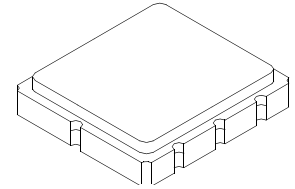


- **Ideal Front-End Filter for Domestic Wireless Receivers**
- **Low-Loss, Coupled-Resonator Quartz Design**
- **Simple External Impedance Matching**
- **Complies with Directive 2011/65/EU (RoHS)**
- **Tape & reel standard ANSI/EIA481**
- **Moisture Sensitivity Level: 1**
- **AEC-Q200 Qualified**

RF1211D

315.0 MHz SAW Filter



SM3838-8

The RF1211D 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. RFM's advanced SAW design and fabrication technology is utilized to achieve high performance and very low loss with simple external impedance matching.

Electrical Characteristics

Characteristic	Sym	Notes	Minimum	Typical	Maximum	Units
Center Frequency at 25°C Absolute Frequency	f_c		314.85	315.00	315.15	MHz
Insertion Loss	IL_{MIN}			1.6	2.5	dB
Passband Ripple (Relative to IL_{MIN}) $F_c \pm 150kHz$				0.7	1.2	dB
3 dB Bandwidth	BW_3		500	600	800	kHz
Rejection Attenuation: (relative to IL_{min})			10 - 295 MHz	44	49	dB
			295 - 305 MHz	40	45	
			305 - 310 MHz	31	36	
			310 - 313 MHz	14	19	
			313 - 314 MHz	6	8	
			316.5 - 320 MHz	22	27	
			320 - 325 MHz	15	18	
			325 - 335 MHz	33	38	
			335 - 600 MHz	46	49	
			600 - 1000 MHz	75	80	
Temperature Freq. Temp. Coefficient	FTC			0.032		ppm/°C ²
Frequency Aging Absolute Value during the First Year	lfA			≤ 10		ppm/yr
Impedance @ f_c	Input $Z_{IN}=R_{IN} C_{IN}$	Z_{IN}		5.0Ω/2.2pf		
	Output $Z_{OUT}=R_{OUT} C_{OUT}$	Z_{OUT}		9.3Ω/1.7pf		
Lid Symbolization (Y=year WW=week S=shift)			476, YVWS			
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.

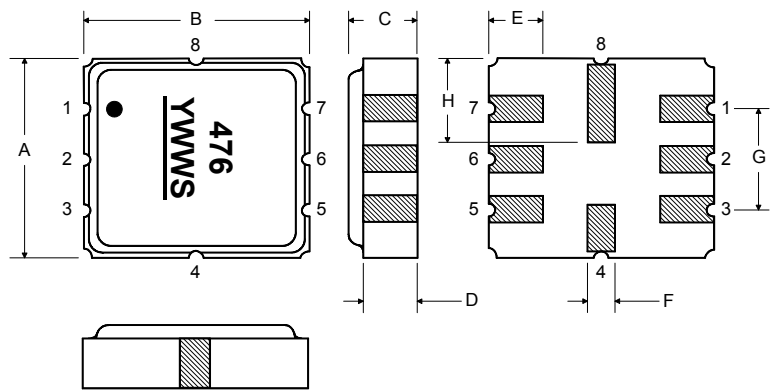
NOTES:

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

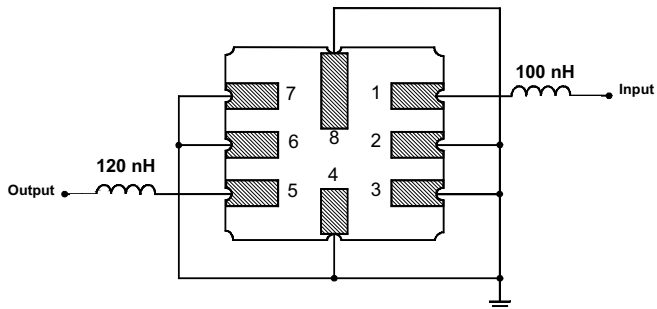
Rating	Value	Units
Input Power Level	10	dBm
DC Voltage	12	VDC
Storage Temperature	-40 to +125	°C
Operable Temperature Range	-40 to +125	°C
Soldering Temperature	(10 seconds / 5 cycles max.)	260 °C

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

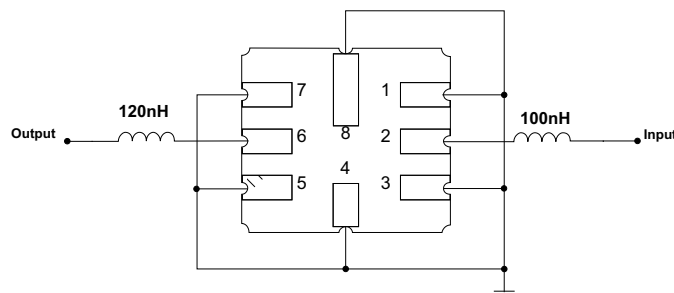
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	3.6	3.8	4.0	0.14	0.15	0.16
B	3.6	3.8	4.0	0.14	0.15	0.16
C	1.00	1.20	1.40	0.04	0.05	0.055
D	0.95	1.10	1.25	0.037	0.043	0.05
E	0.90	1.0	1.10	0.035	0.04	0.043
F	0.50	0.6	0.70	0.020	0.024	0.028
G	2.39	2.54	2.69	0.090	0.100	0.110
H	1.40	1.75	2.05	0.055	0.069	0.080

Optional

Electrical Connections

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

Matching Circuit to 50Ω



Recommended Reflow Profile

1. Preheating shall be fixed at 150~180° for 60~90 seconds.
2. Ascending time to preheating temperature 150° shall be 30 seconds min.
3. Heating shall be fixed at 220°C for 50~80 seconds and at 260°C peak (10 seconds.)
4. Time: 5 times maximum

