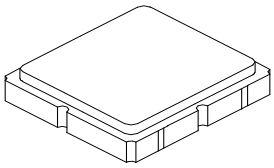
RFM products are now Murata products.

# RF3602D

## 305.3 MHz SAW Filter

- ***303.325 to 307.300 MHz Filter***
- ***Optimized for use with the TRC105 Transceiver***
- ***Balanced 150 ohm IC Interface***
- ***Complies with Directive 2002/95/EC (RoHS)***



**SM3838-8**

### 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 | $f_C$ | | | 305.3 | | MHz |
| 1 dB Bandwidth | $BW_1$ | | | 12.5 | | MHz |
| Maximum Insertion Loss, 303.325 to 307.300 MHz | $IL_{MAX}$ | | | 1.8 | 2.0 | dB |
| Amplitude Ripple, p-p, 303.325 to 307.300 MHz | | | | | 1.0 | |
| Rejection Referenced to Insertion Loss at 303.825 MHz: | | | | | | |
| DC to 285.3 MHz | | | 37 | 40 | | |
| 335.3 to 355.3 MHz | | | 27 | 30 | | |
| 355.3 to 755.3 MHz | | | 44 | 47 | | |
| 755.3 to 1255.3 MHz | | | 50 | 53 | | |
| 1255.3 to 2000 MHz | | | 26 | 29 | | |
| 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 | | 885, YWWS |
| Standard Reel Quantity | Reel Size 7 Inch | 500 Pieces/Reel |
| | Reel Size 13 Inch | 3000 Pieces/Reel |

### Electrical Connections

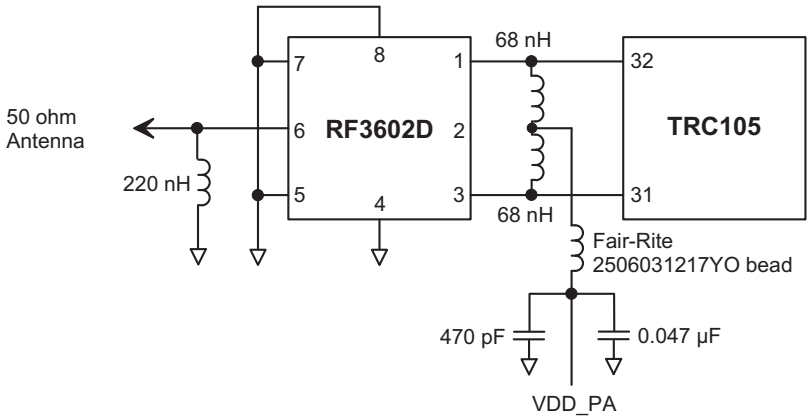
| Connection | Terminals |
|---|---|
| Single-ended Port | 6 |
| Balanced Port | 1, 3 |
| Case Ground | 4, 5, 7, 8 |
| No Connection | 2 |

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

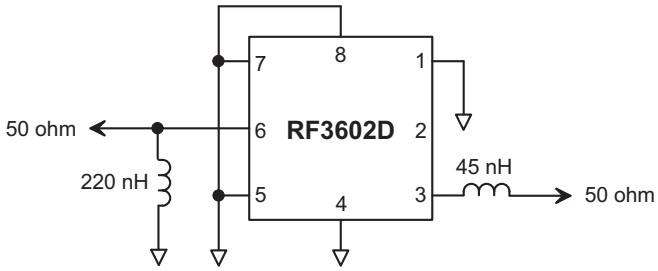
**NOTES:**

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, fc.
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.

