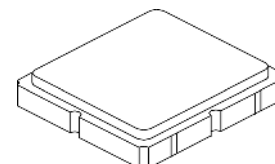


**RF3606D**

**390 MHz  
SAW Filter**



**SM3838-8**

- **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)**
- **Moisture Sensitivity Level: 1**

**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	$f_C$			390.0		MHz	
1 dB Bandwidth	$BW_1$			16.0		MHz	
Maximum Insertion Loss, 383.1 to 396.9 MHz	$IL_{MAX}$			1.4	2.4	dB	
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			
400 to 490 MHz			32	35			
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	$Z_S$			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	889, <u>YWWS</u>		
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

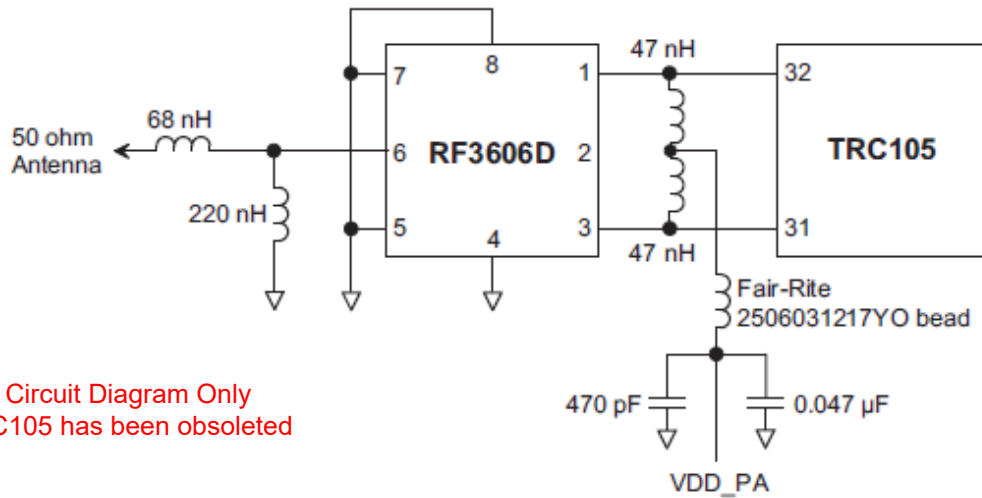


**CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

**NOTES:**

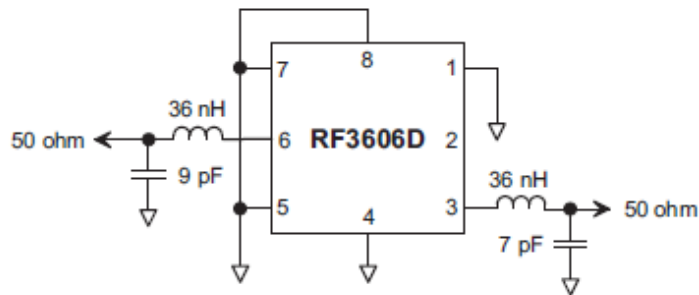
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

