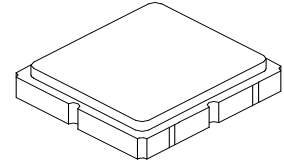


# RF3605D

## 372.25 MHz SAW Filter



SM3838-8

- 364.25 to 380.25 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

### Electrical Characteristics

Characteristic	Sym	Notes	Min	Typ	Max	Units
Center Frequency	$f_C$			372.25		MHz
1 dB Bandwidth	$BW_1$			16		MHz
Maximum Insertion Loss, 364.25 to 380.25 MHz	$IL_{MAX}$			1.5	2.0	dB
Amplitude Ripple, p-p, 364.25 to 380.25 MHz				1.0		
Rejection Referenced to Insertion Loss at 372.25 MHz:						
DC to 335 MHz			27	30		
390 to 500 MHz			25	30		
500 to 900 MHz			36	39		
900 to 1300 MHz			44	47		
1300 to 2000 MHz			37	40		
Source Impedance	$Z_S$			50		$\Omega$
Balanced Load Impedance	$Z_L$			150		$\Omega$

Case Style	SM3838-8 3.8 x 3.8 mm Nominal Footprint		
Lid Symbolization (Y=year, WW=week, S=shift) dot=pin 1 indicator	888, 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

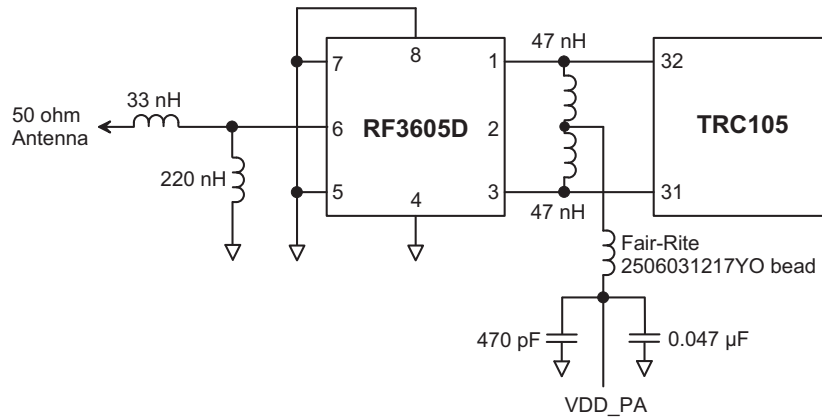


**CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

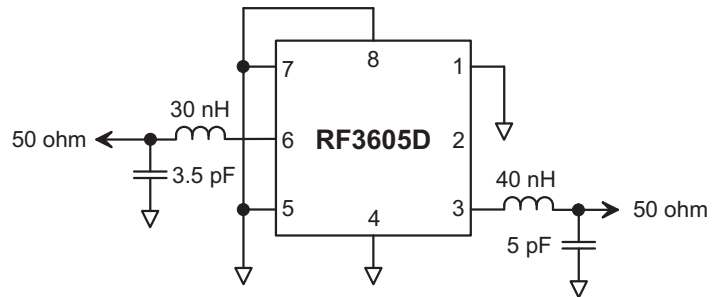
#### NOTES:

1. 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.
2. Unless noted otherwise, all frequency specifications are referenced to the nominal center frequency,  $f_C$ .
3. 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.
4. The design, manufacturing process, and specifications of this filter are subject to change.
5. US and international patents may apply.
6. Murata, stylized Murata logo, and Murata N.A., Inc. are registered trademarks of Murata Manufacturing Co., Ltd.

