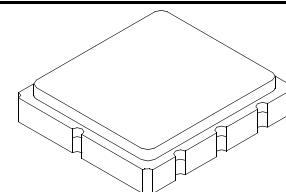


- **Ideal Front-End Filter for European Wireless Receivers**
- **Low-Loss, Coupled-Resonator Quartz Design**
- **Simple External Impedance Matching**
- **Wide Bandwidth for Multi-Channel Receiver Application**
- **Complies with Directive 2002/95/EC (RoHS)**
- **Tape and Reel Standard per ANSI/EIA-481**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

The RF1400D is a low-loss, compact, and economical surface-acoustic-wave (SAW) filter designed to provide front-end selectivity in 433.92 MHz receivers. Receiver designs using this filter include superhet with 10.7 MHz or 500 kHz IF, direct conversion and superregen. Wider bandwidth for channelized receiver applications.

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.

RF1400D
**433.92 MHz
SAW Filter**

 SM3838-8 Case
 3.8 x 3.8

Characteristic	Sym	Notes	Minimum	Typical	Maximum	Units
Center Frequency at 25°C Absolute Frequency	f_c			433.92		MHz
Insertion Loss	IL			2.0	3.0	dB
3 dB Bandwidth	BW_3		1000	1150		kHz
Rejection			40	50		dB
			30	40		
			16	20		
			10	15		
			26	30		
			45	50		
Frequency Temperature Coefficient	FTC			0.032		$ppm/^\circ C^2$
Frequency Aging	Absolute Value during the First Year	$ f_A $		≤ 10		ppm/yr
Impedance @ f_c	Input $Z_{IN} = R_{IN} \parallel C_{IN}$	Z_{IN}		279Ω \parallel 4.1pf		
	Output $Z_{OUT} = R_{OUT} \parallel C_{OUT}$	Z_{OUT}		279Ω \parallel 4.1pf		
Lid Symbolization (Y=year WW=week S=Shift)			490, <u>YWWs</u>			
Standard Reel Quantity	Reel Size 7 Inch			500 Pieces/Reel		
	Reel Size 13 Inch			3000 Pieces/Reel		

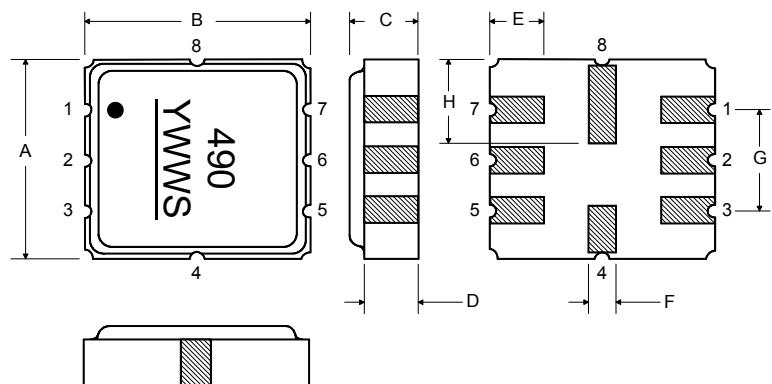


1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

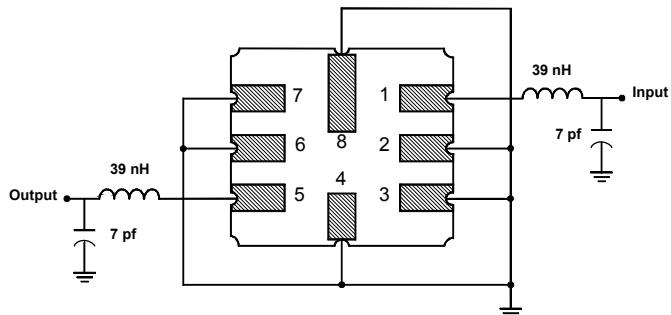
Rating	Value	Units
Input Power Level	10	dBm
DC Voltage	12	VDC
Storage Temperature	-40 to +125	°C
Operable Temperature	-40 to +125	°C
Soldering Temperature (10 seconds / 5 cycles max.)	260	°C

