

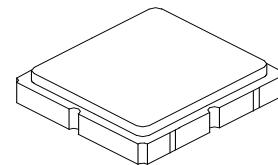
- **342.0 to 348.0 MHz Filter**
- **Optimized for use with the TRC105 Transceiver**
- **Balanced 150 ohm IC Interface**
- **Complies with Directive 2002/95/EC (RoHS)** 

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 |

RF3604D

**345.0 MHz
SAW Filter**



SM3838-8

Electrical Characteristics

| Characteristic | Sym | Notes | Min | Typ | Max | Units |
|--|---|-------|------------------|-------|-----|-------|
| Center Frequency | f_C | | | 345.0 | | MHz |
| 1 dB Bandwidth | BW_1 | | | 16 | | MHz |
| Maximum Insertion Loss, 342.0 to 348.0 MHz | IL_{MAX} | | | 1.5 | 1.8 | dB |
| Amplitude Ripple, p-p, 342.0 to 348.0 MHz | | | | 1.0 | | |
| Rejection Referenced to Insertion Loss at 345.0 MHz: | | | | | | |
| DC to 285 MHz | | | 39 | 42 | | |
| 400 to 500 MHz | | | 43 | 46 | | |
| 500 to 900 MHz | | | 45 | 50 | | |
| 900 to 1300 MHz | | | 46 | 53 | | |
| 1300 to 2000 MHz | | | 27 | 30 | | |
| Source Impedance | Z_S | | | 50 | | Ω |
| Balanced Load Impedance | Z_L | | | 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 | 887, YWWS | | | | | |
| Standard Reel Quantity | Reel Size 7 Inch | | 500 Pieces/Reel | | | |
| | Reel Size 13 Inch | | 3000 Pieces/Reel | | | |

Electrical Connections

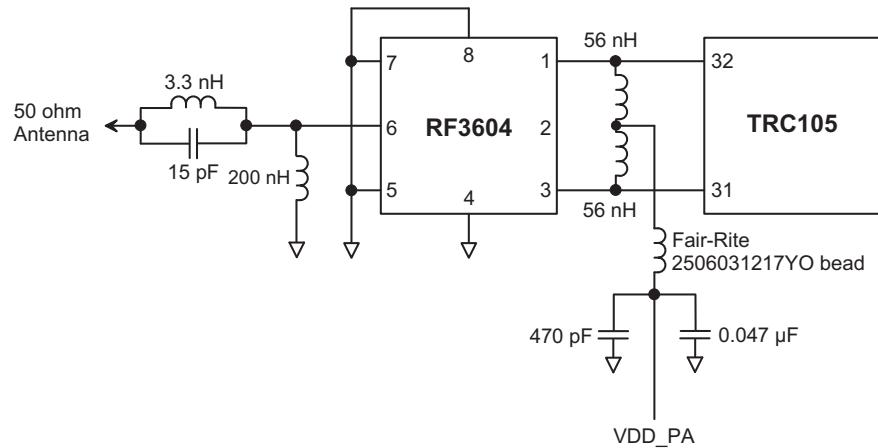
| Connection | Terminals |
|-------------------|------------|
| Single-ended Port | 6 |
| Balanced Port | 1, 3 |
| Case Ground | 4, 5, 7, 8 |
| No Connection | 2 |

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

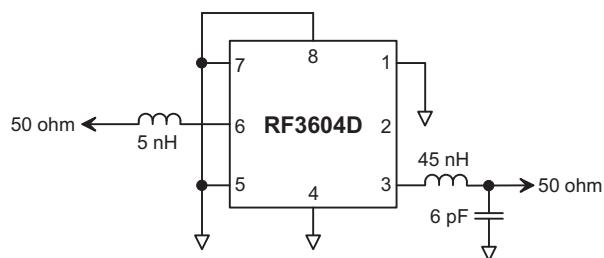
NOTES:

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 Ω and measured with 50 Ω 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.