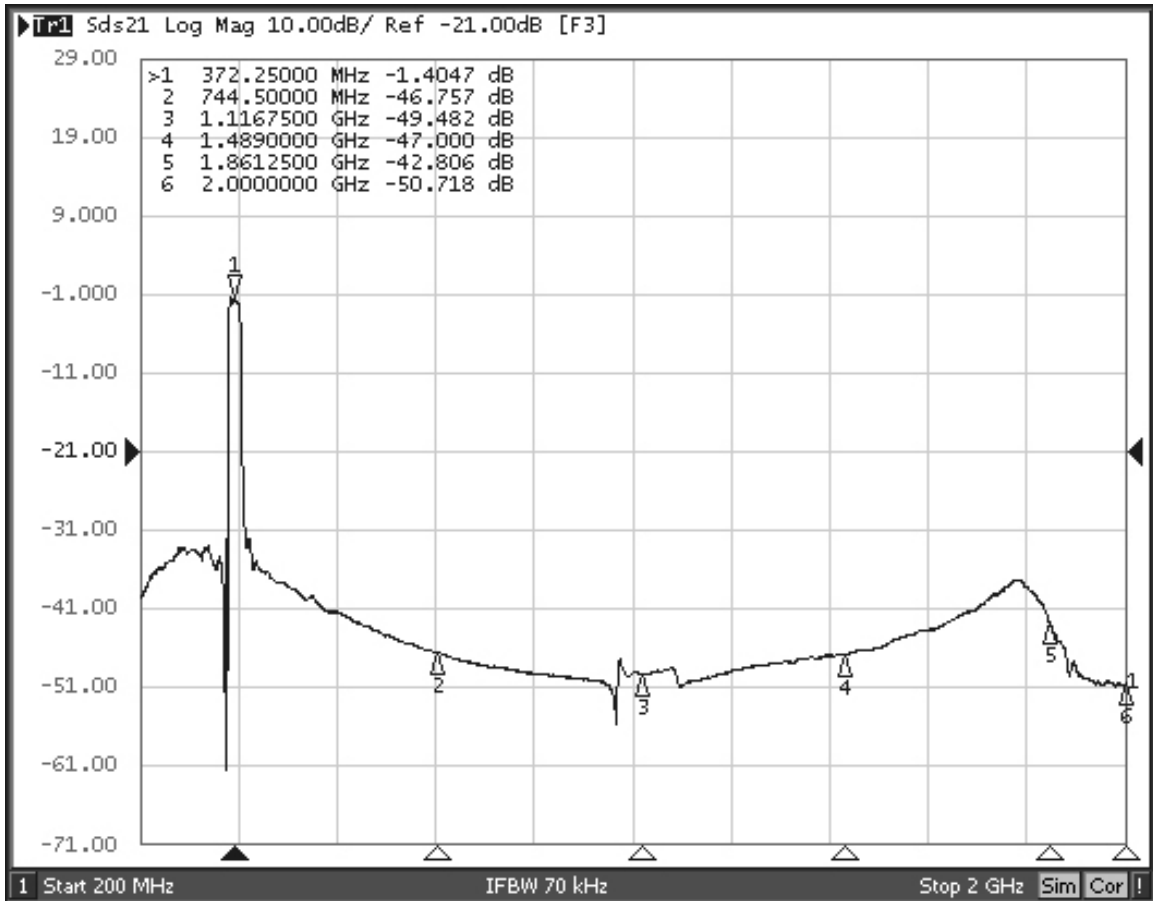
## RF3605D-TRC105 Application Circuit



