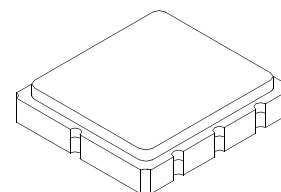


RF1402D

**315.0 MHz
SAW Filter**



**SM3838-8 Case
3.8 x 3.8**

- *Designed for 315.00 MHz Applications*
- *Advanced Lithium Tantalate Design for Low Insertion Loss*
- *Designed for Match to 50Ω, No External LC Required*
- *Hermetically Sealed Surface Mount Package*
- *Complies with Directive 2002/95/EC (RoHS)*
- *Tape and Reel Standard per ANSI/EIA-481*
- *Moisture Sensitivity Level: 1*
- *AEC-Q200 Qualified*

| Item | Minimum | Typical | Maximum | Units |
|--|-------------------|------------------|------------------|-------|
| Center Frequency @ 25 °C, f_C | - | 315 | - | MHz |
| Minimum Insertion Loss ,314.50 to 315.50 MHz , IL_{min} | - | 2.7 | 3.7 | dB |
| Pass band relative to IL_{min} | | | | |
| 314.80 to 315.2 MHz | - | .4 | 1.0 | dB |
| 314.50 to 315.50 MHz | - | .8 | 2.0 | |
| 3 dB Bandwidth (relative to IL_{min}), BW_3 | 1000 | | - | kHz |
| Attenuation relative to IL_{min} | | | | |
| 10 to 250 MHz | 55 | 60 | - | dB |
| 250 to 295 MHz | 47 | 53 | - | |
| 295 to 307 MHz | 36 | 41 | - | |
| 307 to 310 MHz | 30 | 35 | - | |
| 320 to 328 MHz | 16 | 20 | - | |
| 328 to 335 MHz | 39 | 44 | - | |
| 480 to 680 MHz | 44 | 49 | - | |
| Temperature Coeff | | -30 | | ppm/k |
| Operating Temperature Range | -40 | | +85 | °C |
| Lid Symbolization | | 496, <u>YWWS</u> | | |
| Standard Reel Quantity | Reel Size 7 Inch | | 500 Pieces/Reel | |
| | Reel Size 13 Inch | | 3000 Pieces/Reel | |

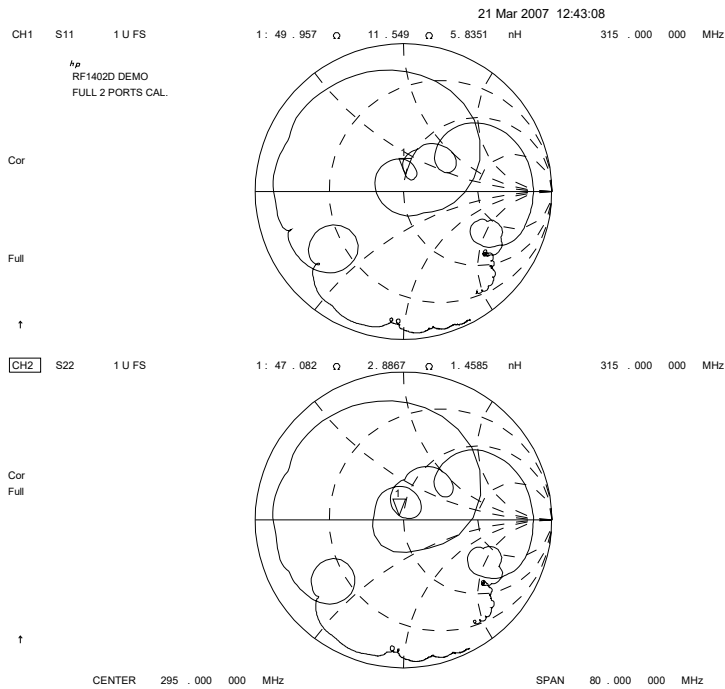
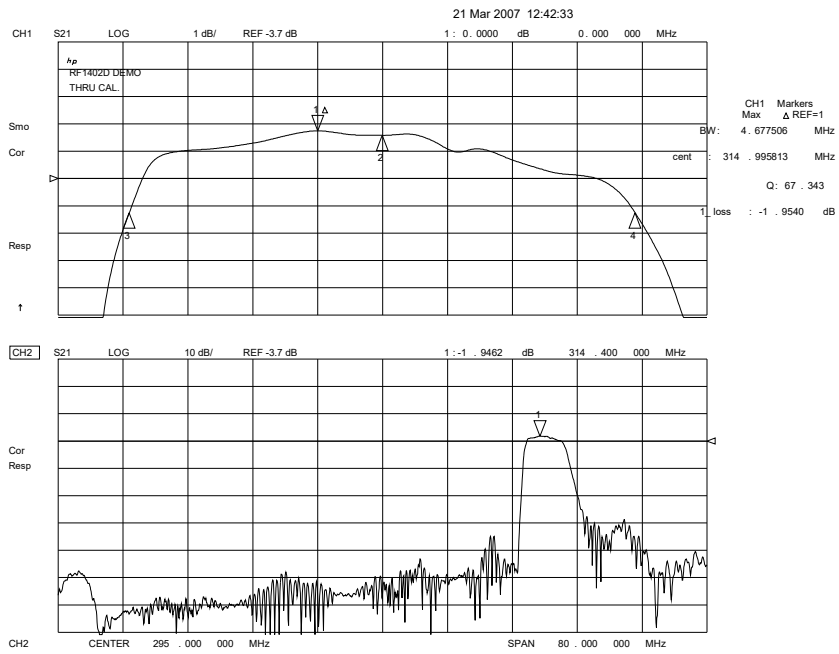


CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

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.

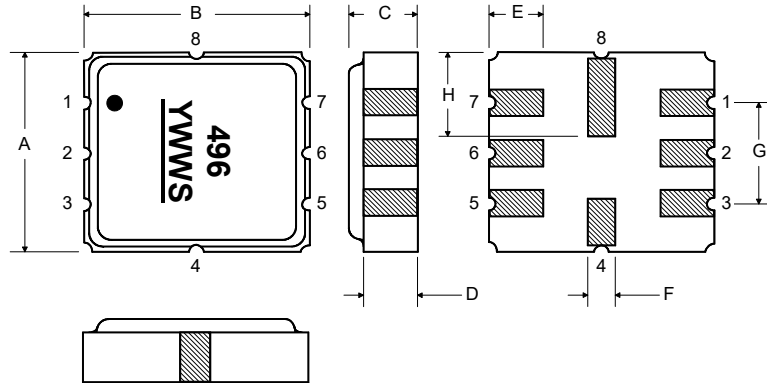
Filter Response and Impedance Plots



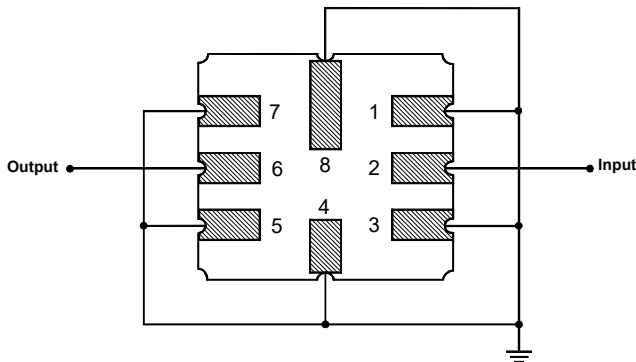
| Rating | Value | Units |
|--|------------|-------|
| Input Power Level | 10 | dBm |
| DC Voltage | 12 | VDC |
| Storage Temperature ⁵ | -45 to +90 | °C |
| Soldering Temperature, 10 seconds / 5 cycles maximum | 260 | °C |

Electrical Connections

| Pin | Connection |
|-----|---------------|
| 1 | Input Ground |
| 2 | Input |
| 3 | Ground |
| 4 | Case Ground |
| 5 | Output Ground |
| 6 | Output |
| 7 | Ground |
| 8 | Case Ground |



Matching Circuit to 50Ω



Case Dimensions

| Dimension | mm | | | Inches | | |
|-----------|------|------|------|--------|-------|-------|
| | Min | Nom | Max | Min | Nom | Max |
| A | 3.6 | 3.8 | 4.0 | 0.14 | 0.15 | 0.16 |
| B | 3.6 | 3.8 | 4.0 | 0.14 | 0.15 | 0.16 |
| C | 1.00 | 1.20 | 1.40 | 0.04 | 0.05 | 0.055 |
| D | 0.95 | 1.10 | 1.25 | 0.033 | 0.043 | 0.05 |
| E | 0.90 | 1.0 | 1.10 | 0.035 | 0.04 | 0.043 |
| F | 0.50 | 0.6 | 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 |

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.