## RF3606D – TRC105 Application Circuit

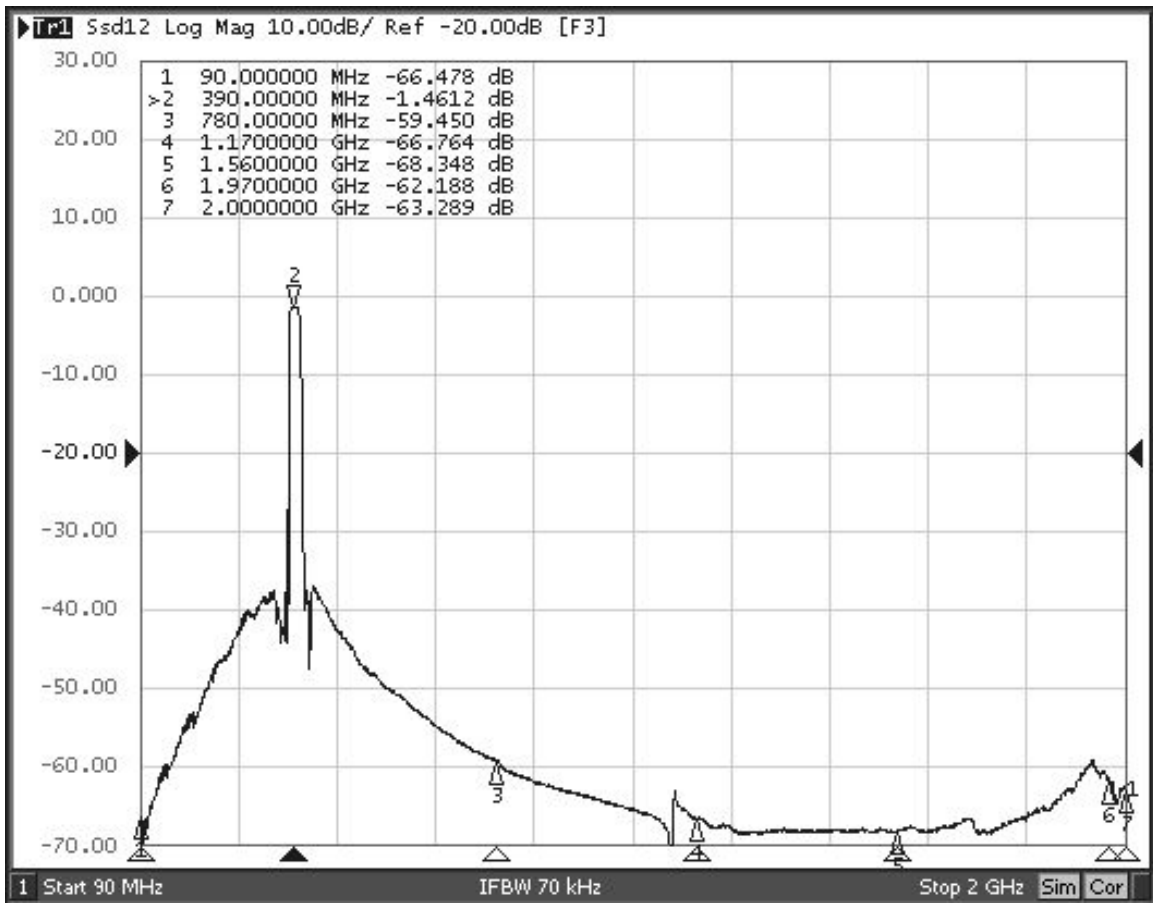


Reference Circuit Diagram Only  
Note: TRC105 has been obsolete

