# **Preliminary**



- 383.1 to 396.9 MHz Filter
- Optimized for use with the TRC105 Transceiver
- Balanced 150 ohm IC Interface
- Complies with Directive 2002/95/EC (RoHS)

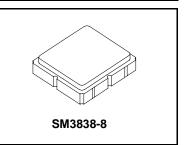


#### **Absolute Maximum Ratings**

Rating	Value	Units
Input Power Level	+15	dBm
DC Voltage	±5	V
Operating Temperature Range	-40 to +85	°C
Storage Temperature Range in Tape and Reel	-40 to +85	°C

# **RF3606D**

# 390 MHz **SAW Filter**



#### **Electrical Characteristics**

Characteristic	Sym	Notes	Min	Тур	Max	Units
Center Frequency	f <sub>C</sub>			390.0		MHz
1 dB Bandwidth	BW <sub>1</sub>			16.0		MHz
Maximum Insertion Loss, 383.1 to 396.9 MHz	IL <sub>MAX</sub>			1.4	2.4	
Amplitude Ripple, p-p, 383.1 to 396.9 MHz					1.0	
Rejection Referenced to Insertion Loss at 390.0 MHz:						
DC to 370 MHz			32	35		dB
400 to 490 MHz			32	35		ub ub
490 to 890 MHz			42	45		
890 to 1390 MHz			63	66		
1390 to 1790 MHz			55	58		
1790 to 2000 MHz			53	56		
Source Impedance	Z <sub>S</sub>			50		Ω
Balanced Load Impedance	Z <sub>L</sub>			150		Ω

Case Style	SM3838-8 3.8 x 3.8 mm Nominal Footprint	
Lid Symbolization (Y=year, WW=week, S=shift) dot=pin 1 indicator	889, YWWS	
Standard Reel Quantity Reel Size 7 Inch	500 Pieces/Reel	
Reel Size 13 Inch	3000 Pieces/Reel	

#### **Electrical Connections**

Connection	Terminals
Single-ended Port	6
Balanced Port	1, 3
Case Ground	4, 5, 7, 8
No Connection	2

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

#### Notes:

Unless noted otherwise, all specifications apply over the operating temperature range with filter soldered to the specified demonstration board with impedance matching to 50  $\Omega$  and measured with 50  $\Omega$  network analyzer.

Unless noted otherwise, all frequency specifications are referenced to the nominal center frequency, fc.

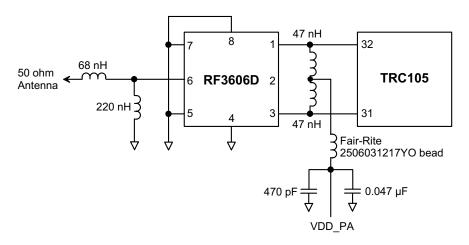
Rejection is measured as attenuation below the minimum IL point in the passband. Rejection in final user application is dependent on PCB layout and external impedance matching design. See Application Note No. 42 for details.

The design, manufacturing process, and specifications of this filter are subject to change.

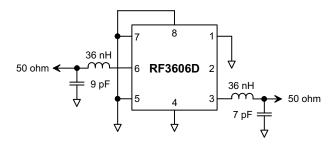
- US and international patents may apply.

  RFM, stylized RFM logo, and RF Monolithics, Inc. are registered trademarks of RF Monolithics, Inc.