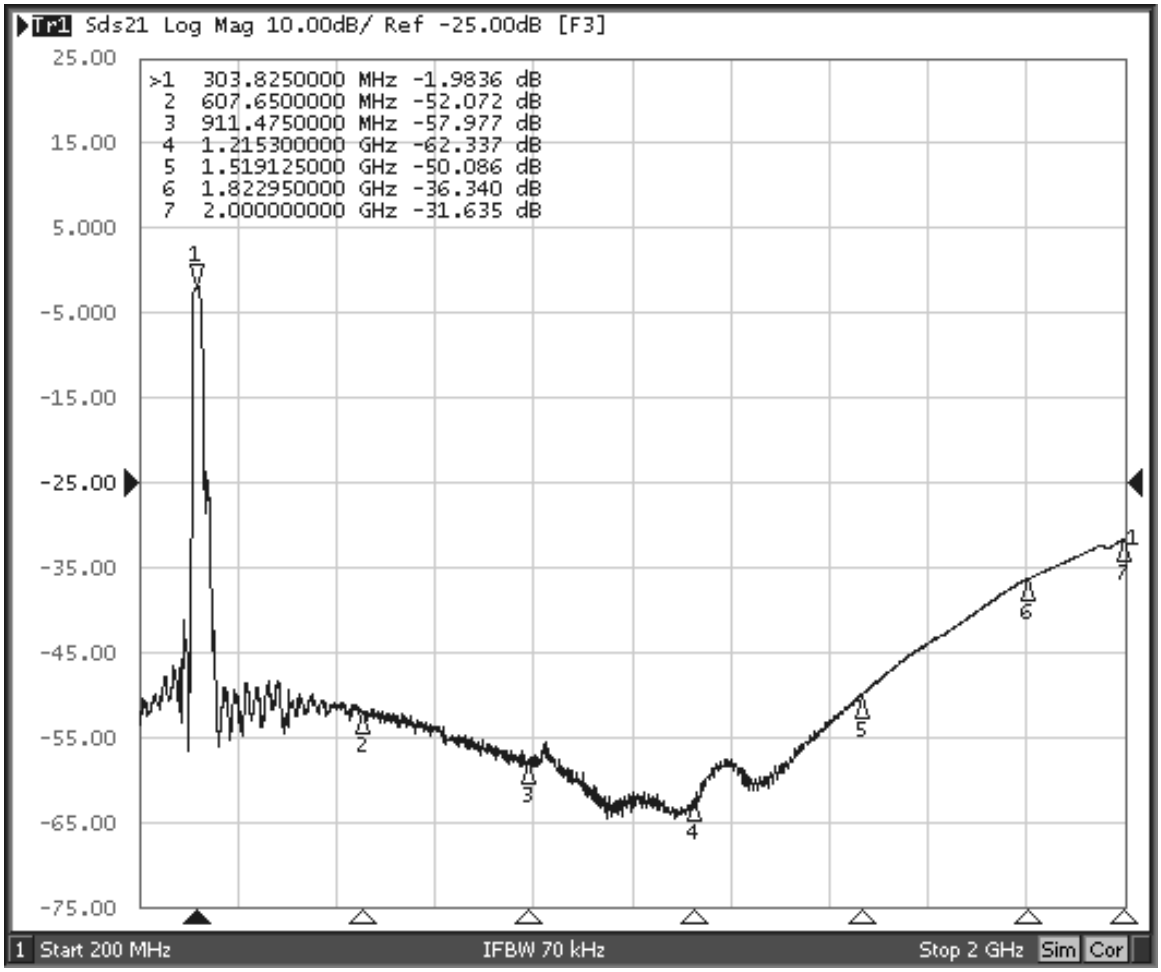
## RF3602D-TRC105 Application Circuit