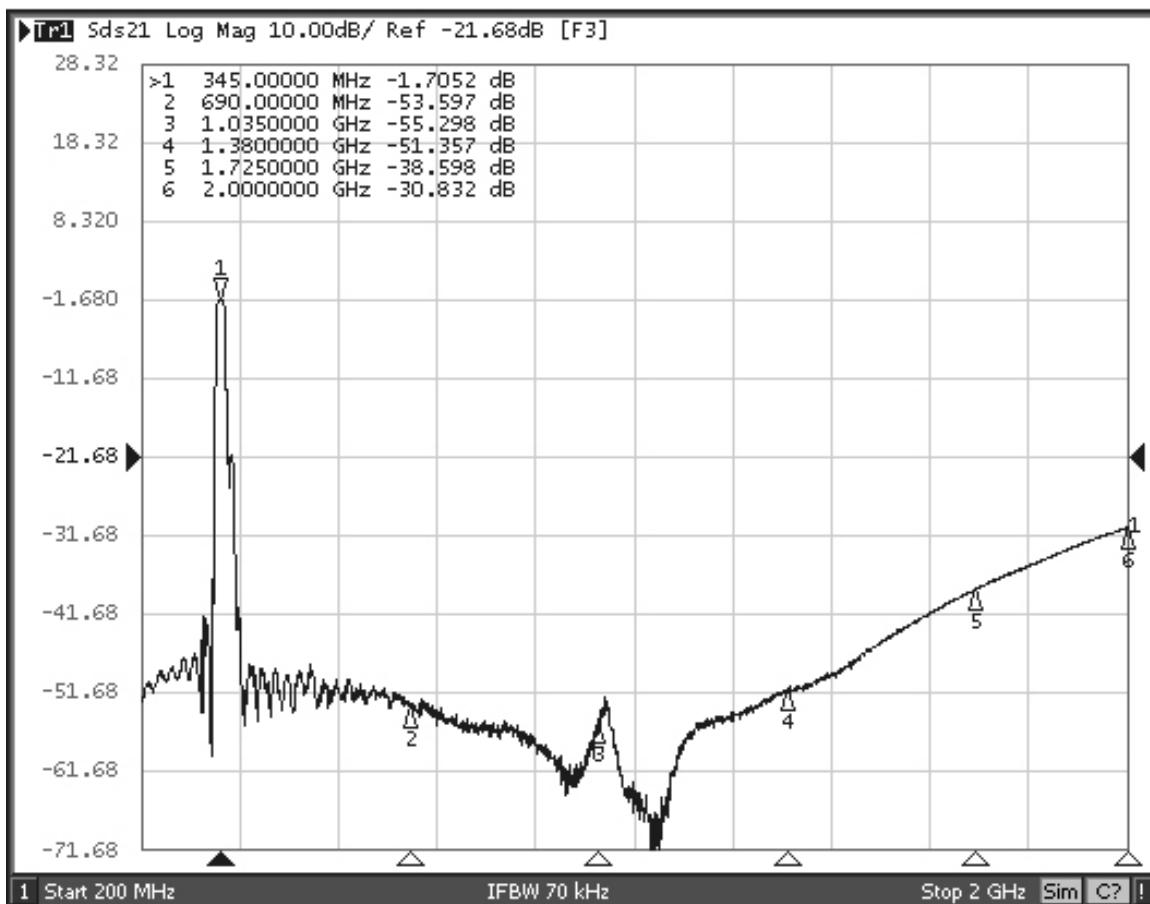
RF3604D-TRC105 Application Circuit