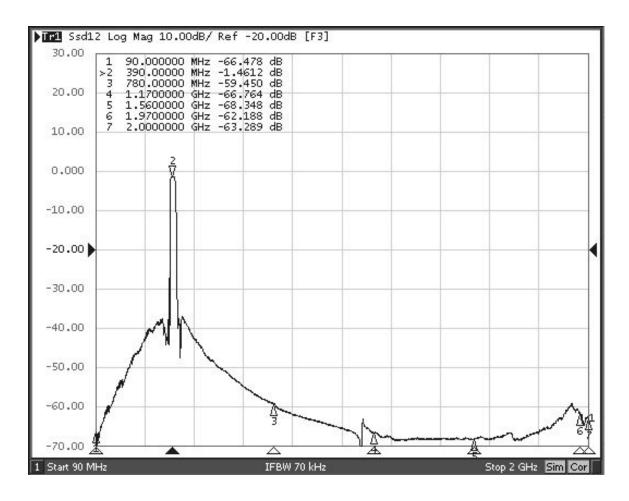
## RF3606D-TRC105 Application Circuit



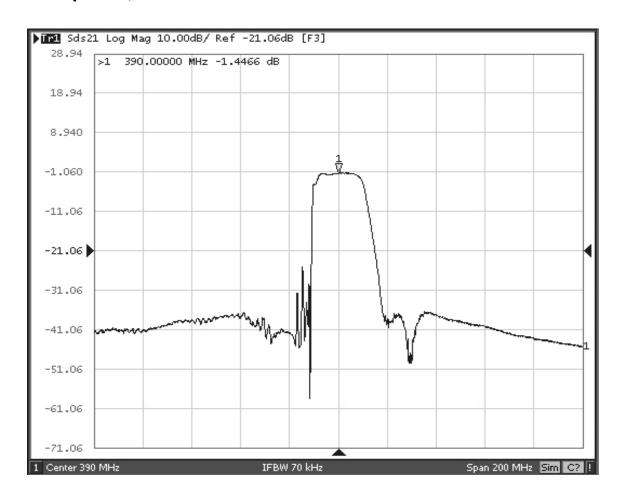
#### RF3606D 50 Ohm Tuning Network



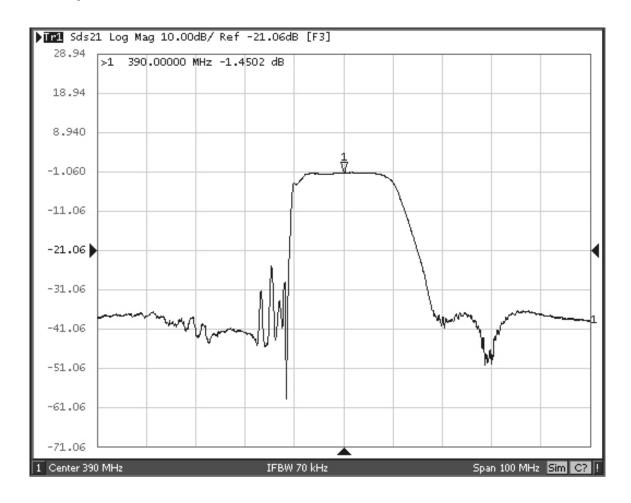
#### RF3606D Broadband Response, 200 to 2000 MHz