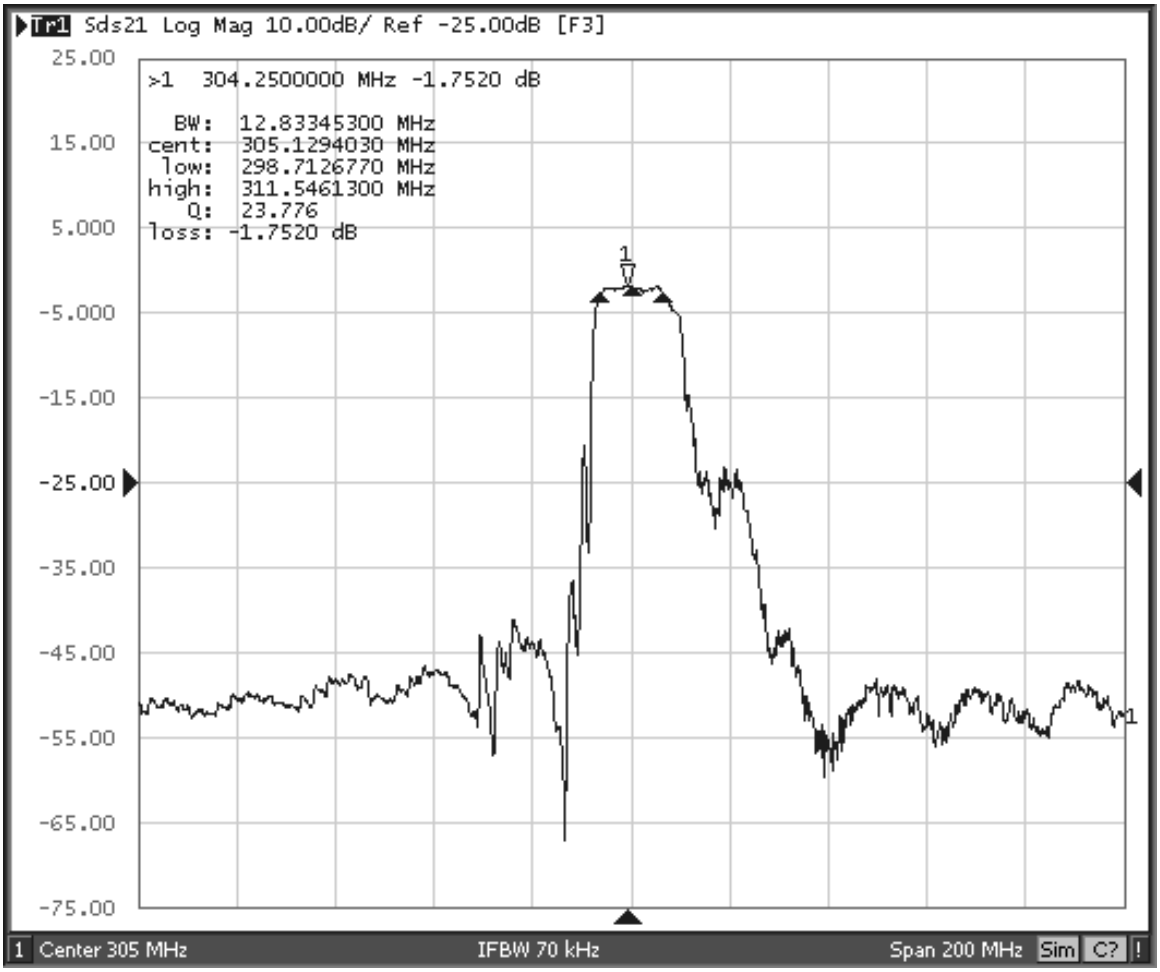

## RF3602D 50 Ohm Tuning Network