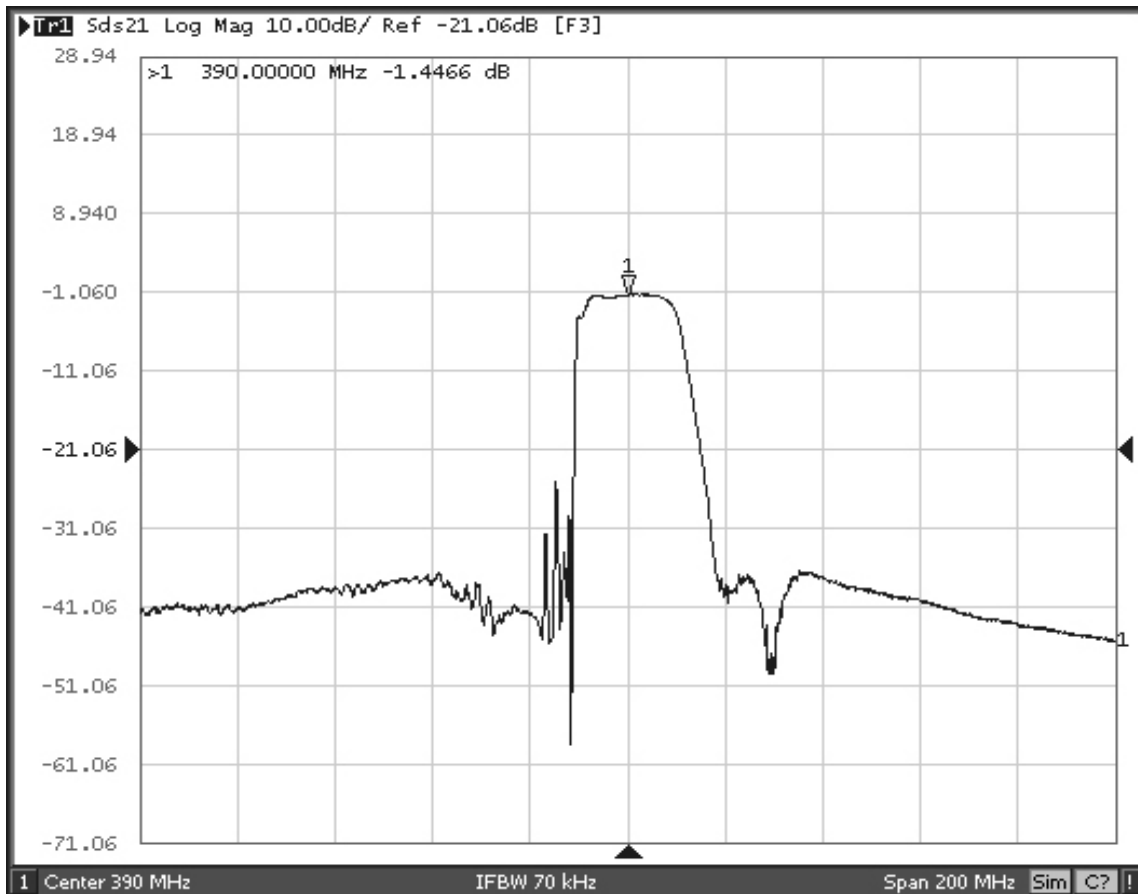
## RF3606D 50 Ohm Tuning Network



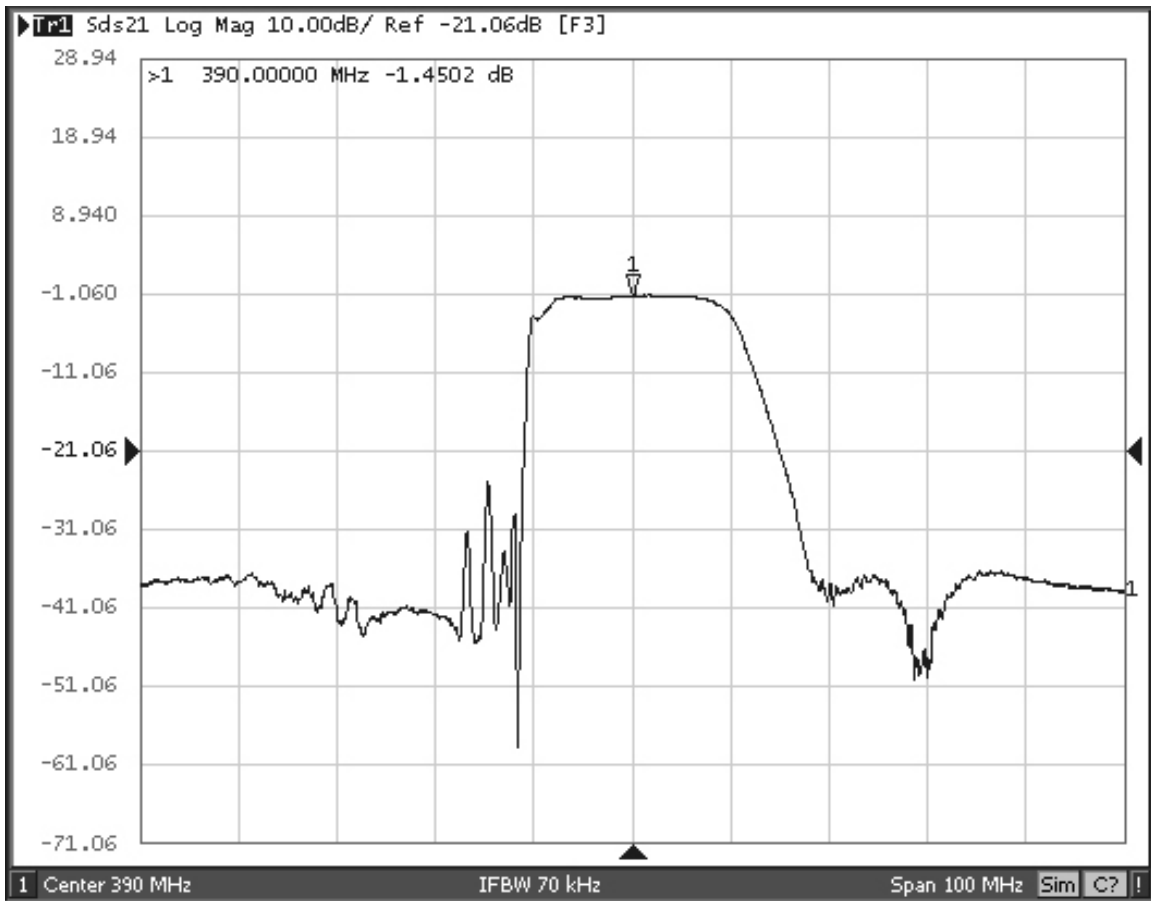
# RF3606D Broadband Response, 200 to 2000 MHz



