

- **Ideal Front-End Filter for Wireless Receivers**
- **Low-Loss, Coupled-Resonator Quartz Design**
- **Simple External Impedance Matching**
- **Complies with Directive 2002/95/EC (RoHS)**

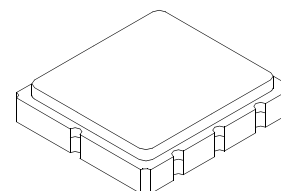


The RF3355C is a low-loss, compact, and economical surface-acoustic-wave (SAW) filter designed to provide front-end selectivity in 390 MHz receivers. Receiver designs using this filter include superhet with 10.7 MHz or 500 kHz IF, direct conversion and superregen. Typical applications of these receivers are wireless remote-control and security devices.

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

RF3355C

390.0 MHz SAW Filter



**SM5050-8 Case
5 x 5**

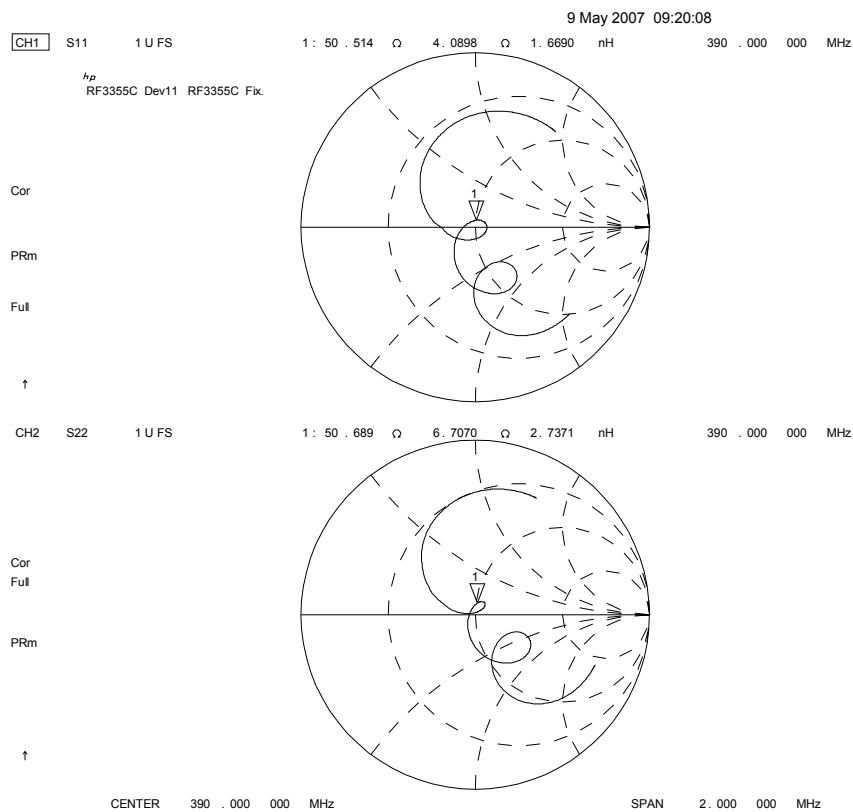
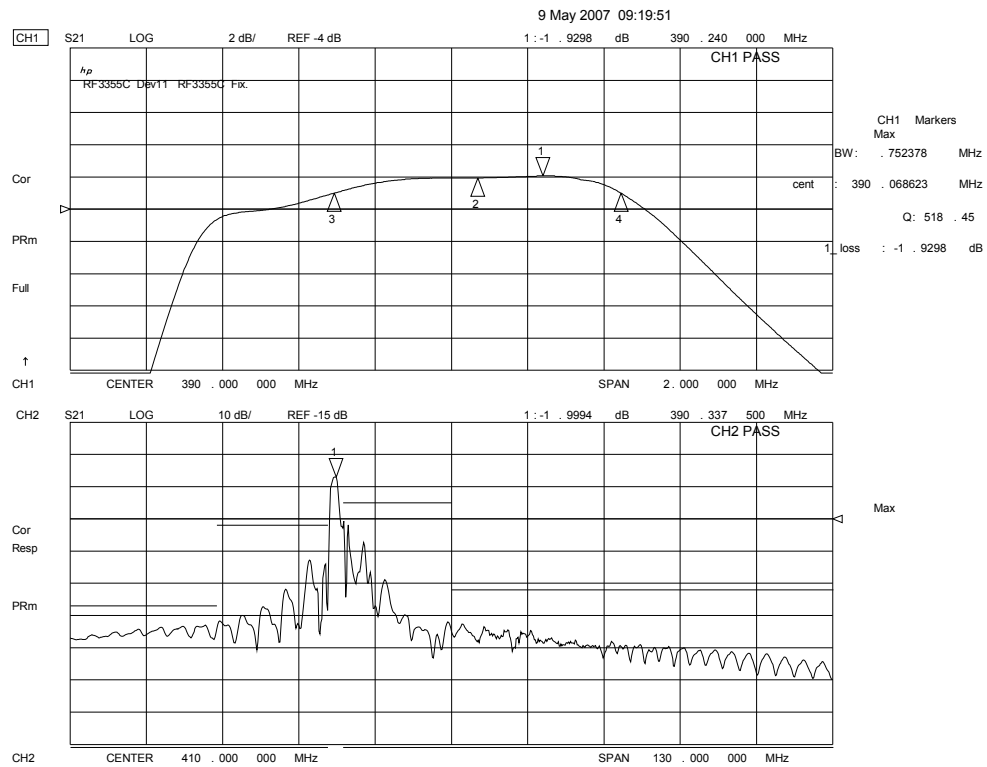
Characteristic		Sym	Notes	Minimum	Typical	Maximum	Units
Center Frequency at 25°C	Absolute Frequency	f _C	1, 2		390.0		MHz
Tolerance from 390.0 MHz		Δf _C	1, 2			±100	kHz
Minimum Insertion Loss 389.82 -390.22 MHz		IL _{min}	1		2.0	4.0	dB
Passband (relative to IL _{min})	389.77 -390.2		1		1.5	3.0	dB
	389.71 -390.26				2.0	6.0	
Passband (relative to IL _{min})		BW ₃	1	500	1100		kHz
Attenuation: (relative to IL _{min})	0 - 345 MHz		1	45	50		dB
	345 - 370 MHz			40	45		
	370 - 388.94 MHz			15	25		
	391.5 - 410 MHz			8	13		
	410 - 475 MHz			35	45		
	475 - 1000 MHz			45	55		
	Impedance at F _C ; Input Z _{IN} =R _{IN} //C _{IN}				1	344Ω // 4.9pF	
Output Z _{OUT} =R _{OUT} //C _{OUT}			1	344Ω // 4.9pF			
Turnover To			3, 4		25		°C
Frequency Aging Absolute Value During the First Year			3, 4	≤10 ppm/yr Typical			
Lid Symbolization (in addition to Lot and/or Date Codes)		736 // 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:

