



AEC-Q200

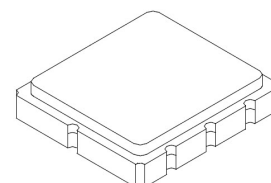
This component was always RoHS compliant from the first date of manufacture.

- **Ideal Front-End Filter for Domestic 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**



RF1415D

**315.0 MHz
SAW Filter**



**SM3838-8 Case
3.8 x 3.8**

The RF1415D is a low-loss, compact, and economical surface-acoustic-wave (SAW) filter designed to provide front-end selectivity in 315.0 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 (especially for automotive keyless entry) operating in the USA under FCC Part 15, in Canada under RSS-210, and in Italy

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.

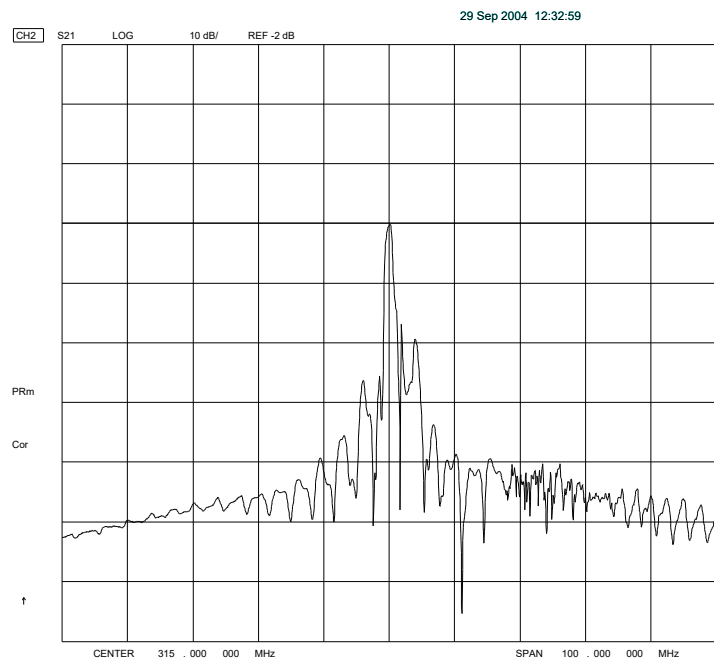
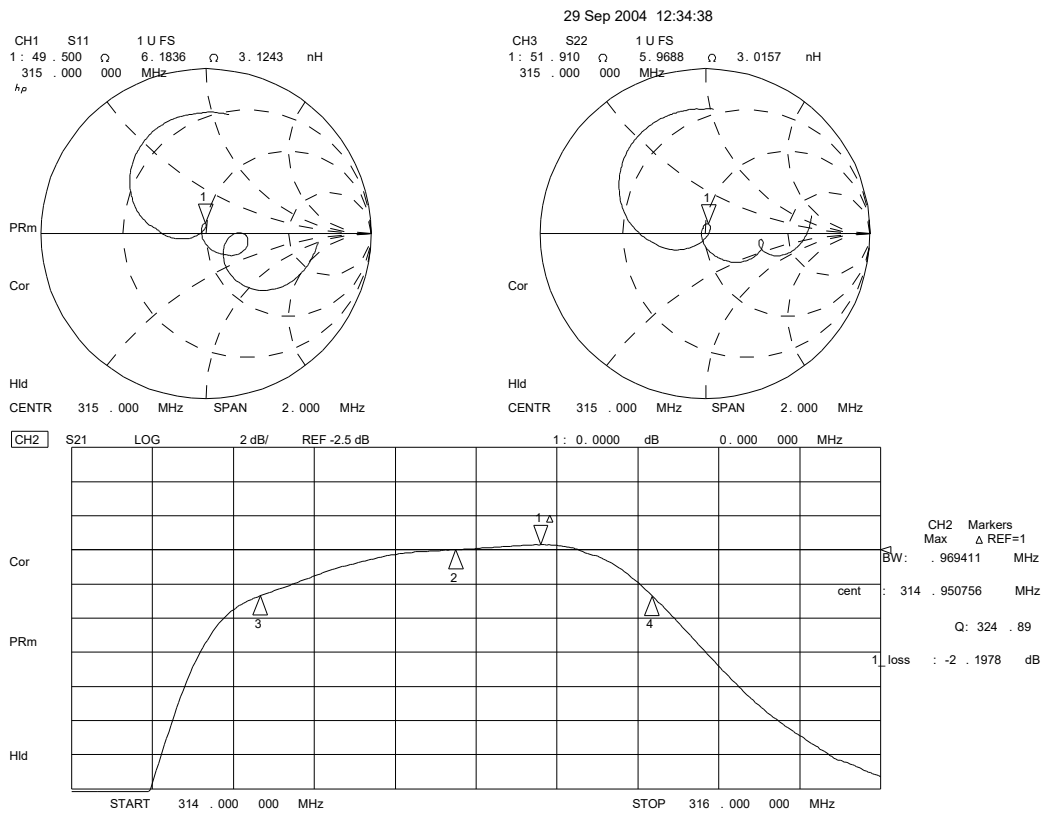
Characteristic		Sym	Notes	Minimum	Typical	Maximum	Units
Center Frequency at 25°C Absolute Frequency		f _c		314.840	315.00	315.170	MHz
Insertion Loss		IL _{MIN}			2.10	3.50	dB
3 dB Bandwidth		BW ₃		800	950	1200	kHz
Rejection Attenuation: (relative to ILmin) 10 - 285 MHz 285 - 305 MHz 305 - 309 MHz 309 - 313.9 MHz 316 - 327 MHz 327 - 335 MHz 335 - 450 MHz 450 - 1000 MHz				42	44		dB
				32	34		
				30	32		
				15	17		
				10	12		
				33	35		
				35	37		
				45	47		
Temperature Freq. Temp. Coefficient		FTC			0.032		ppm/ °C ²
Frequency Aging	Absolute Value during the First Year	fAI			≤10		ppm/yr
Impedance @ fc	Input Z _{IN} =R _{IN} C _{IN}	Z _{IN}		19Ω // 3.08pf			
	Output Z _{OUT} =R _{OUT} C _{OUT}	Z _{OUT}		20.3Ω // 3.14pf			
Lid Symbolization (Y=year WW=week S=shift)		538, <u>YWWWS</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:

