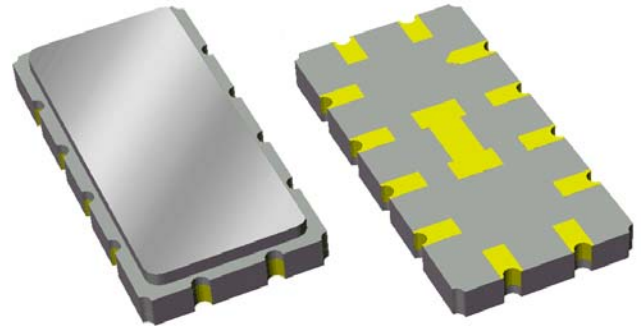


Data Sheet

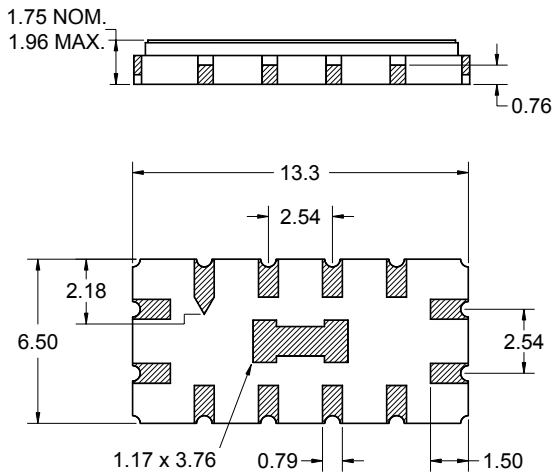
Features

- Usable bandwidth of 4 MHz
- Typical 3 dB bandwidth of 4.6 MHz
- Low loss
- High attenuation
- Single-ended operation, 50Ω
- Ceramic Surface Mount Package (SMP)
- Hermetic



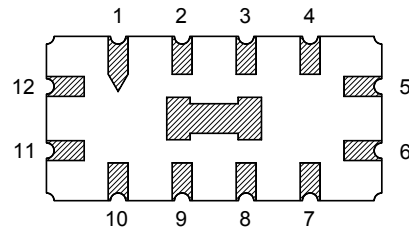
Package

Surface Mount 13.30 x 6.50 x 1.75 mm



Pin Configuration

Bottom View



| Pin No. | Description |
|----------|-------------|
| 5 | Output |
| 11 | Input |
| 6,12 | Ground |
| 1,2,3,4 | Case Ground |
| 7,8,9,10 | Case Ground |

Dimensions shown are nominal in millimeters
 All tolerances are ± 0.15 mm except overall
 length and width ± 0.10 mm

Body: Al_2O_3 ceramic
 Lid: Kovar, Ni plated
 Terminations: Au plating 0.5 - 1.0μm,
 over a 2 - 6μm Ni plating

Data Sheet
Electrical Specifications ⁽¹⁾

 Operating Temperature: ⁽²⁾ +25 °C

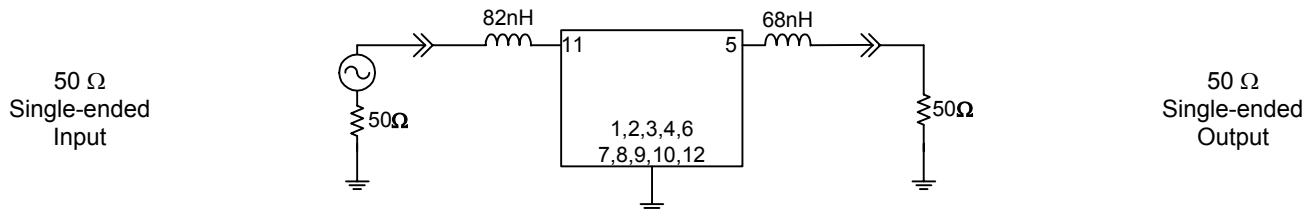
| Parameter | Minimum | Typical | Maximum | Unit |
|---|---------|---------|---------|--------|
| Center Frequency | 139.6 | 140 | 140.4 | MHz |
| Insertion Loss at F_o | - | 10.85 | 12.5 | dB |
| 1 dB Bandwidth | 3.4 | 3.9 | - | MHz |
| 3 dB Bandwidth | 4 | 4.6 | - | MHz |
| 40 dB Bandwidth | - | 7.46 | 9.1 | MHz |
| Passband Ripple 138.4 - 141.6 MHz | - | 0.42 | 1 | dB |
| Phase Linearity 138.4 - 141.6 MHz | - | 2 | 6 | deg |
| Group Delay Variation 138.4 - 141.6 MHz | - | 27 | 100 | nsec |
| Absolute Delay | - | 1.2 | - | μsec |
| Temperature Coefficient | - | -23 | - | ppm/°C |
| Source Impedance ⁽³⁾ | - | 50 | - | Ω |
| Load Impedance ⁽³⁾ | - | 50 | - | Ω |