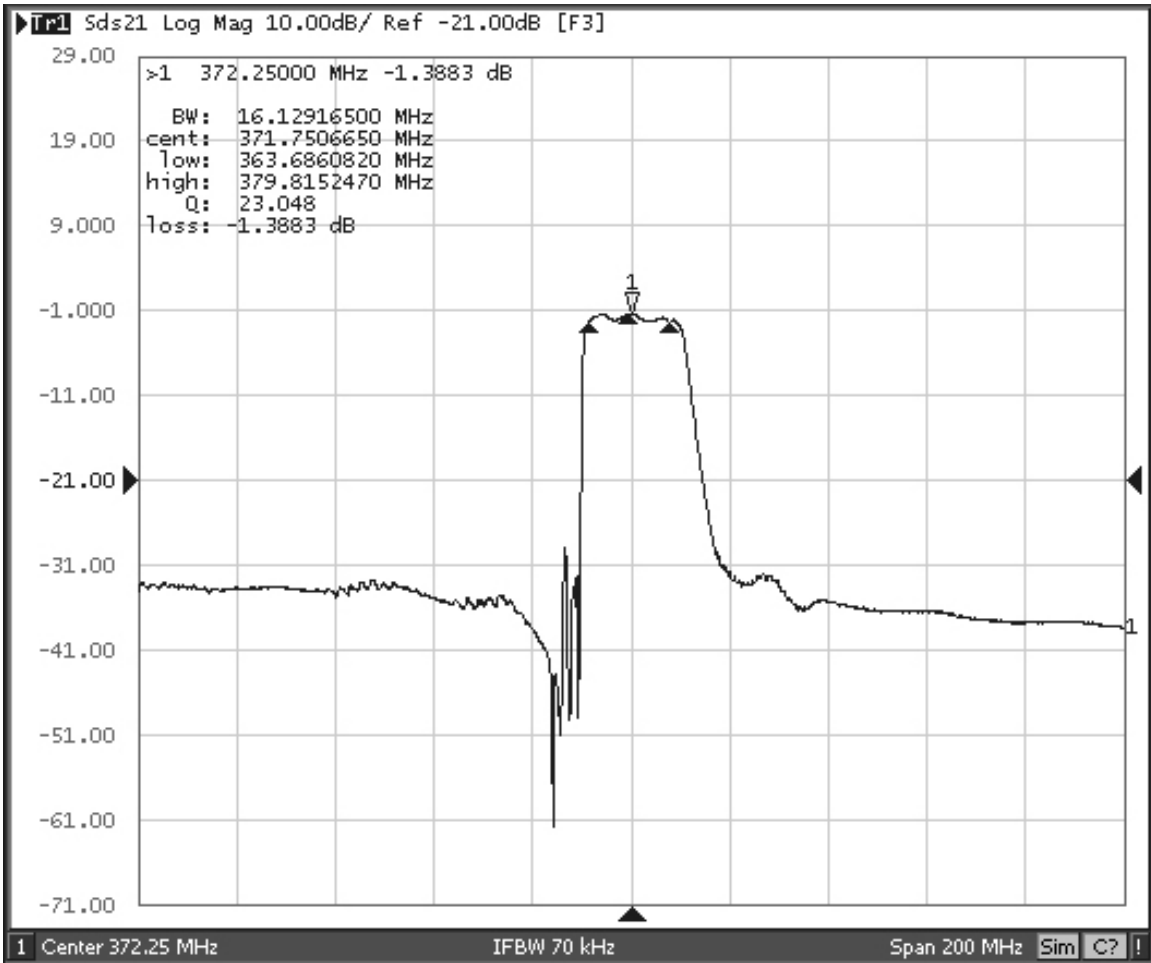
## RF3605D 50 Ohm Tuning Network