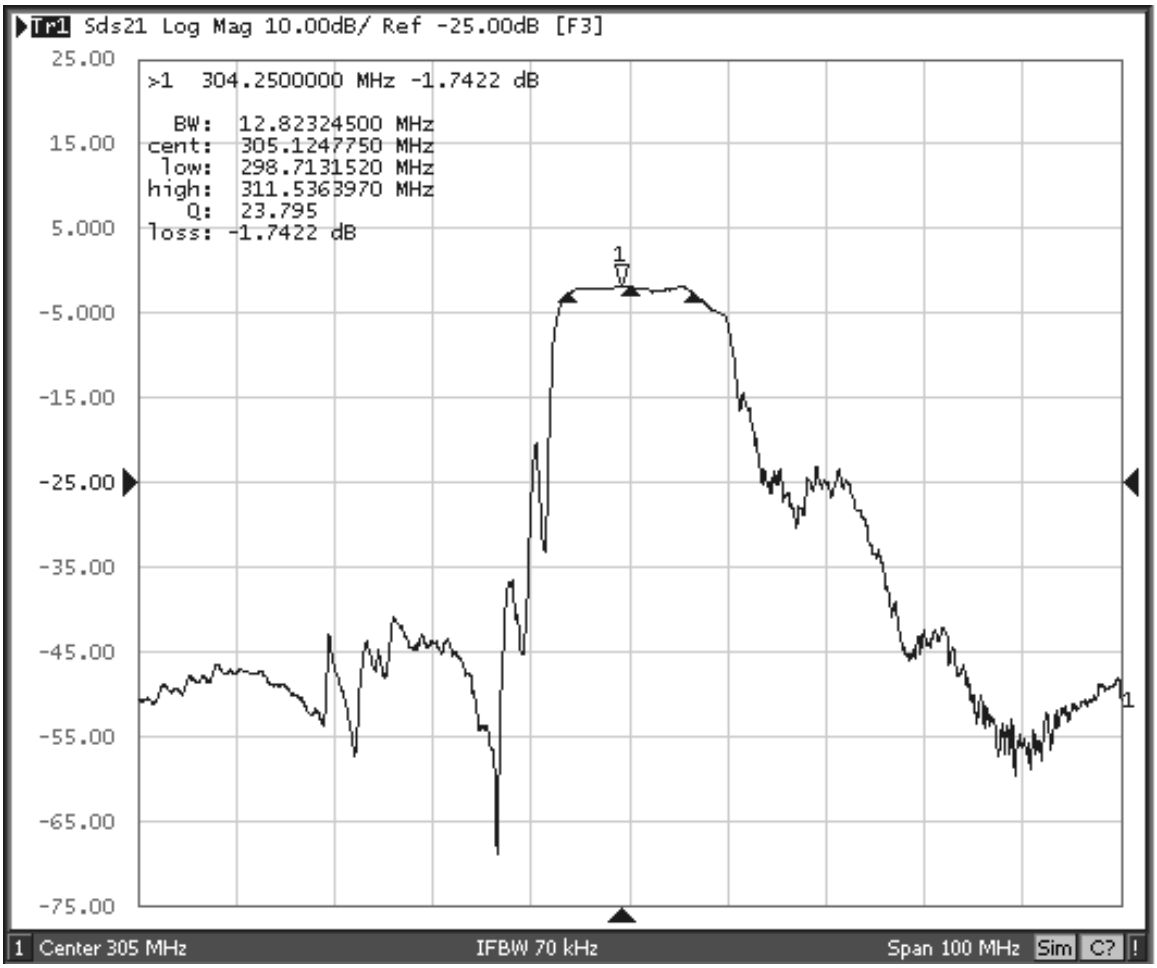
## RF3602D Broadband Response, 200 to 2000 MHz