Electrical Connections

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

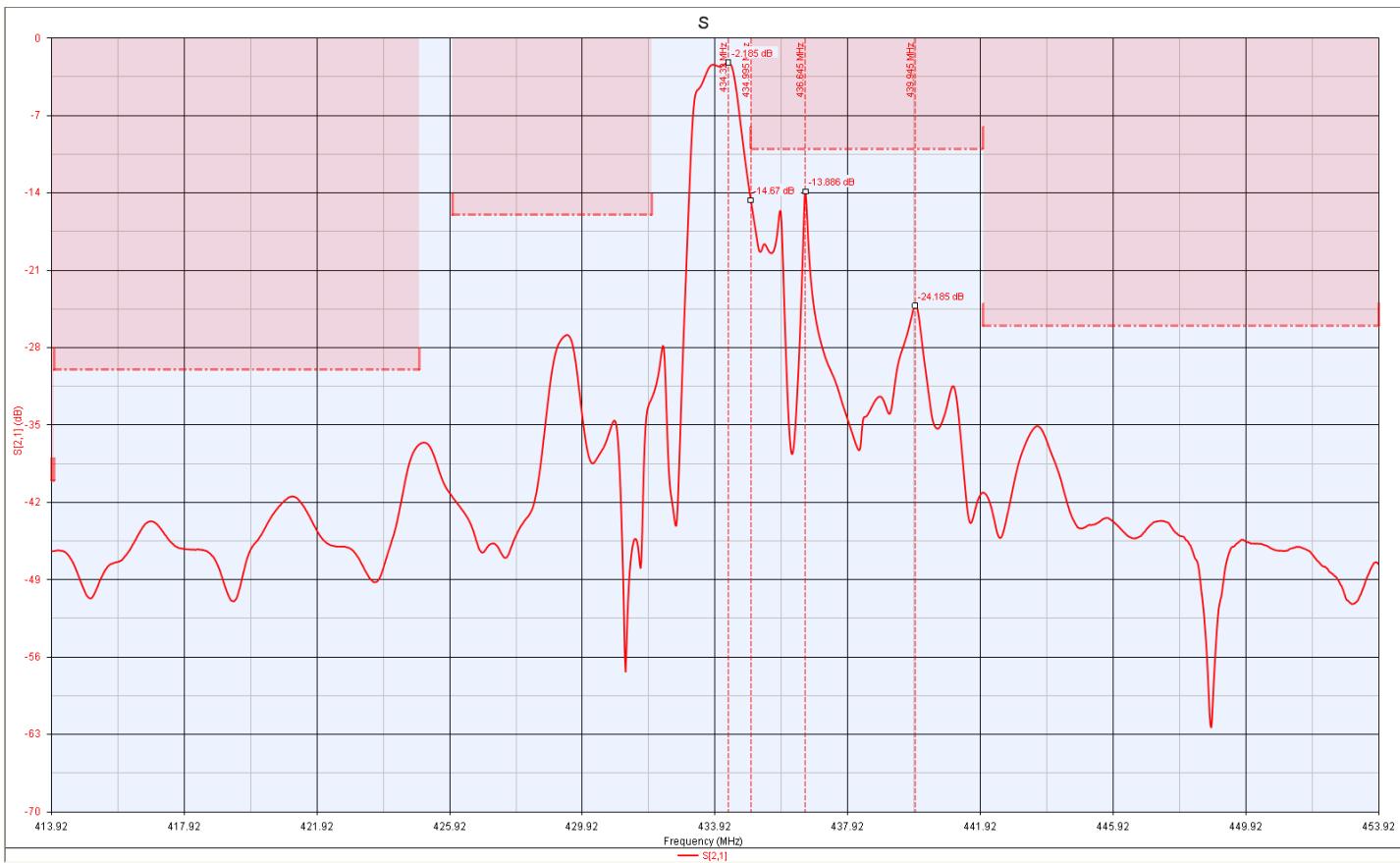
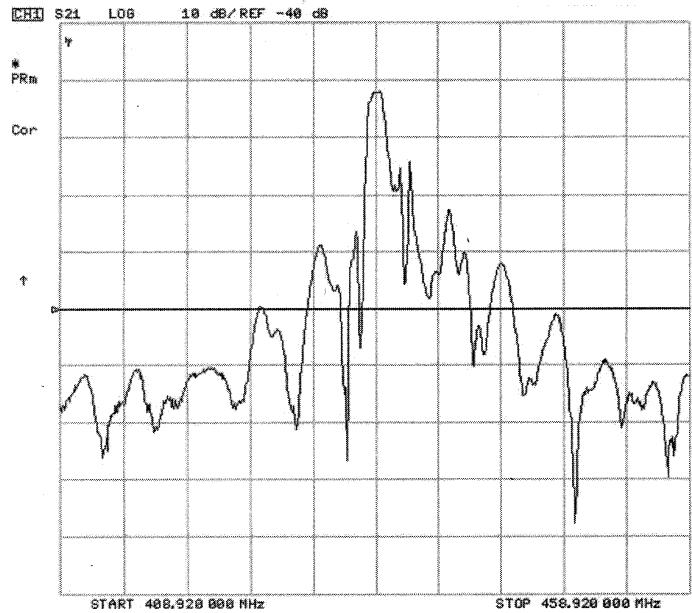
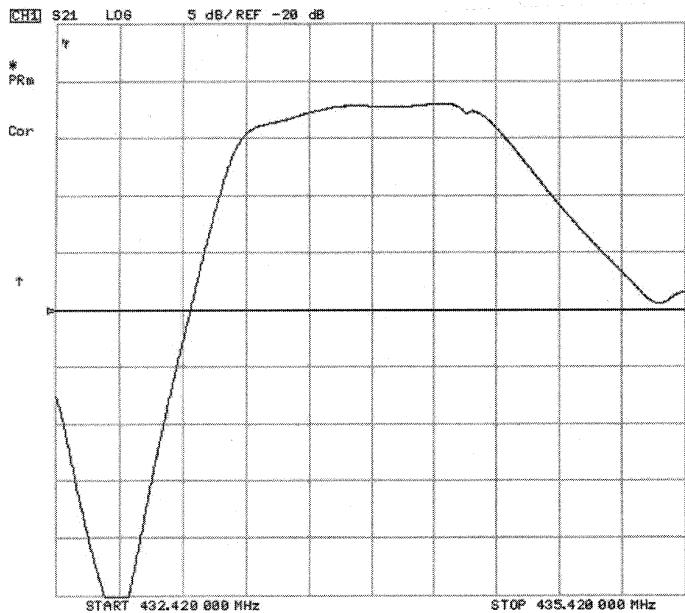