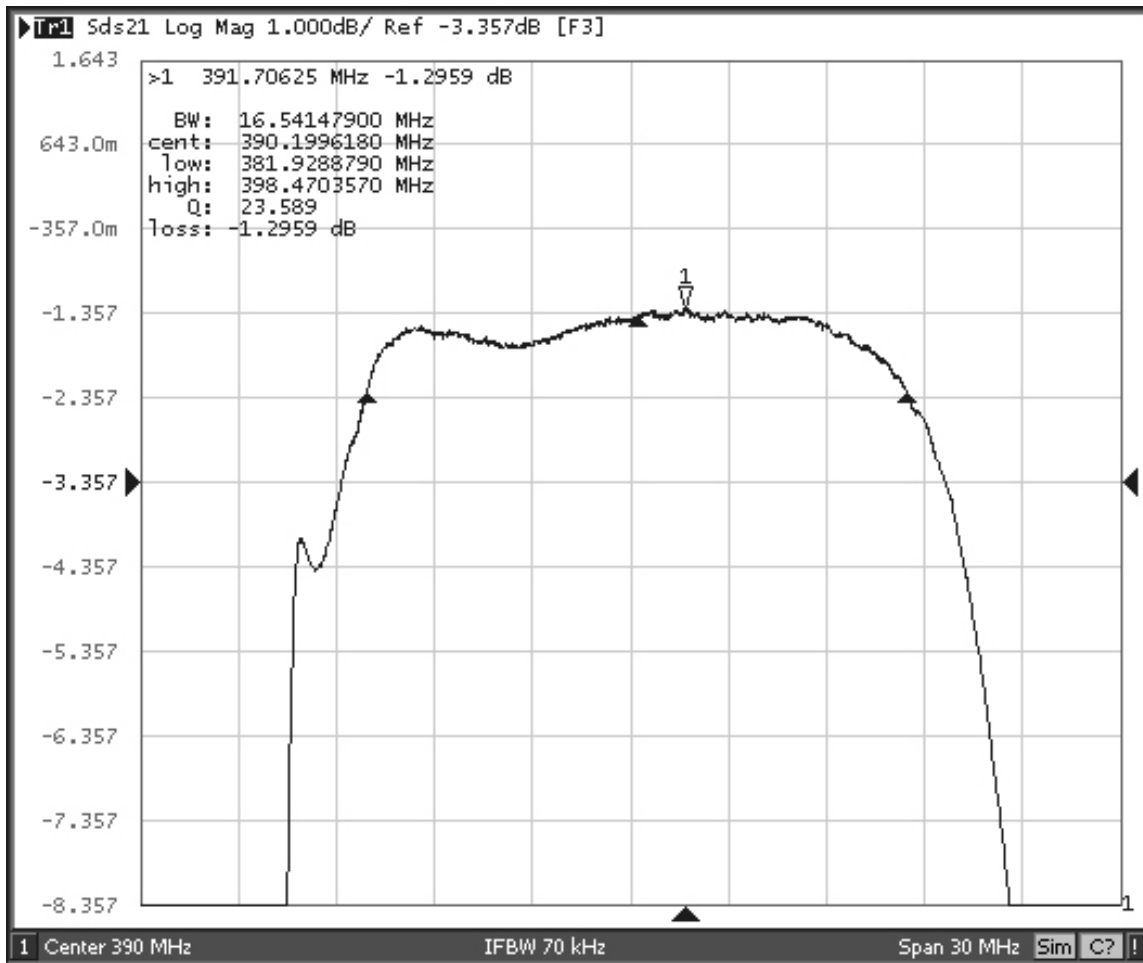
# RF3606D Response, 290 to 490 MHz



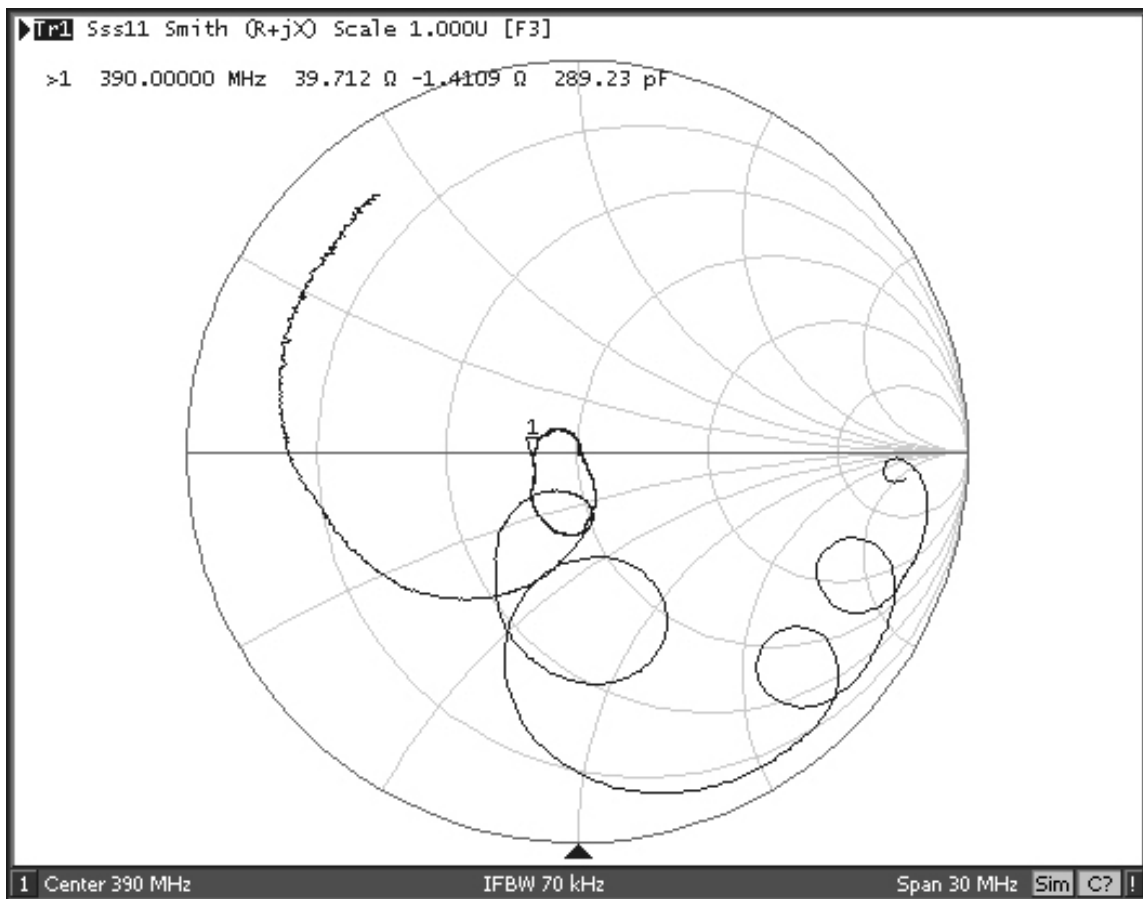
# RF3606D Response, 340 to 440 MHz



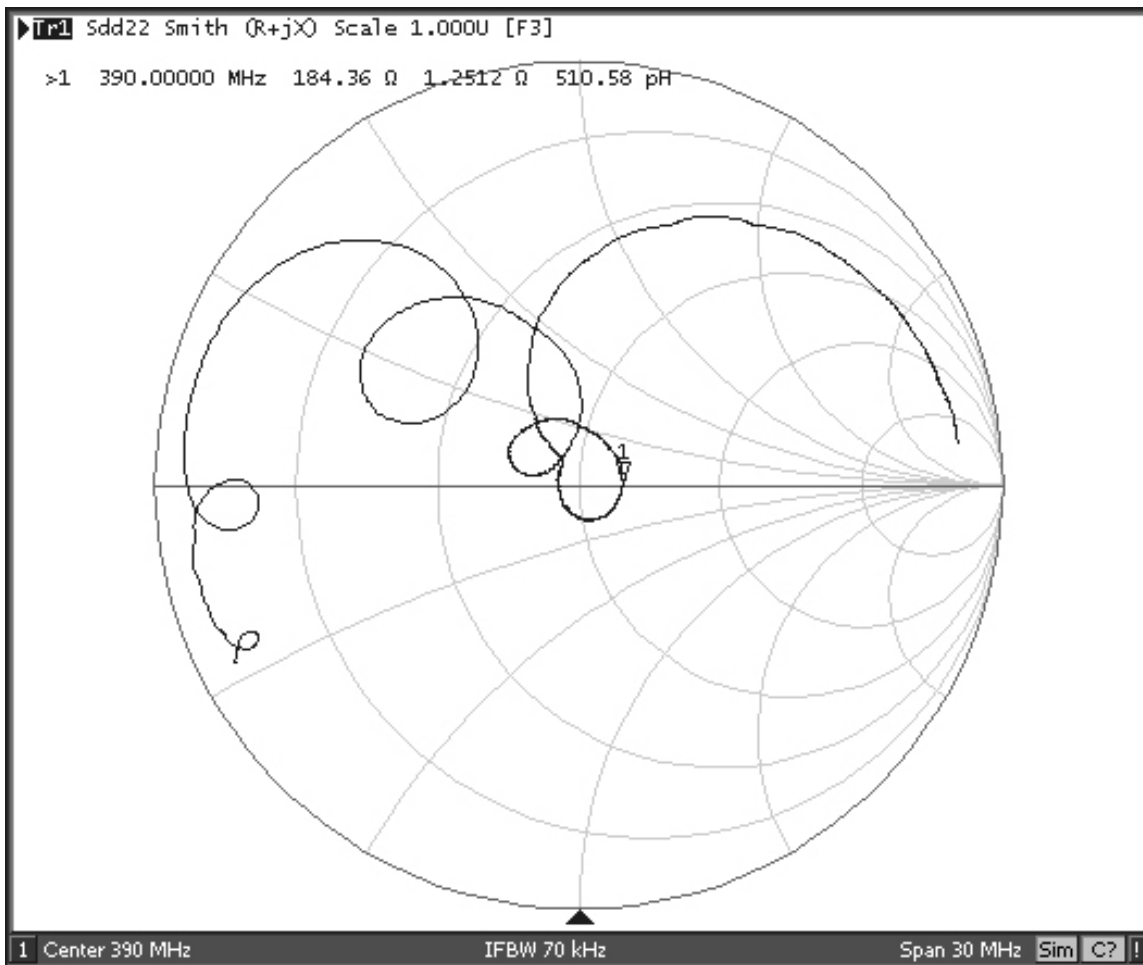
# RF3606D Passband Response



## RF3606D Input Impedance Plot

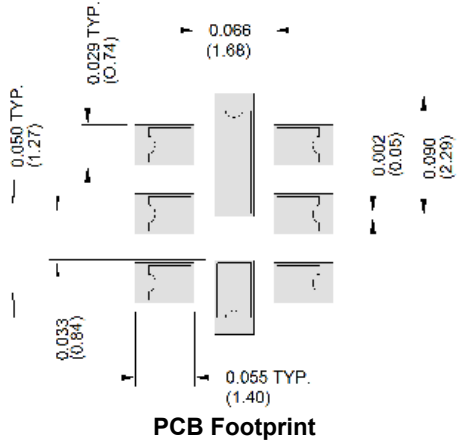


