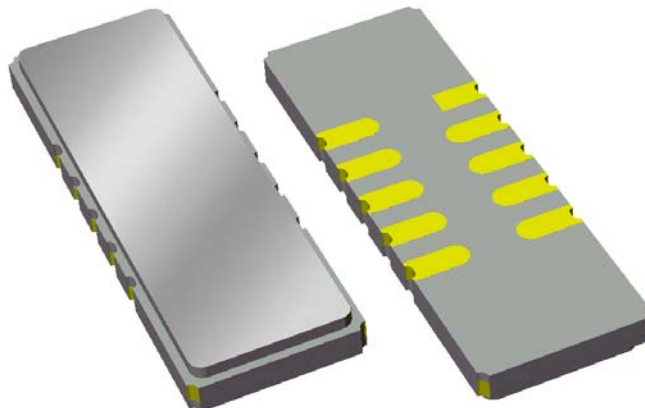


Data Sheet

Features

- Usable bandwidth of 0.5 MHz
- Typical 3 dB bandwidth of 0.55 MHz
- Low loss
- High attenuation
- Single-ended operation, 50Ω
- Ceramic Surface Mount Package (SMP)
- Hermetic

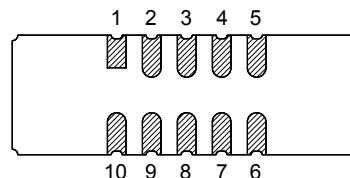
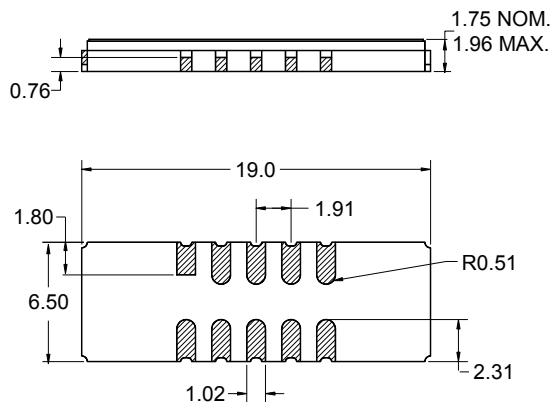


Package

Surface Mount 19.00 x 6.50 x 1.75 mm

Pin Configuration

Bottom View



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

Dimensions shown are nominal in millimeters
 All tolerances are ± 0.15 mm except overall
 length and width $+0.15$ mm/ -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 Range: ⁽²⁾ +25 °C

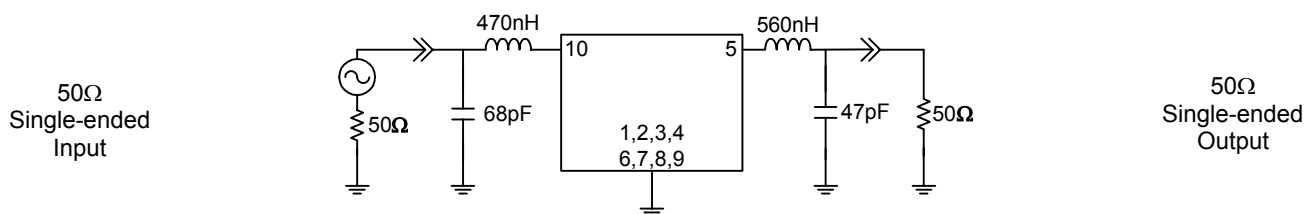
| Parameter | Minimum | Typical | Maximum | Unit |
|--|---------|---------------------------------|---------|------|
| Center Frequency, f_0 | 69.95 | 70 | 70.05 | MHz |
| Insertion Loss at f_0 | | 7.6 | 8 | dB |
| 1 dB Bandwidth | 0.35 | 0.37 | - | MHz |
| 3 dB Bandwidth | 0.5 | 0.55 | - | MHz |
| 35 dB Bandwidth | - | 1.28 | 1.4 | MHz |
| Passband Ripple 69.85 - 70.15 MHz | - | 0.7 | 1 | dB |
| Phase Linearity 69.85 - 70.15 MHz | - | 5.2 | 6.75 | deg |
| Group Delay Variation 69.85 - 70.15 MHz | - | 330 | 500 | nsec |
| Absolute Group Delay | - | 2 | - | μsec |
| Temperature Coefficient | - | $\Delta F/F = -[(T-T_0)/5.4]^2$ | - | ppm |
| 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