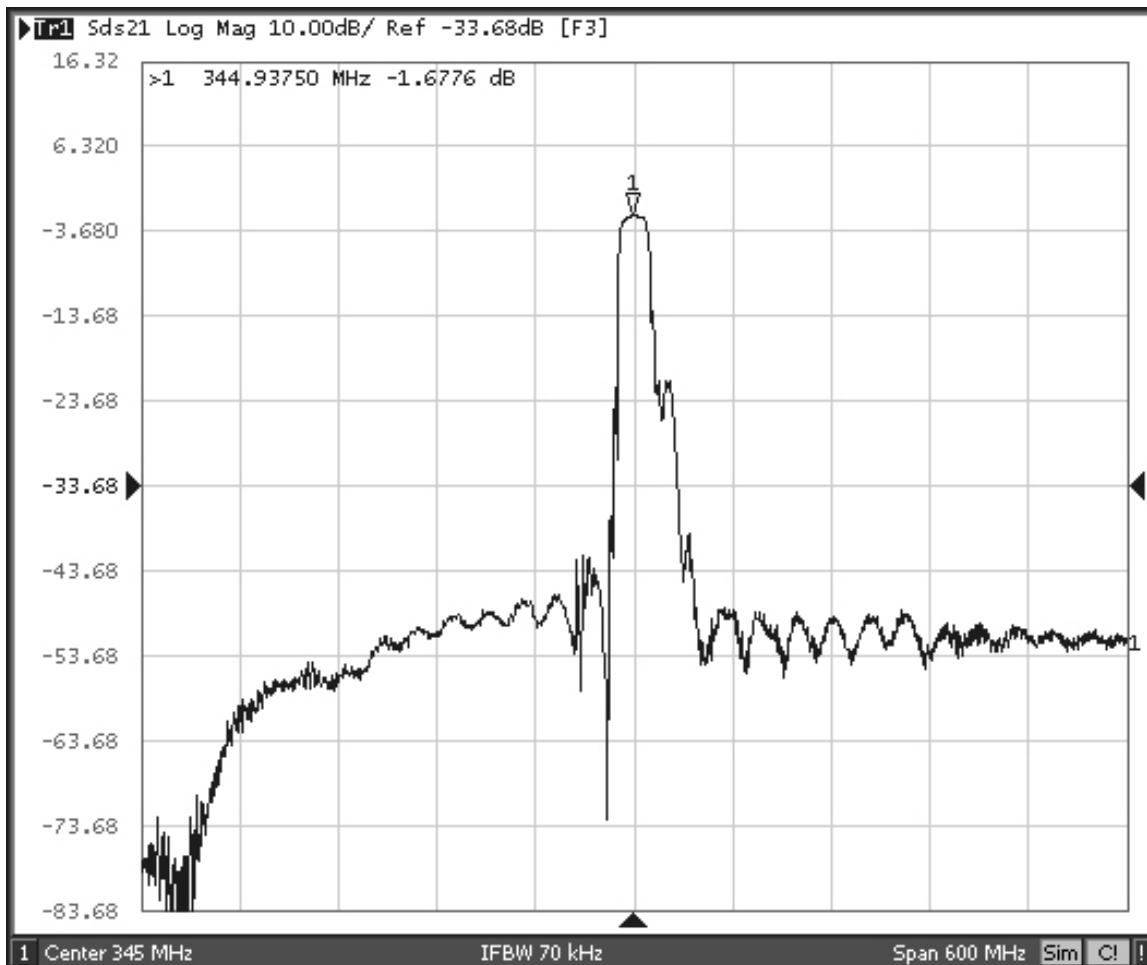
RF3604D 50 Ohm Tuning Network