## RF3606D Balanced Output Impedance Plot



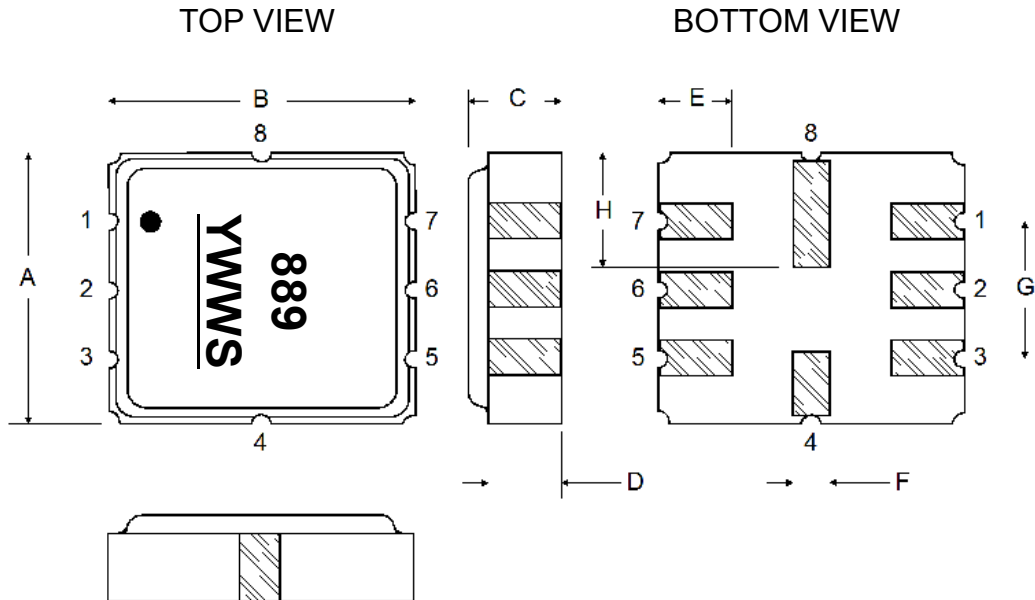


## 8-Terminal Ceramic Surface-Mount Case 3.8 X 3.8 mm Nominal Footprint



Case Dimensions						
Dimension	mm			Inches		
	Min	Nom	Max	Min	Nom	Max
A	3.6	3.8	4.0	0.142	0.150	0.157
B	3.6	3.8	4.0	0.142	0.150	0.157