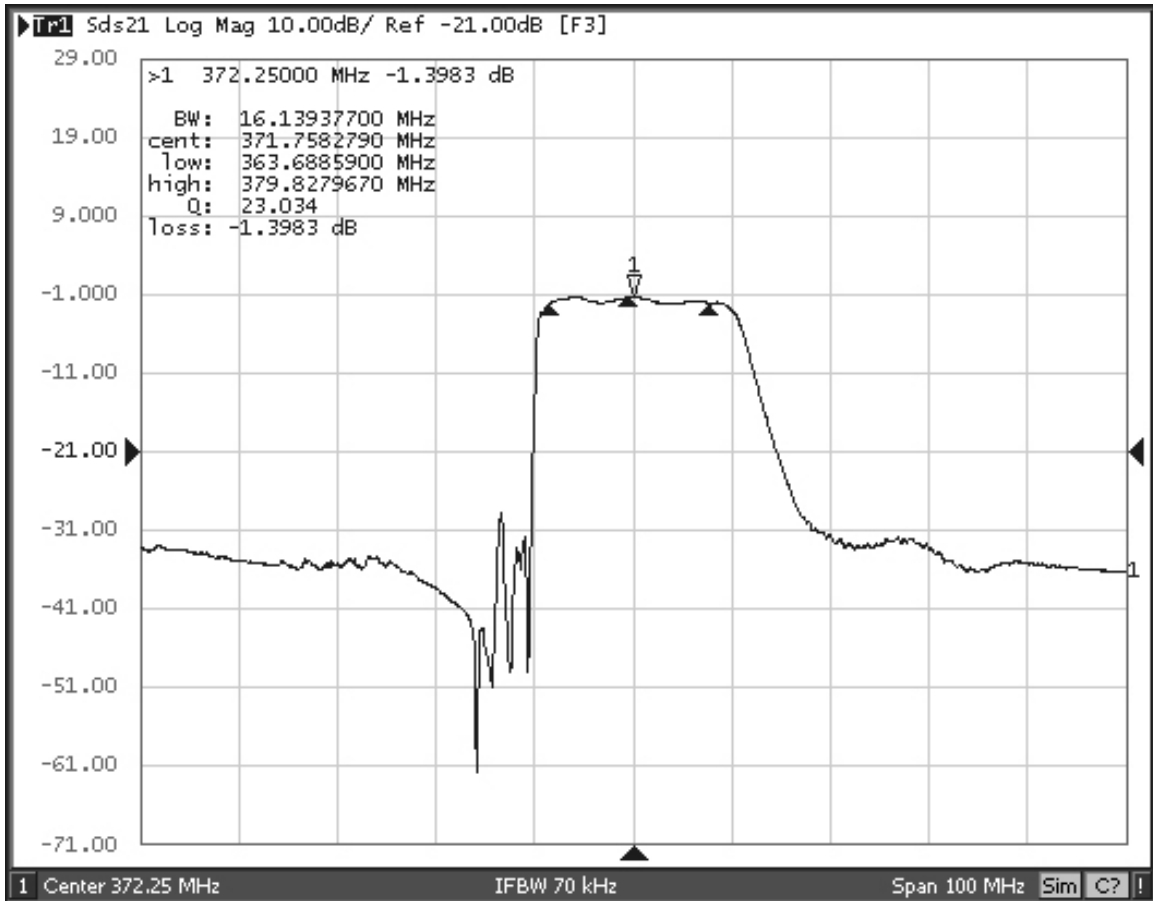
# RF3605D Broadband Response, 200 to 2000 MHz