Notes:

1. All specifications are based on the test circuit shown below
2. All specifications are tested at room temperature only
3. This is the optimum impedance in order to achieve the performance shown

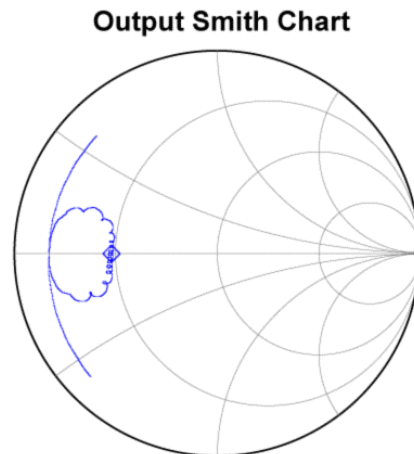
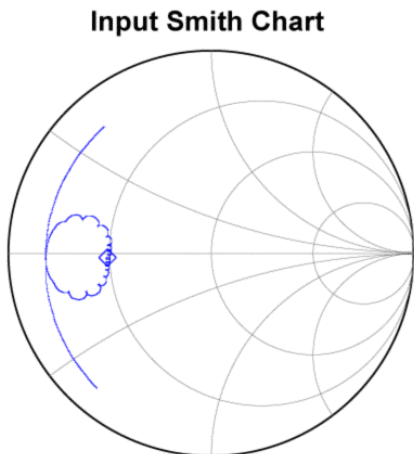
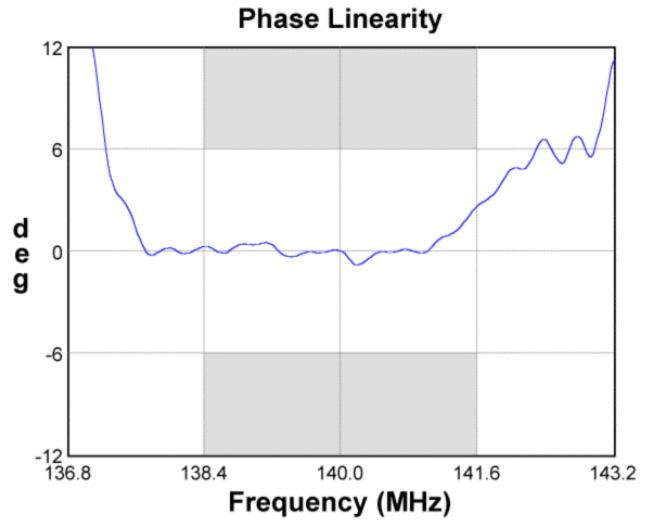