C	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
H	1.40	1.75	2.05	0.055	0.069	0.080

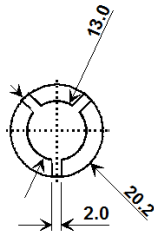
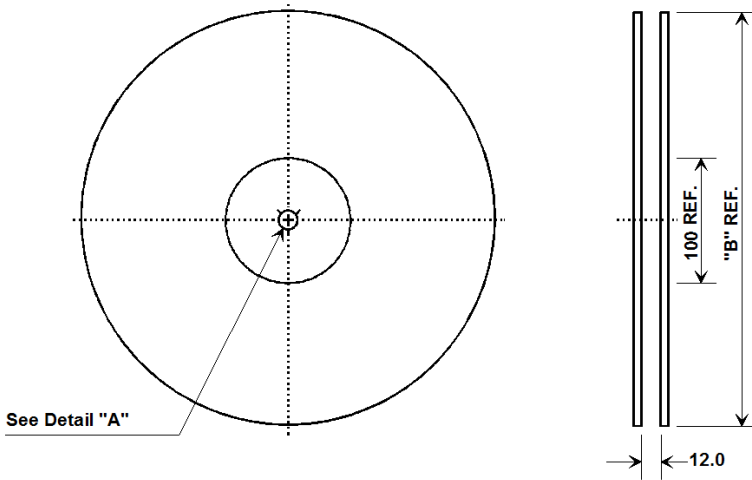
Materials	
Solder Pad Plating	0.3 to 1.0 $\mu$ m Gold over 1.27 to 8.89 $\mu$ m Nickel
Lid Plating	2.0 to 3.0 $\mu$ m Nickel