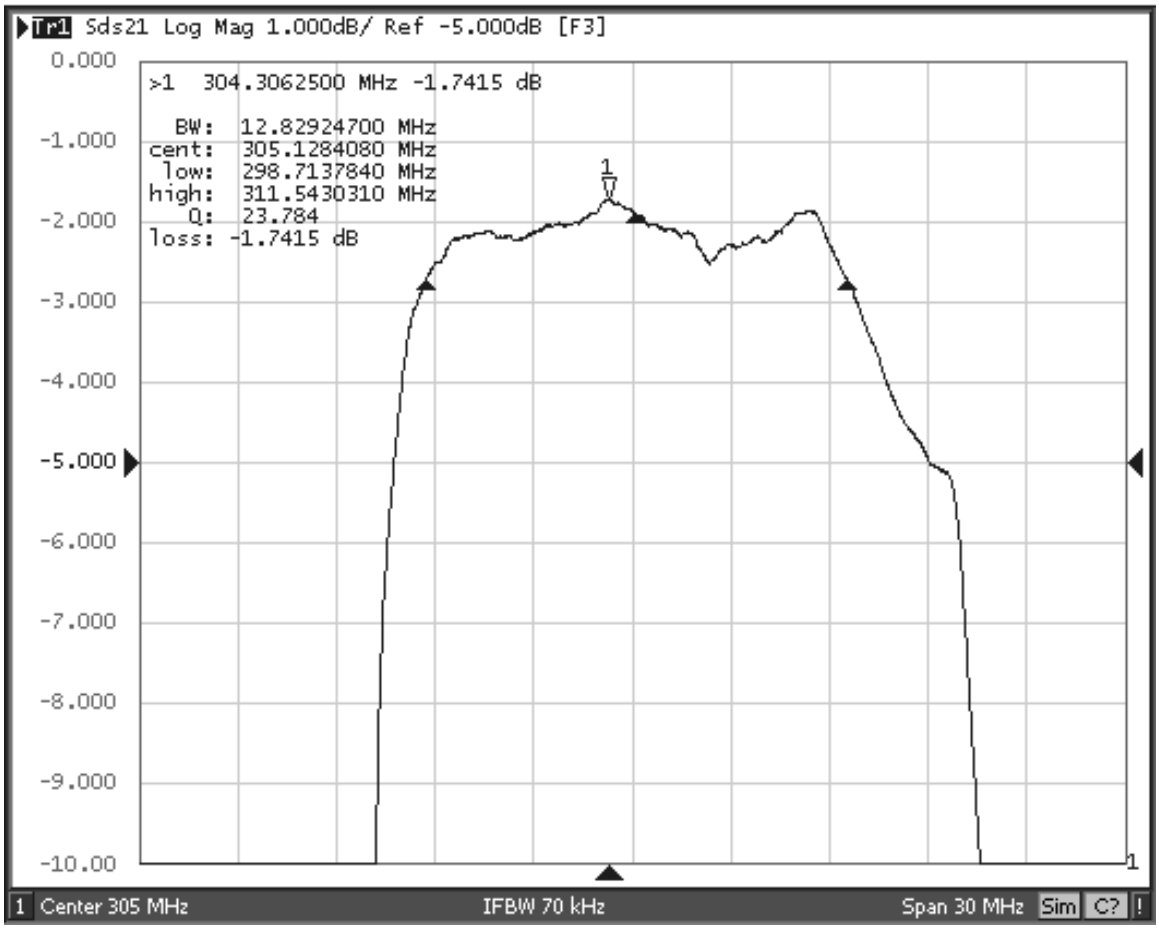
## RF3602D Response, 205 to 405 MHz



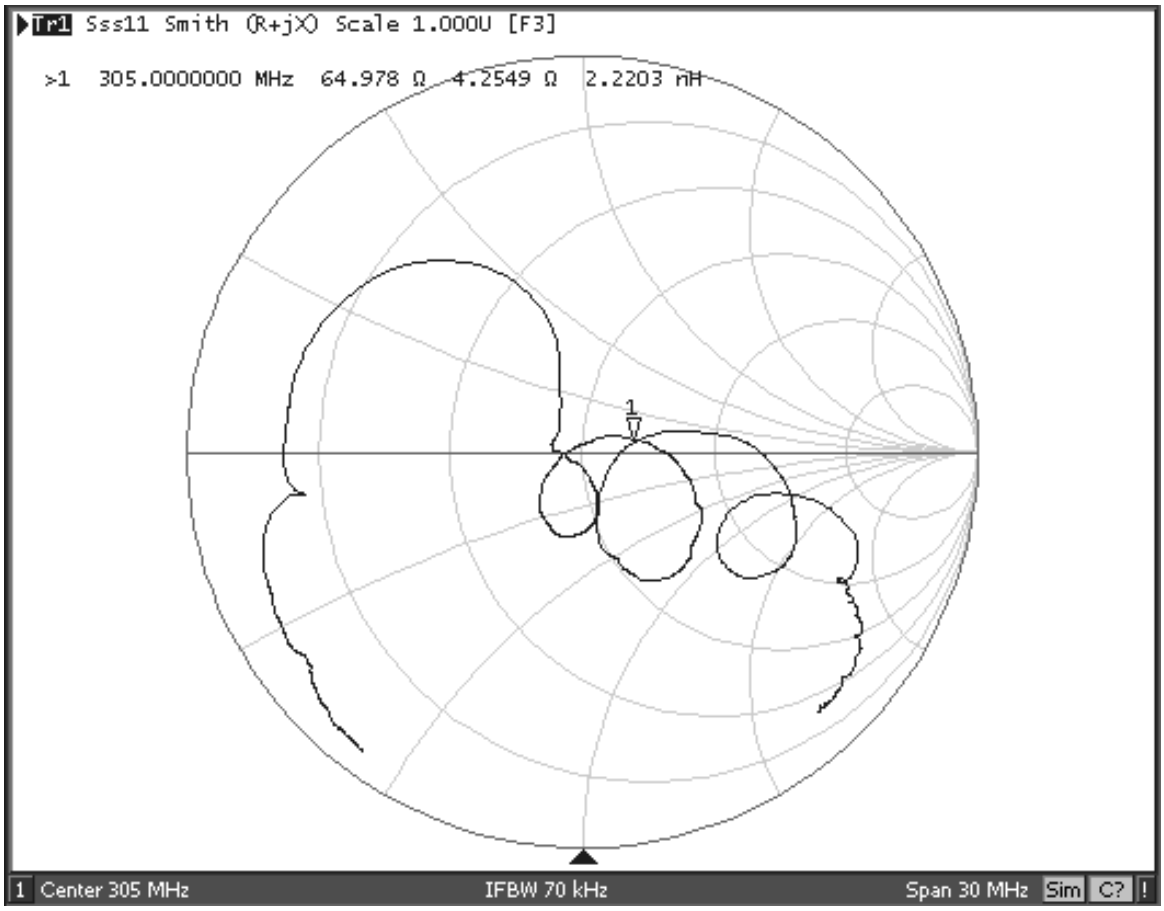
## RF3602D Response, 255 to 355 MHz



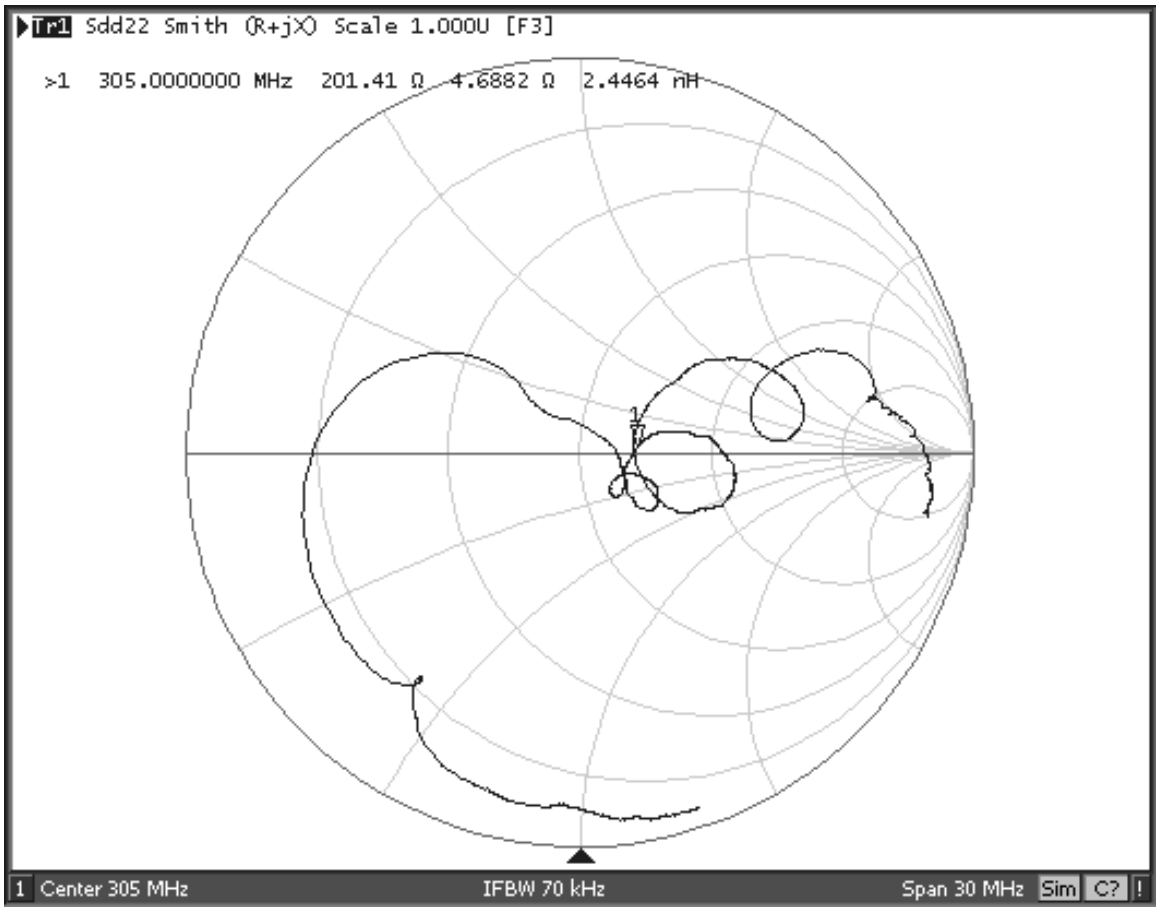
## RF3602D Passband Response



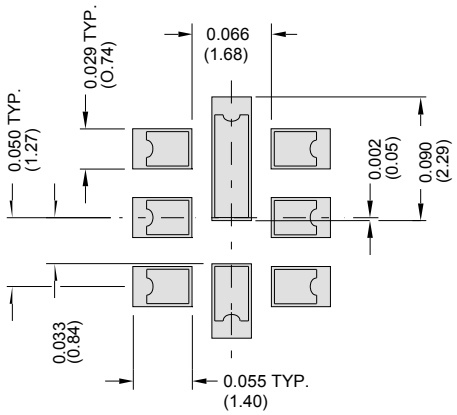
## RF3602D Input Impedance Plot



## RF3602D Balanced Output Impedance