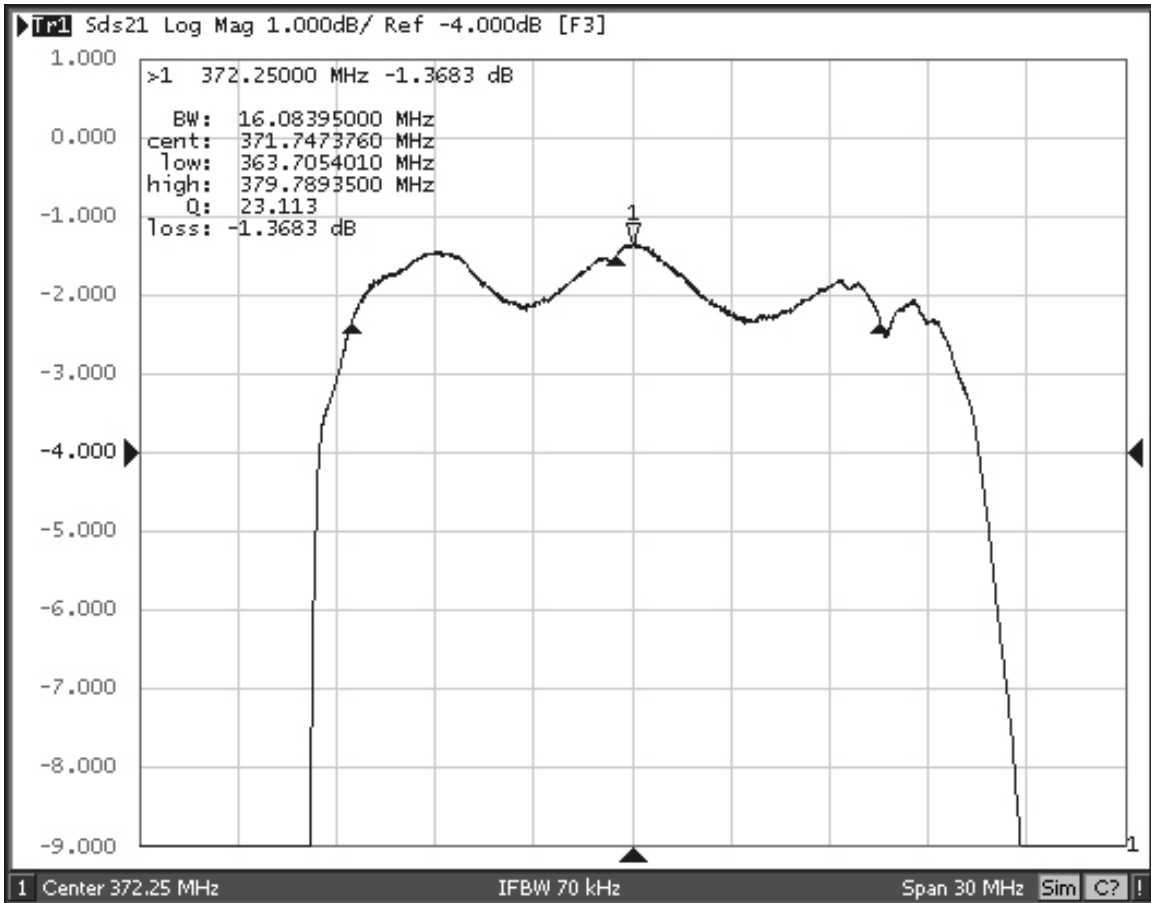
# RF3605D Response, 272.25 to 472.25 MHz