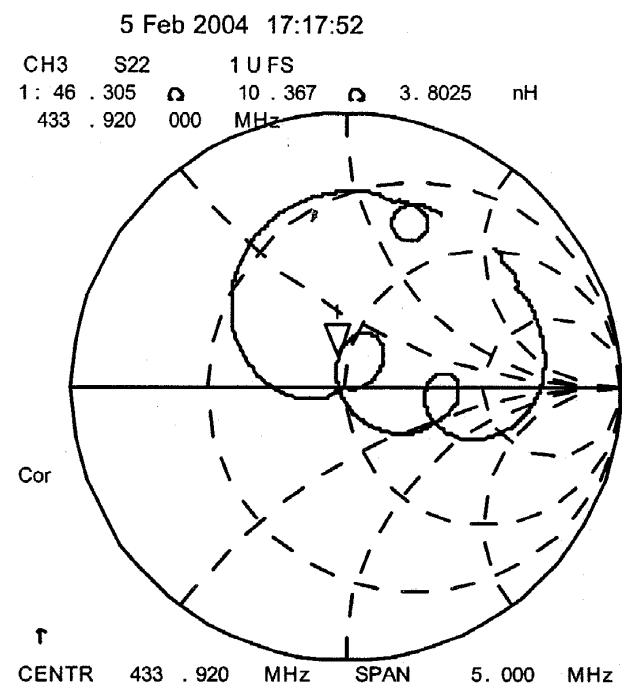
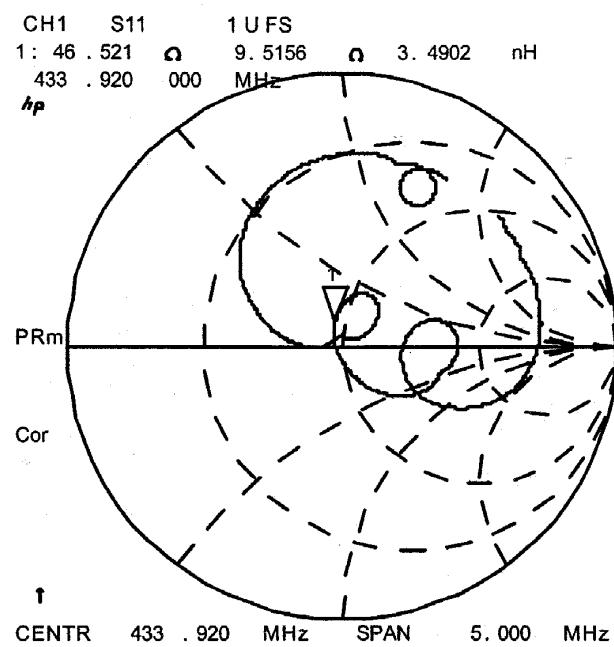
Matching Circuit to 50Ω



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.