Plot



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

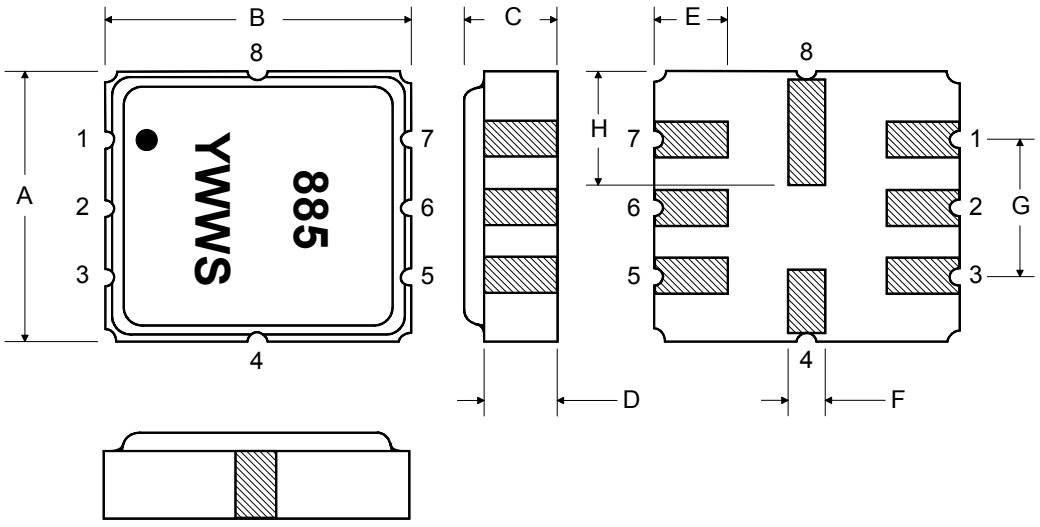



**PCB Footprint**

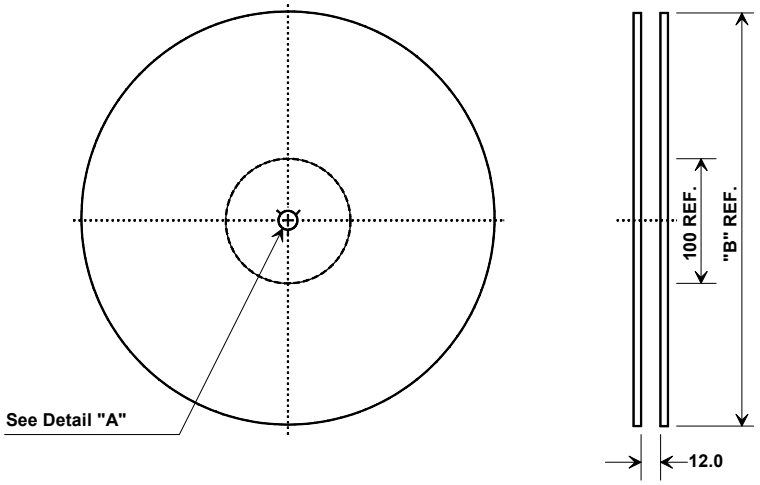
| Case Dimensions | | | | | | |
|---|---|---|---|---|---|---|
| **Dimension** | **mm** | | | **Inches** | | |
| | **Min** | **Nom** | **Max** | **Min** | **Nom** | **Max** |
| **A** | 3.6 | 3.8 | 4.0 | 0.142 | 0.150 | 0.157 |
| **B** | 3.6 | 3.8 | 4.0 | 0.142 | 0.150 | 0.157 |
| **C** | 0.90 | 1.00 | 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 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 | |

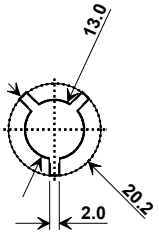
TOP VIEW BOTTOM VIEW



**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 |