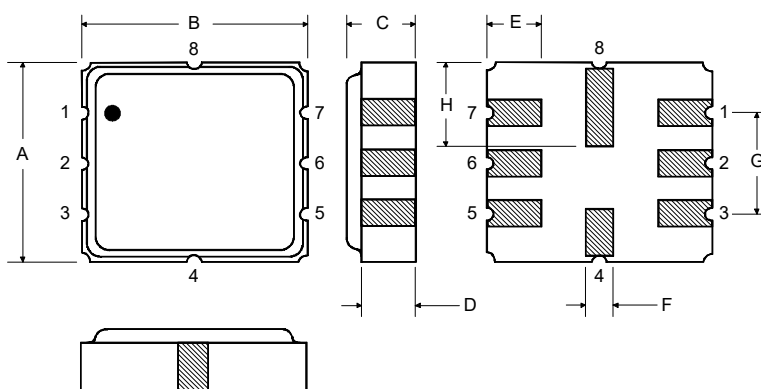
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.



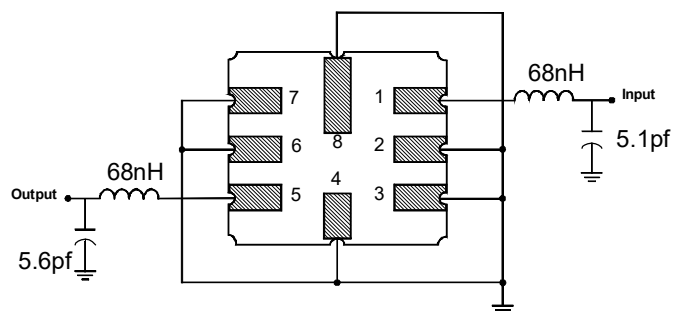
Rating	Value	Units
Input Power Level	10	dBm
DC Voltage	12	VDC
Storage Temperature	-40 to +125	°C
Operable Temperature Range	-40 to +125	°C
Soldering Temperature (10 seconds / 5 cycles max.)	260	°C

Electrical Connections

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



Matching Circuit to 50Ω



Case Dimensions

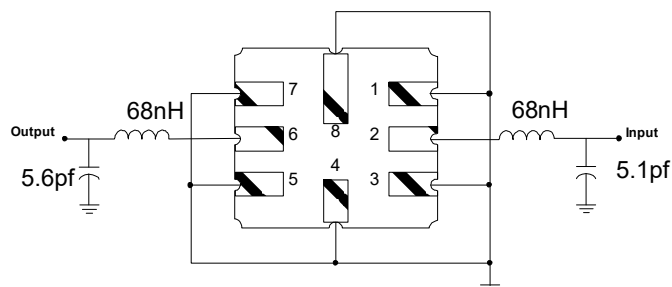
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	3.6	3.8	4.0	0.14	0.15	0.16
B	3.6	3.8	4.0	0.14	0.15	0.16
C	1.00	1.20	1.40	0.04	0.05	0.055
D	0.95	1.10	1.25	0.033	0.043	0.05
E	0.90	1.0	1.10	0.035	0.04	0.043
F	0.50	0.6	0.70	0.020	0.024	0.028
G	2.39	2.54	2.69	0.090	0.100	0.110
H	1.40	1.75	2.05	0.055	0.069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

Optional

Electrical Connections

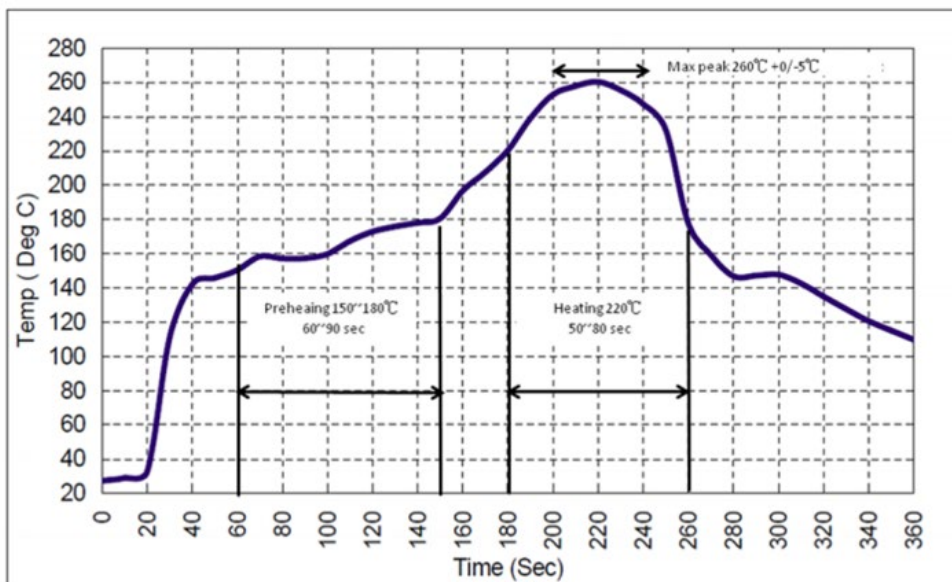
Pin	Connection
1	Input Ground
2	Input
3	Input Ground
4	Case Ground
5	Output Ground
6	Output
7	Output Ground
8	Case Ground

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.



Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[RFMi:](#)

[RF1415D](#)