Body	Al <sub>2</sub> O <sub>3</sub> Ceramic



## Tape and Reel Specifications

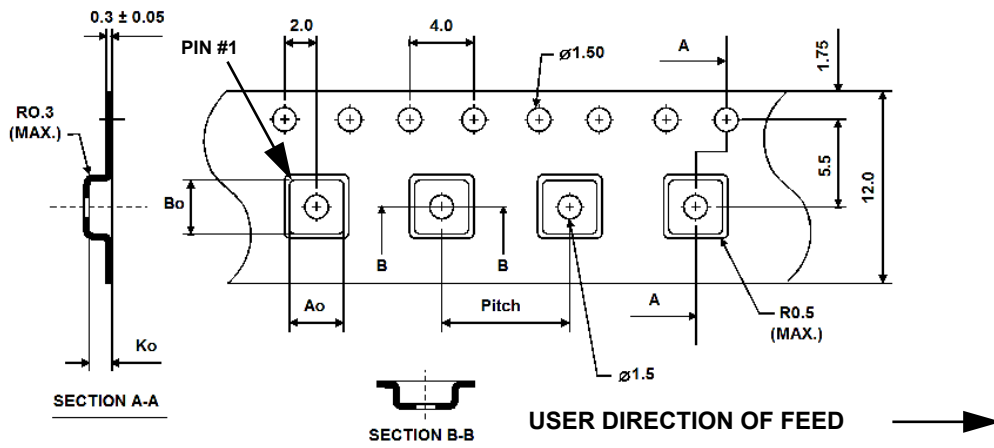
Tape and Reel Standard per ANSI/EIA-481

"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



## 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.

