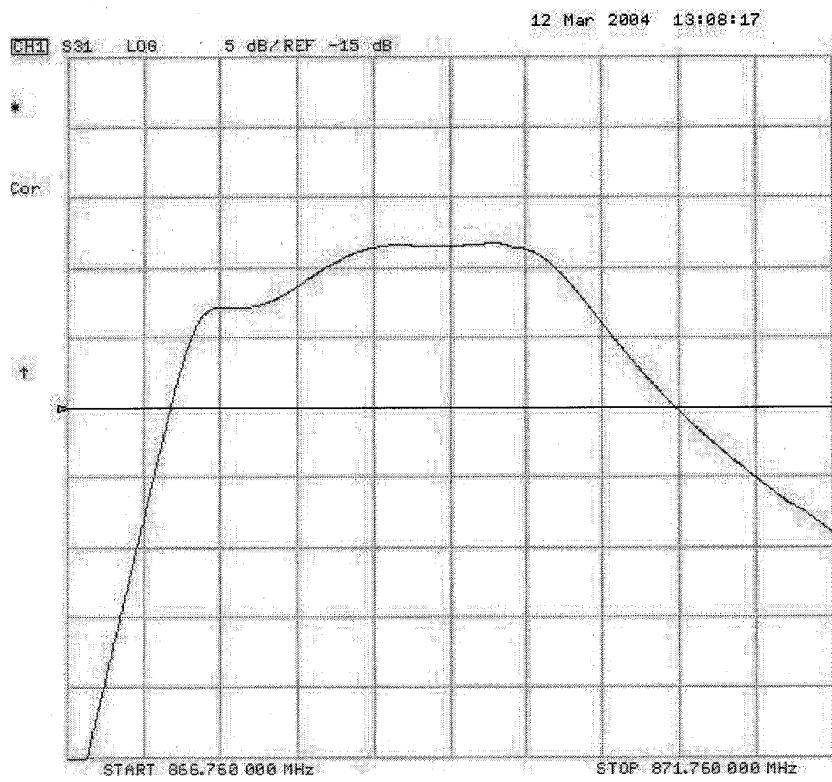


### Matching Circuit to 50Ω



### Case Dimensions

Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	3.6	3.8	4.0	0.14	0.15	0.16
B	3.6	3.8	4.0	0.14	0.15	0.16
C	1.00	1.20	1.40	0.04	0.05	0.055
D	0.95	1.10	1.25	0.033	0.043	0.05
E	0.90	1.0	1.10	0.035	0.04	0.043
F	0.50	0.6	0.70	0.020	0.024	0.028
G	2.39	2.54	2.69	0.090	0.100	0.110
H	1.40	1.75	2.05	0.055	0.069	0.080



## 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.