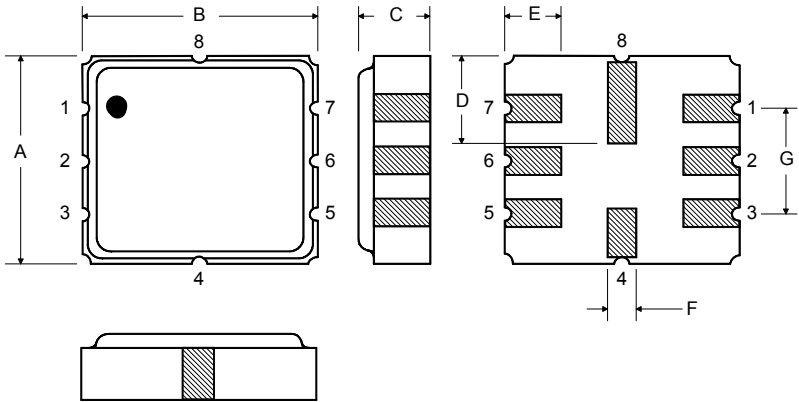
1. Unless noted otherwise, all measurements are made with the filter installed in the specified test fixture which is connected to a 50 Ω test system with VSWR $\leq 1.2:1$. The test fixture L and C are adjusted for minimum insertion loss at the filter center frequency, f_C . Note that insertion loss and bandwidth and passband shape are dependent on the impedance matching component values and quality.
2. The frequency f_C is defined as the midpoint between the 3dB frequencies.
3. Where noted specifications apply over the entire specified operating temperature range.
4. The turnover temperature, T_O , is the temperature of maximum (or turnover) frequency, f_O . The nominal frequency at any case temperature, T_C , may be calculated from:
 $f = f_O [1 - FTC (T_O - T_C)^2]$.
5. Frequency aging is the change in f_C with time and is specified at +65°C or less. Aging may exceed the specification for prolonged temperatures above +65°C. Typically, aging is greatest the first year after manufacture, decreasing significantly in subsequent years.
6. The design, manufacturing process, and specifications of this device are subject to change without notice.



Rating	Value	Units
Input Power Level	10	dBm
DC Voltage	12	VDC
Storage Temperature	-45 to +85	°C
Operating Temperature	-35 to +85	°C
Soldering Temperature	(10 seconds / 5 cycles max.)	260 °C

Electrical Connections

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



Case Dimensions

Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	4.8	5.0	5.2	0.189	0.197	0.205
B	4.8	5.0	5.2	0.189	0.197	0.205
C			1.7			0.067
D		2.08			0.082	
E		1.17			0.046	
F		0.64			0.025	
G	2.39	2.54	2.69	0.094	0.100	0.106

Matching Circuit to 50Ω