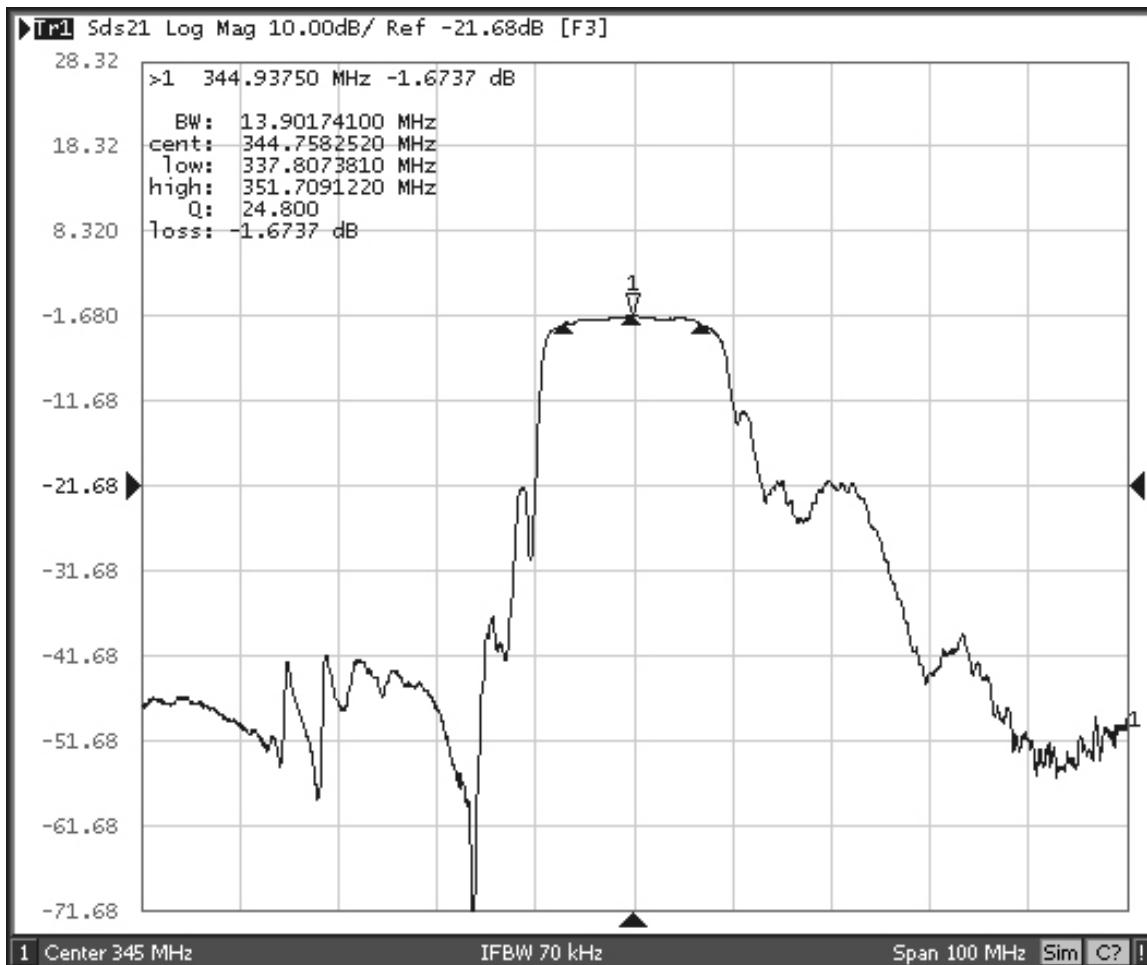
RF3604D Broadband Response, 200 to 2000 MHz