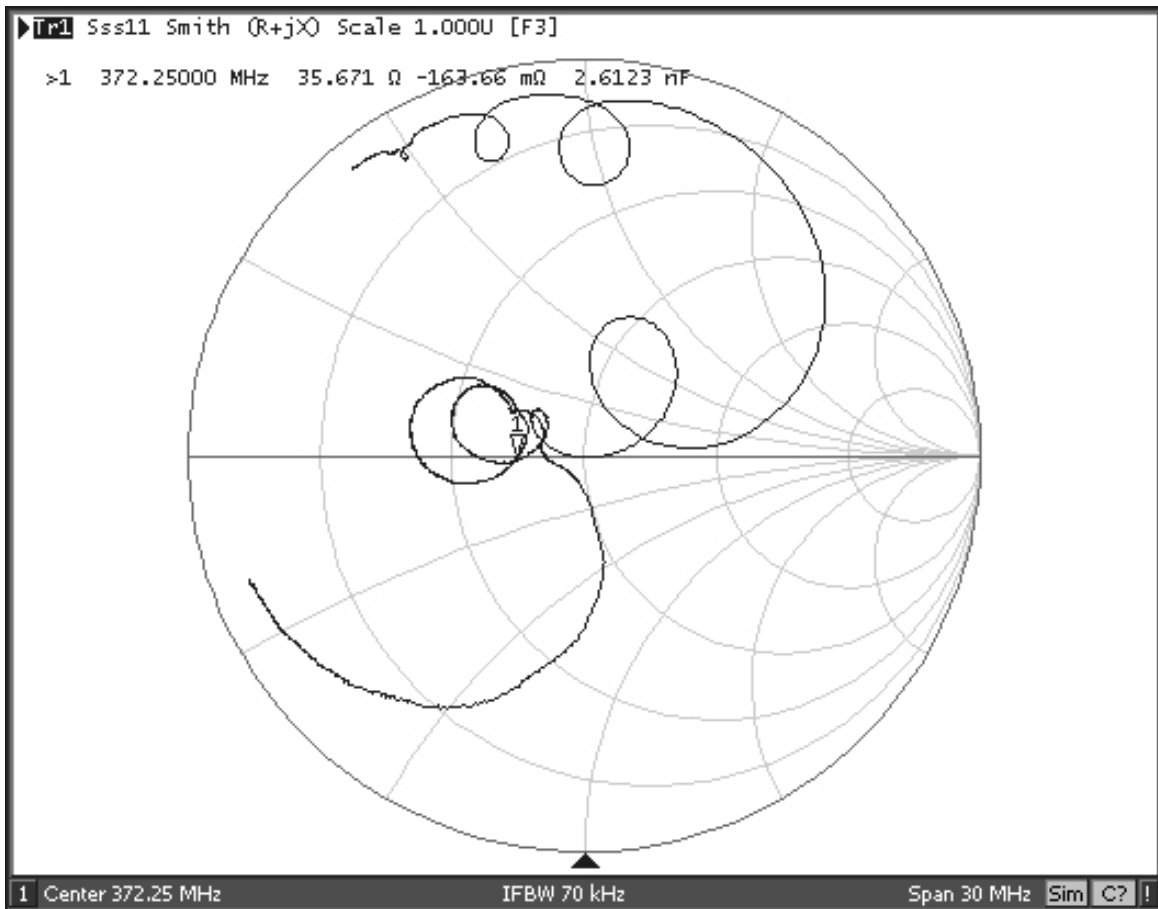
# RF3605D Response, 322.25 to 422.25 MHz