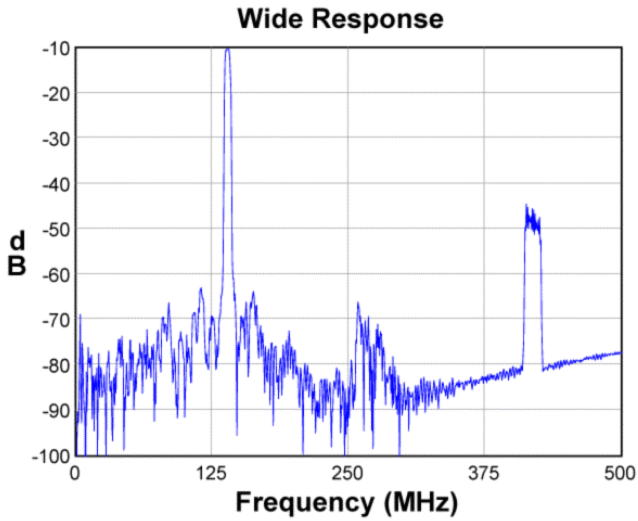
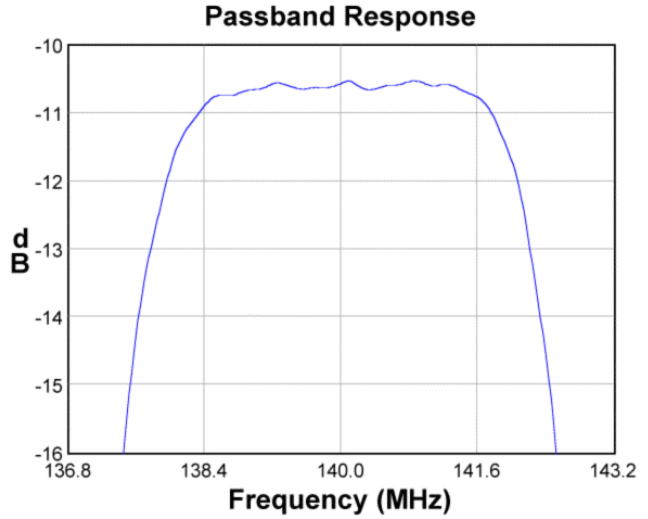
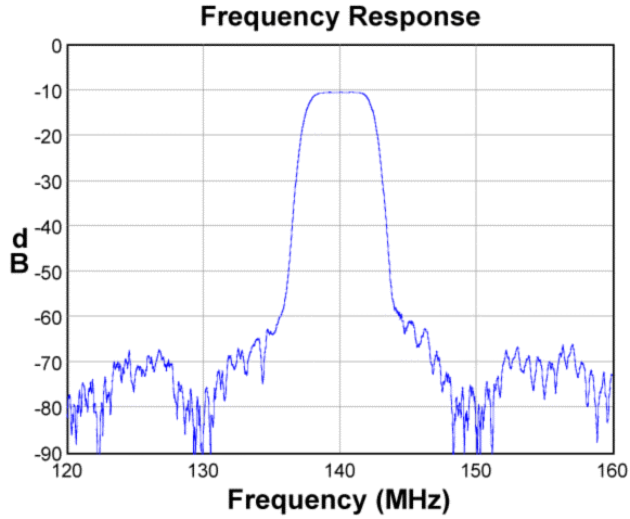
Test Circuit:

Actual matching values may vary due to PCB layout and parasitics



Data Sheet

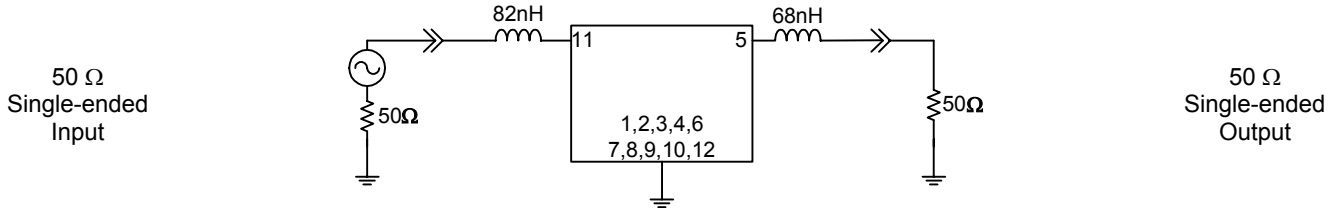
Typical Performance (at +25°C)