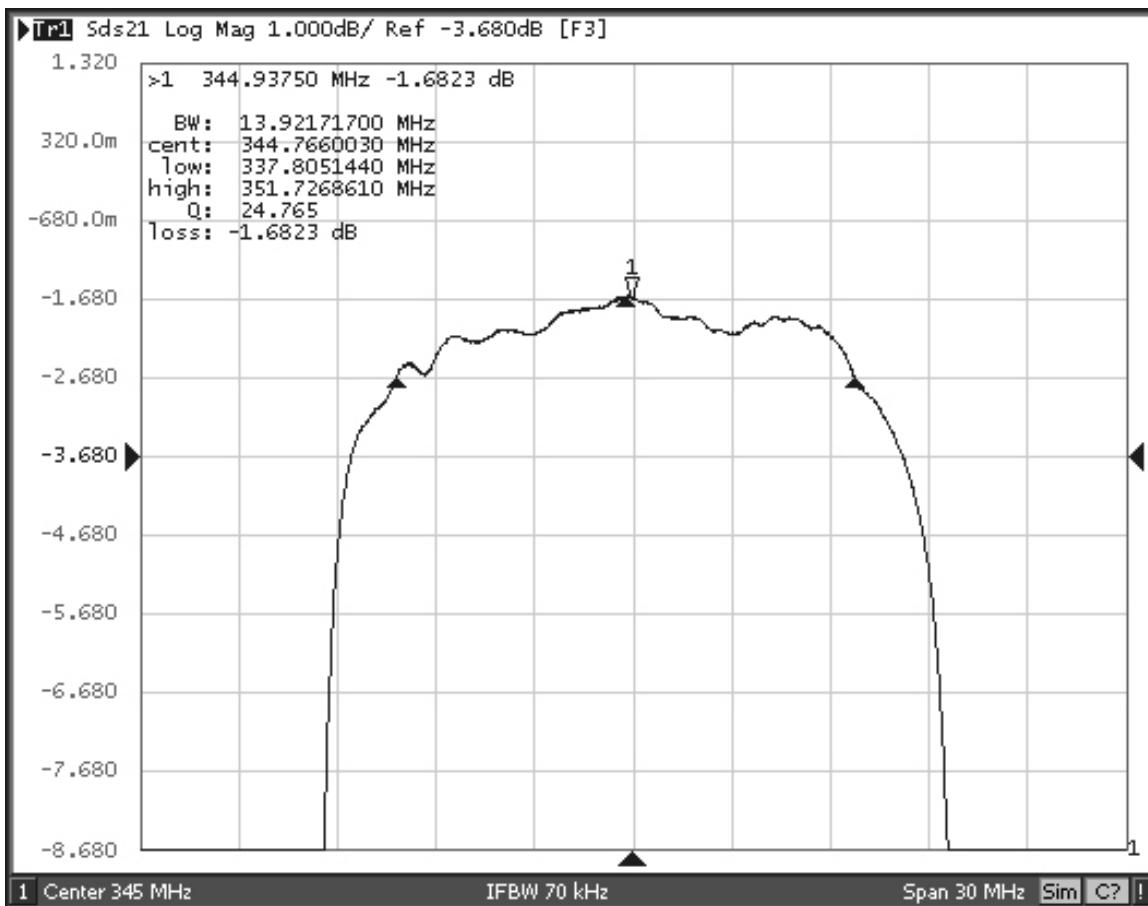
RF3604D Response, 45 to 645 MHz



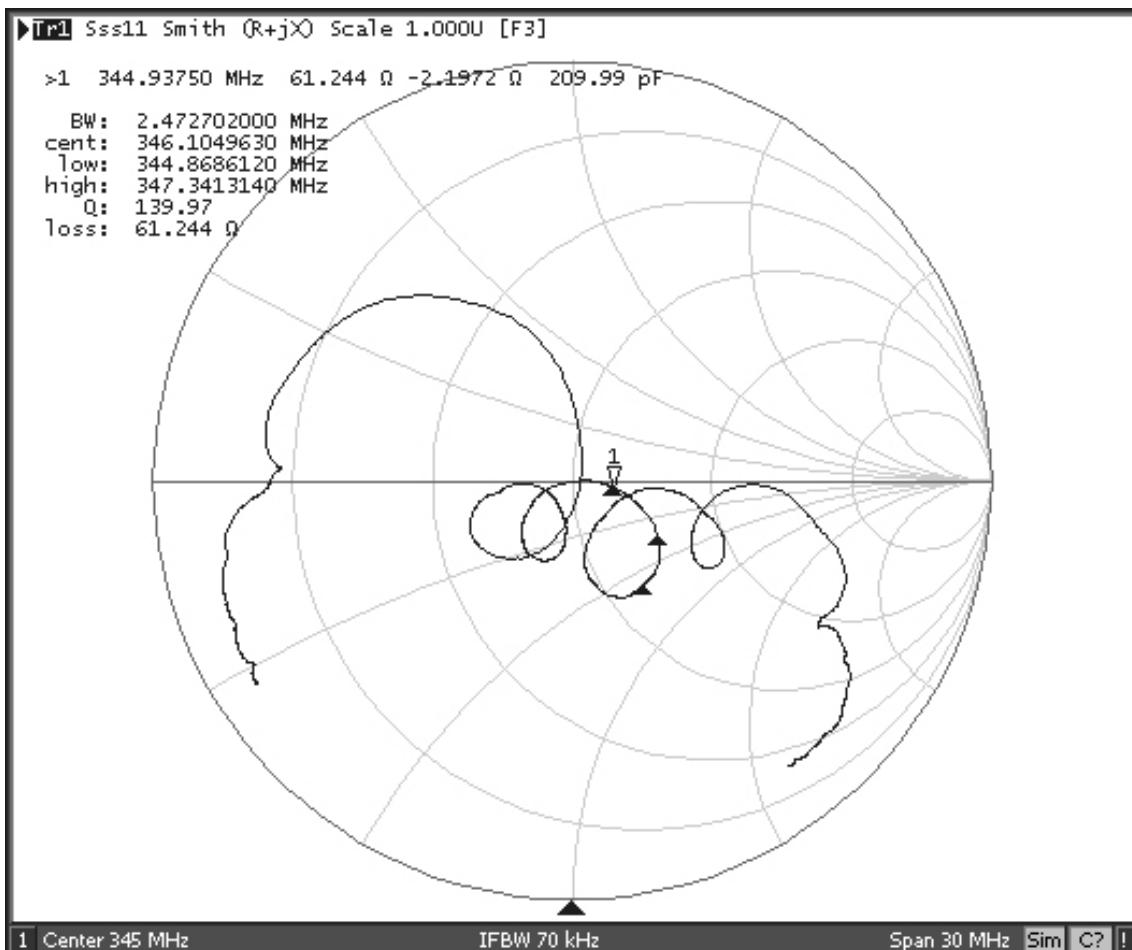
RF3604D Response, 295 to 395 MHz



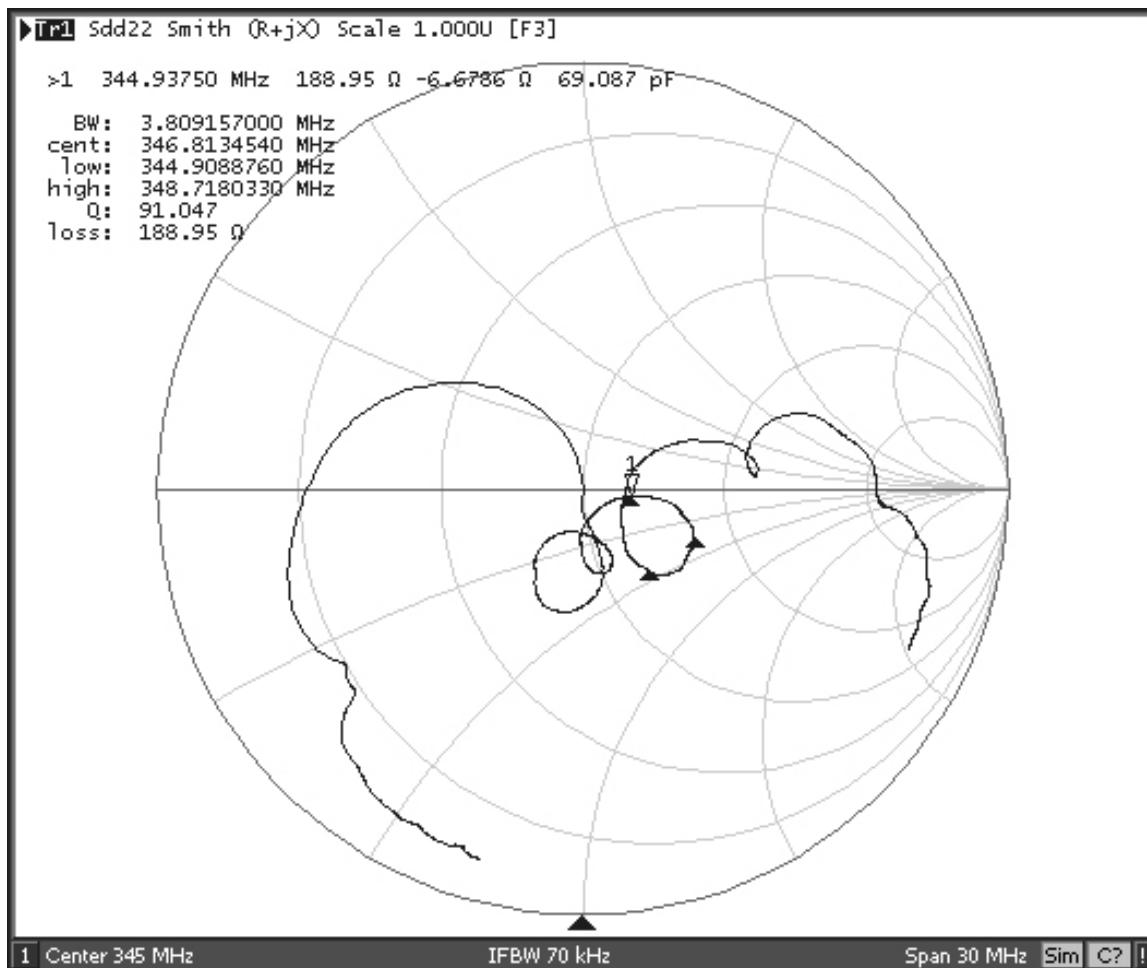
RF3604D Passband Response



RF3604D Input Impedance Plot

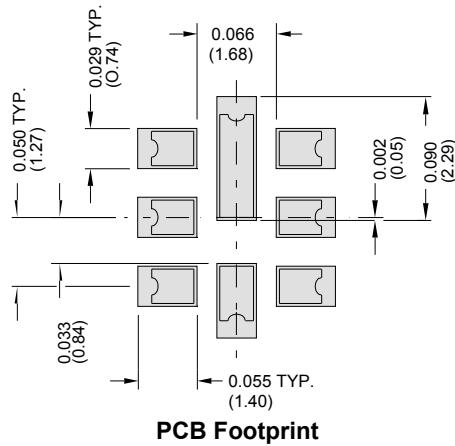


RF3604D Balanced Output Impedance Plot



8-Terminal Ceramic Surface-Mount Case