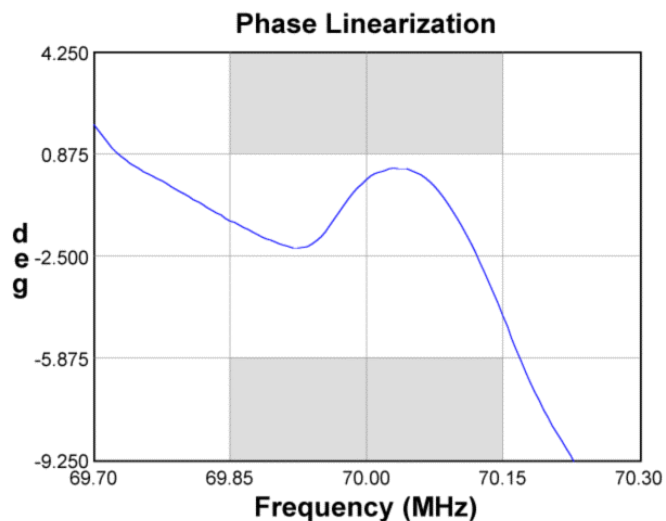
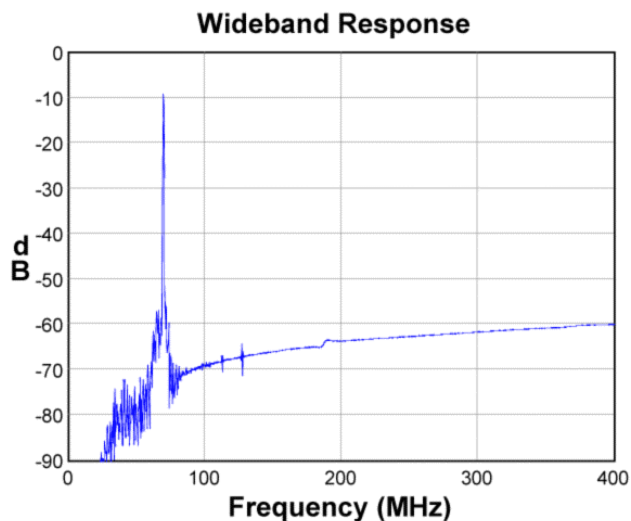
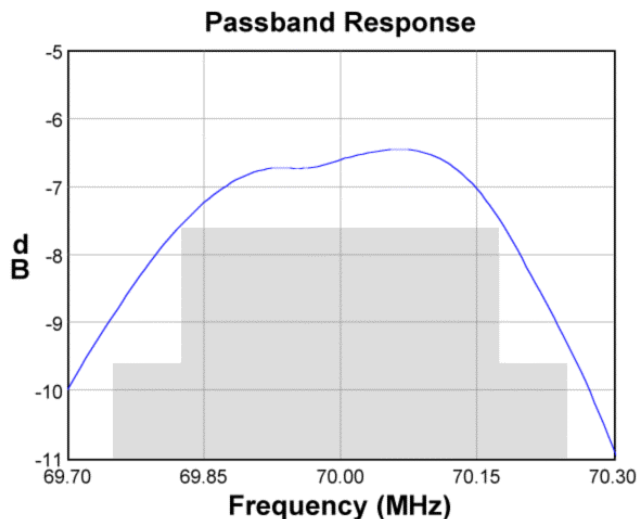
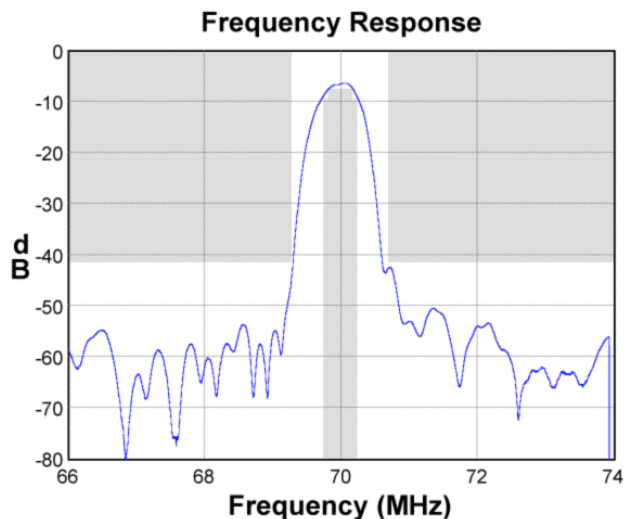
Test Circuit:

Actual matching values may vary due to PCB layout and parasitics

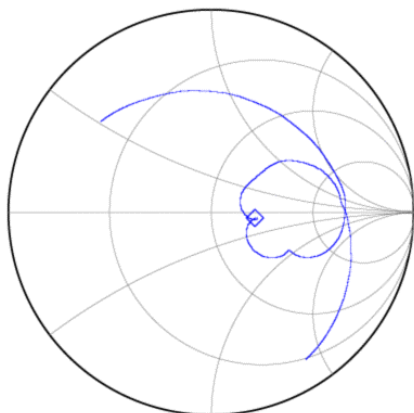


Data Sheet

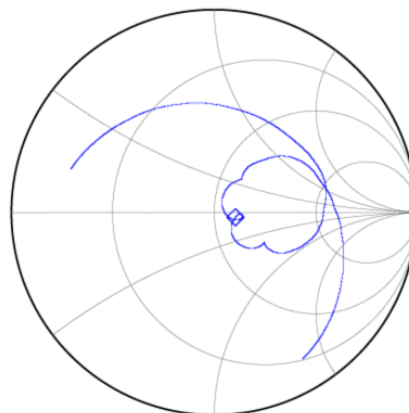
Typical Performance (at +25°C)



Input Smith Chart



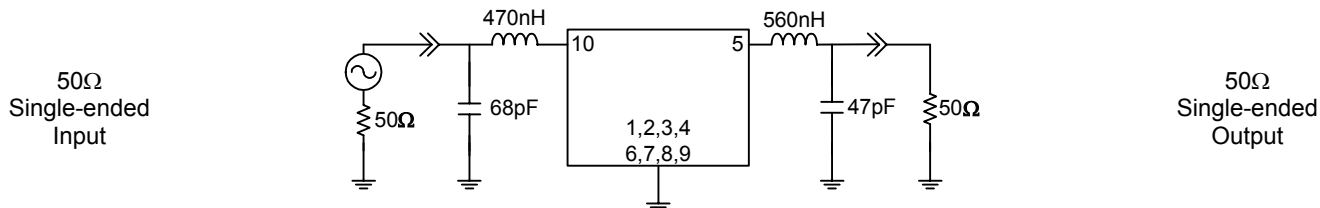
Output Smith Chart



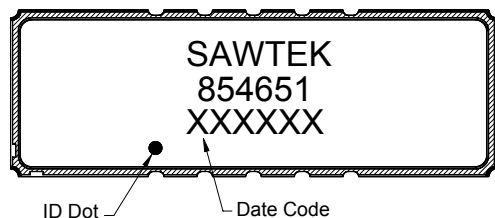
Data Sheet

Matching Schematics

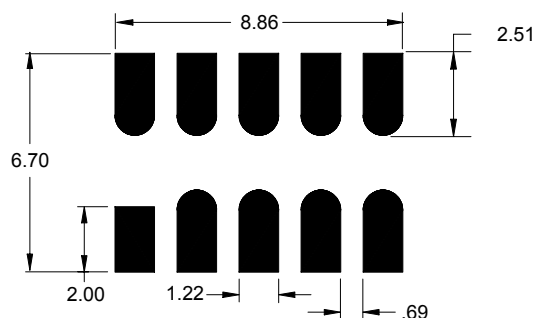
Actual matching values may vary due to PCB layout and parasitics



Marking



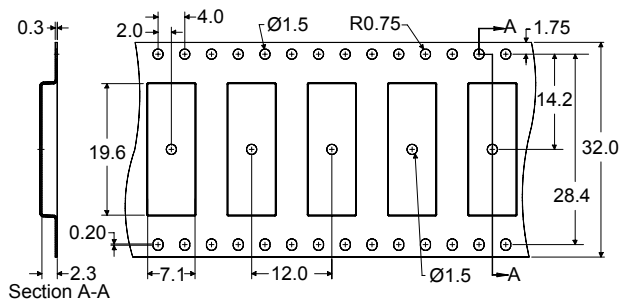
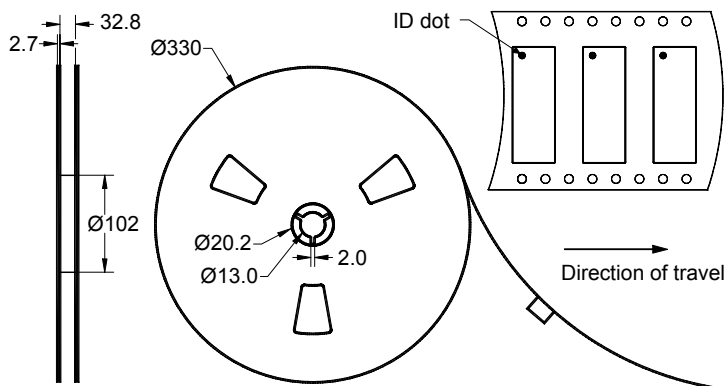
PCB Footprint



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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