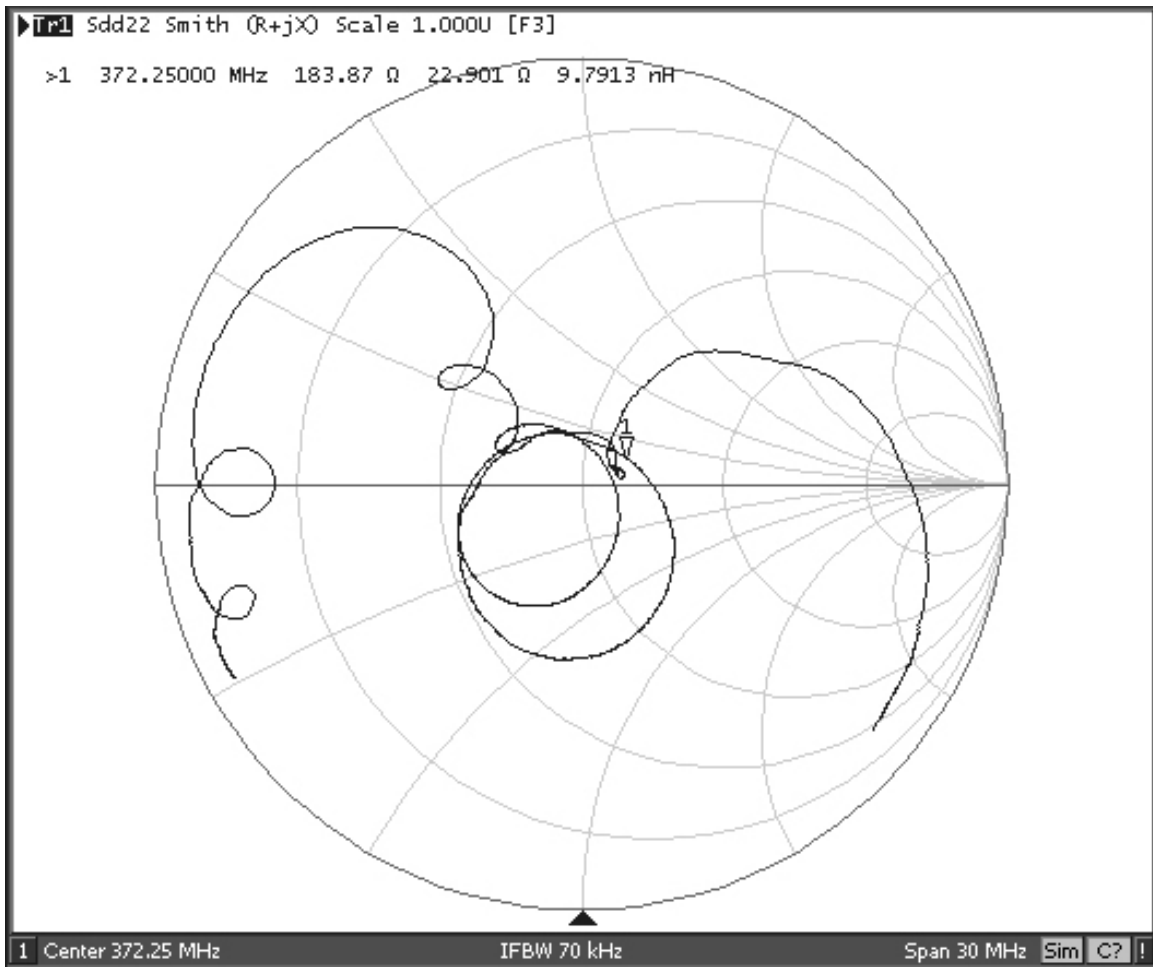
# RF3605D Passband Response



## RF3605D Input Impedance Plot

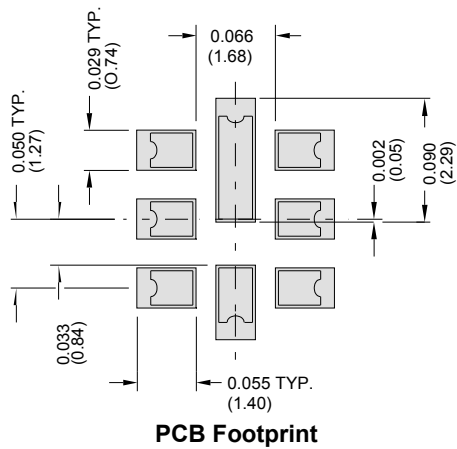


## RF3605D Balanced Output Impedance Plot



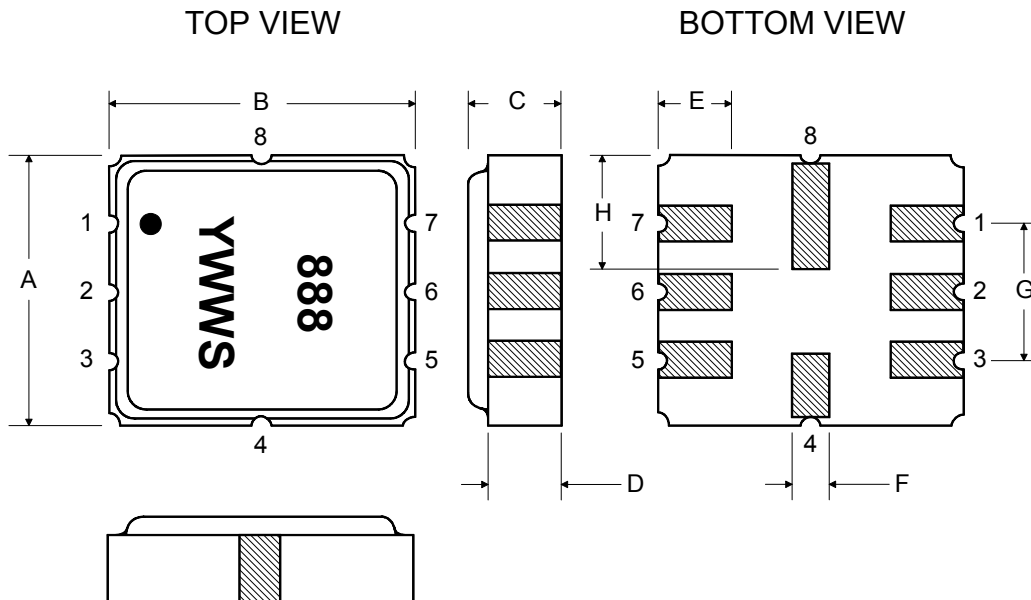


## 8-Terminal Ceramic Surface-Mount Case 3.8 X 3.8 mm Nominal Footprint

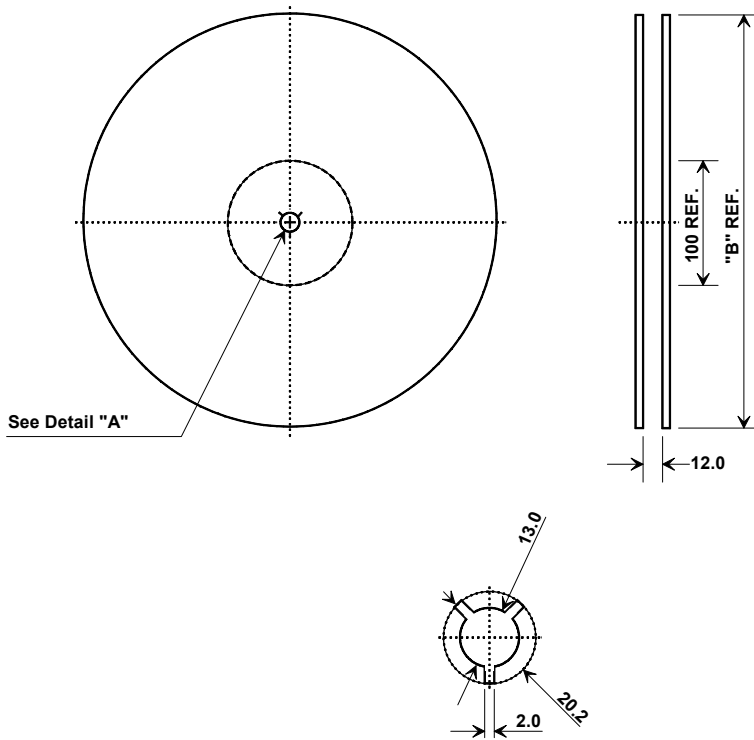


Case Dimensions						
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
<b>A</b>	3.6	3.8	4.0	0.142	0.150	0.157
<b>B</b>	3.6	3.8	4.0	0.142	0.150	0.157
<b>C</b>	0.90	1.00	1.1	0.035	0.040	0.043
<b>D</b>	0.80	0.90	1.0	0.031	0.035	0.040
<b>E</b>	0.90	1.00	1.10	0.035	0.040	0.043
<b>F</b>	0.50	0.60	0.70	0.020	0.024	0.028
<b>G</b>	2.39	2.54	2.69	0.090	0.100	0.110
<b>H</b>	1.40	1.75	2.05	0.055	0.069	0.080

Materials	
Solder Pad Plating	0.3 to 1.0 $\mu$ m Gold over 1.27 to 8.89 $\mu$ m Nickel
Lid Plating	2.0 to 3.0 $\mu$ m 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
Bo	4.25 mm
Ko	1.30 mm
Pitch	8.0 mm
W	12.0 mm