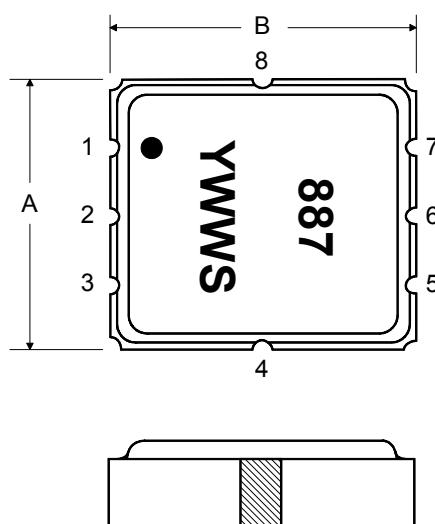
3.8 X 3.8 mm Nominal Footprint



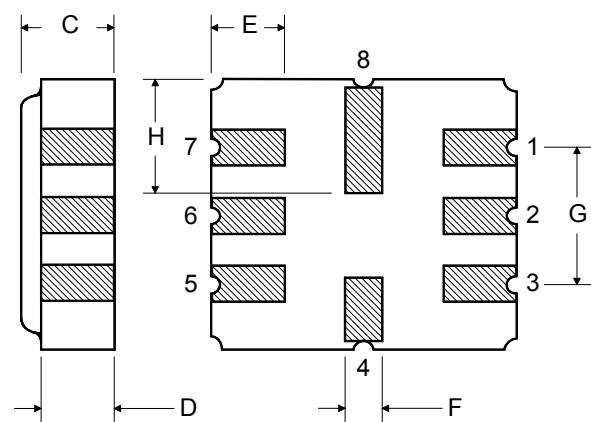
| Dimension | Case Dimensions | | | Inches | | |
|-----------|-----------------|------|------|--------|-------|-------|
| | mm | Min | Nom | Max | Min | Nom |
| A | 3.6 | 3.8 | 4.0 | 0.142 | 0.150 | 0.157 |