Data Sheet

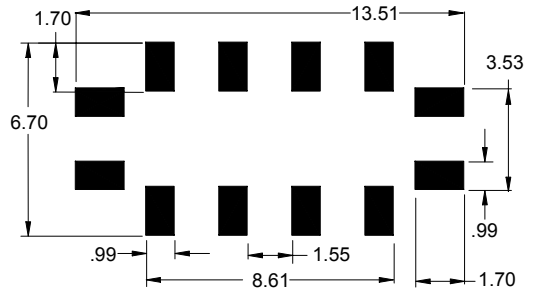
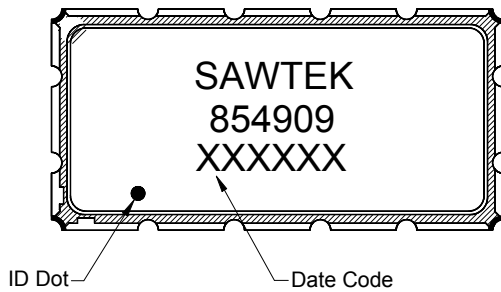
Matching Schematics

Actual matching values may vary due to PCB layout and parasitics



Marking

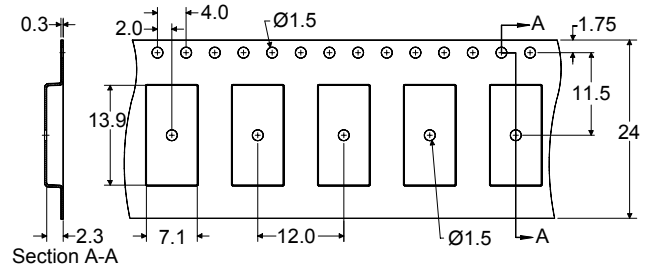
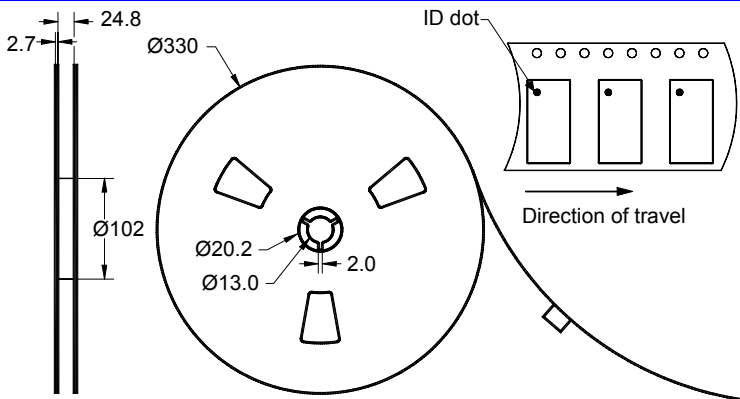
PCB Footprint



The date code consists of: day of the current year (Julian, 3 digits), last digit of the year (1 digit) and hour (2 digits)

This footprint represents a recommendation only
Dimensions shown are nominal in millimeters

Tape and Reel




Dimensions shown are nominal in millimeters
Packaging quantity: 2000 units/reel

Data Sheet

Maximum Ratings

| Parameter | Symbol | Minimum | Maximum | Unit |
|---------------------------|------------------|---------|---------|------|
| Storage Temperature Range | T _{stg} | -40 | +85 | ° C |

Warnings

- Electrostatic Sensitive Device (ESD) 
- Avoid ultrasonic exposure

Material Content

- Does not contain lead (Pb) or other RoHS restricted materials

Links to Additional Technical Information

[PCB Layout Tips](#)

[Qualification Flowchart](#)

[Soldering Profile](#)

[S-Parameters](#)

[Other Technical Information](#)

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Contact Information



PO Box 609501
 Orlando, FL 32860-9501
 USA

Phone: +1 (407) 886-8860
 Fax: +1 (407) 886-7061
 Email: custservice@sawtek.com
 Web: www.sawtek.com

Or contact one of our worldwide
 Network of [sales offices](#),
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