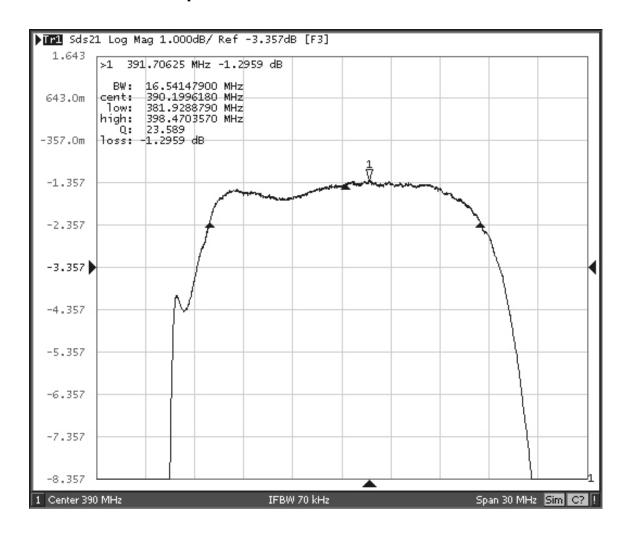
## RF3606D Response, 290 to 490 MHz



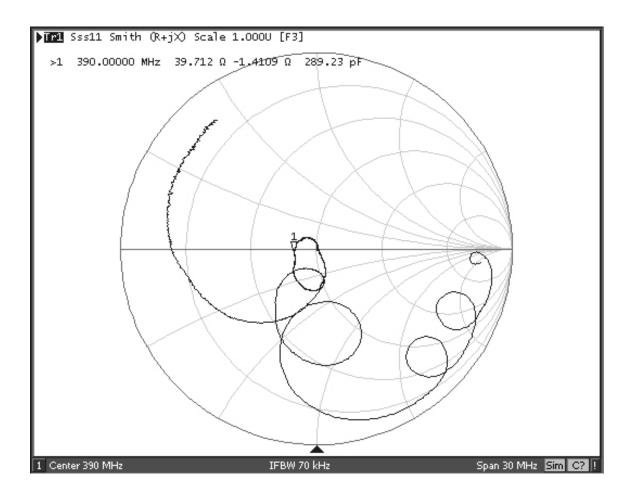
## RF3606D Response, 340 to 440 MHz



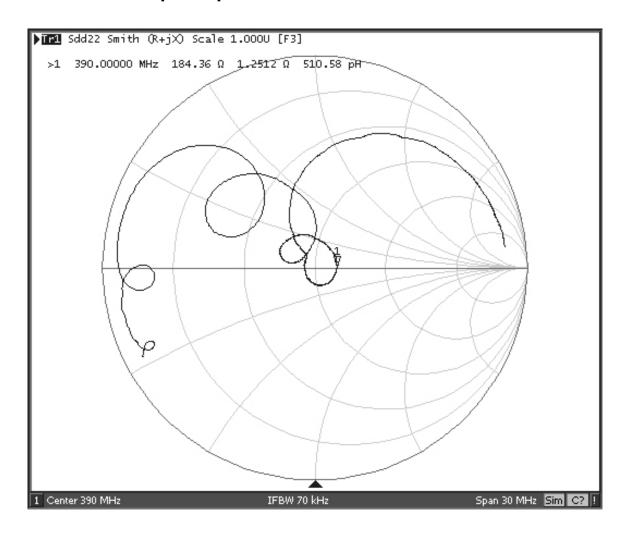
#### **RF3606D Passband Response**



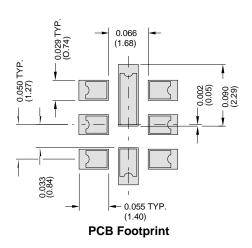
# **RF3606D Input Impedance Plot**



# **RF3606D Balanced Output Impedance Plot**

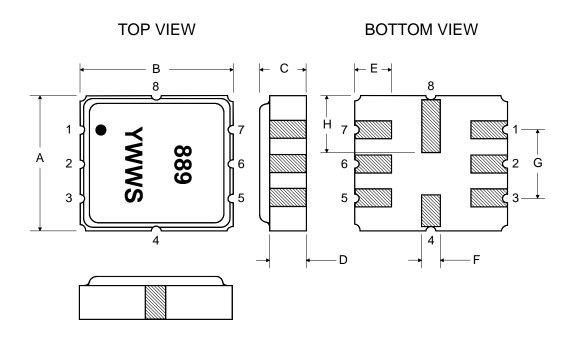


# 8-Terminal Ceramic Surface-Mount Case 3.8 X 3.8 mm Nominal Footprint

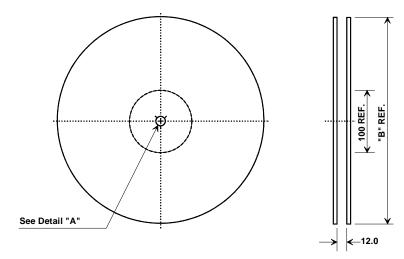


Case Dimensions						
Dimension	mm		Inches			
	Min	Nom	Max	Min	Nom	Max
Α	3.6	3.8	4.0	0.142	0.150	0.157
В	3.6	3.8	4.0	0.142	0.150	0.157
С	0.90	1.00	1.1	0.035	0.040	0.043
D	0.80	0.90	1.0	0.031	0.035	0.040
E	0.90	1.00	1.10	0.035	0.040	0.043
F	0.50	0.60	0.70	0.020	0.024	0.028
G	2.39	2.54	2.69	0.090	0.100	0.110
Н	1.40	1.75	2.05	0.055	0.069	0.080

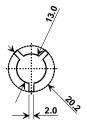
Materials				
Solder Pad Plating	0.3 to 1.0 μm Gold over 1.27 to 8.89 μm Nickel			
Lid Plating	2.0 to 3.0 µm Nickel			
Body	Al <sub>2</sub> O <sub>3</sub> Ceramic			
Pb Free				



#### **Tape and Reel Specifications**



"B " Nominal Size		Quantity Per Reel
Inches	millimeters	
7	178	500
13	330	3000



#### **COMPONENT ORIENTATION and DIMENSIONS**

Carrier Tape Dimensions				
Ao	4.25 mm			
Во	4.25 mm			
Ко	1.30 mm			
Pitch	8.0 mm			
W	12.0 mm			