| B | 3.6 | 3.8 | 4.0 | 0.142 | 0.150 | 0.157 |
| C | 0.90 | 1.00 | 1.1 | 0.035 | 0.040 | 0.043 |
| 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 μm Gold over 1.27 to 8.89 μm Nickel |
| Lid Plating | 2.0 to 3.0 μm Nickel |
| Body | Al_2O_3 Ceramic |
| Pb Free | |

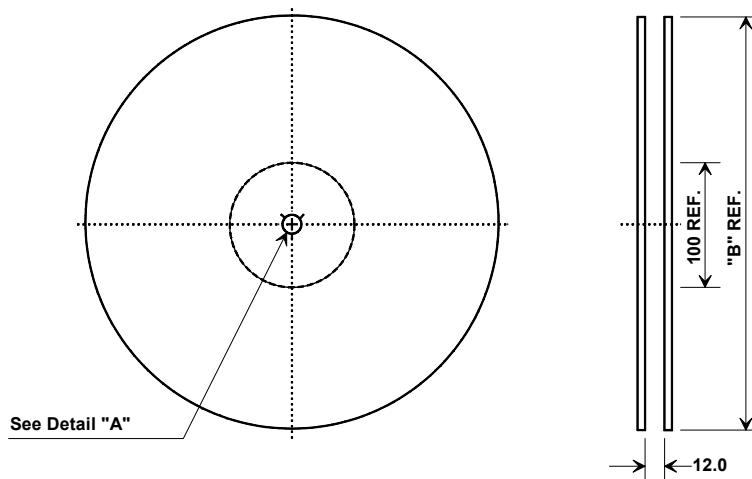
TOP VIEW



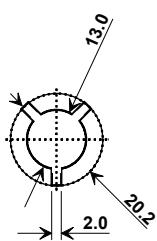
BOTTOM VIEW



Tape and Reel Specifications

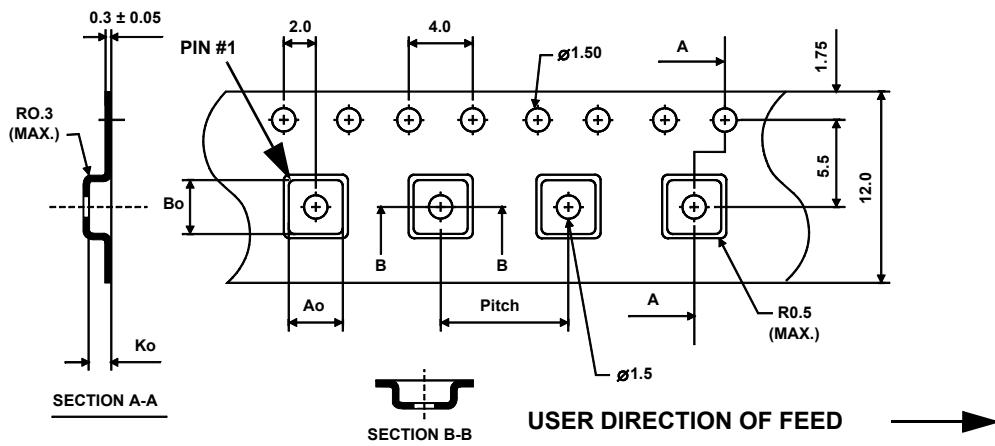


| "B" Nominal Size | | Quantity Per Reel |
|------------------|-------------|-------------------|
| Inches | millimeters | |
| 7 | 178 | 500 |
| 13 | 330 | 3000 |



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 |



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