
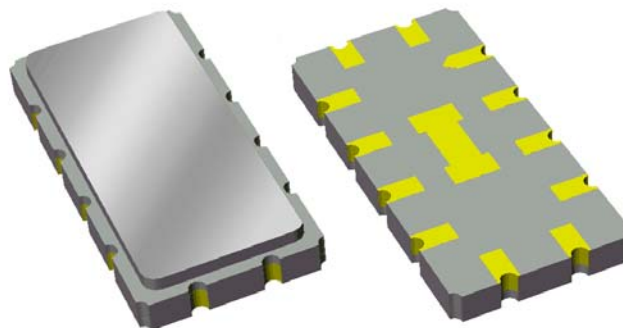


Data Sheet

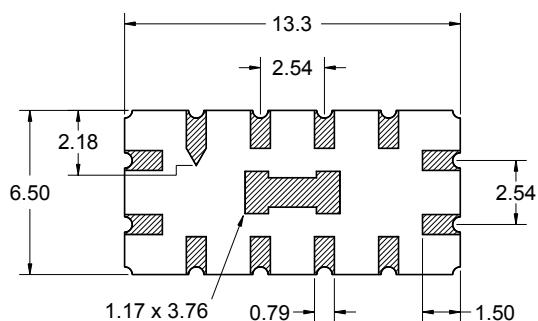
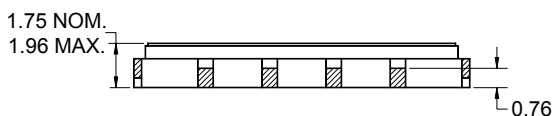
Features

- For GSM/EDGE applications
- Usable bandwidth 400 KHz
- Single-ended and differential operation
- Ceramic Surface Mount Package (SMP)
- Hermetic
- RoHS compliant (2002/95/EC), Pb-free 



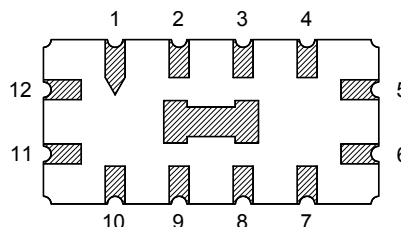
Package

Surface Mount 13.3 x 6.50 x 1.75 mm



Pin Configuration

Bottom View



| Pin No. | Description |
|----------|---------------|
| 5 | Output |
| 6 | Output return |
| 11 | Input |
| 12 | Input return |
| 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 - 1.0 μ m,
over a 2 - 6 μ m Ni plating

Data Sheet

Electrical Specifications ⁽¹⁾

Operating Temperature Range: ⁽²⁾ -10 to +85 °C

| Parameter ⁽³⁾ | Minimum | Typical | Maximum | Unit |
|---|---------|-----------|---------|--------|
| Center Frequency | - | 125 | - | MHz |
| Insertion Loss at Fo | 4 | 5.7 | 7 | dB |
| 1 dB Lower Frequency | - | 124.719 | 124.8 | MHz |
| 1 dB Upper Frequency | 125.2 | 125.307 | - | MHz |
| 8 dB Lower Frequency | 124.4 | 124.494 | - | MHz |
| 8 dB Upper Frequency | - | 125.547 | 125.6 | MHz |
| 20 dB Lower Frequency | 123.8 | 124.313 | - | MHz |
| 20 dB Upper Frequency | - | 125.742 | 126.2 | MHz |
| Amplitude Variation 124.8 - 125.2 MHz | - | 0.62 | 1 | dB p-p |
| Group Delay Variation 124.8 - 125.2 MHz | - | 194 | 300 | nsec |
| Absolute Delay 124.8 - 125.2 MHz | 0.7 | 1.230 | 1.7 | μsec |
| Absolute Attenuation 10 - 112 MHz | 55 | 72 | - | dB |
| 112 - 115.5 MHz | 43 | 66 | - | dB |
| 115.5 - 119 MHz | 40 | 61 | - | dB |
| 119 - 121.6 MHz | 34 | 47 | - | dB |
| 121.6 - 123.2 MHz | 25 | 34 | - | dB |
| 123.2 - 123.8 MHz | 20 | 32 | - | dB |
| 126.2 - 126.8 MHz | 20 | 32 | - | dB |
| 126.8 - 128.4 MHz | 25 | 37 | - | dB |
| 128.4 - 131 MHz | 34 | 48 | - | dB |
| 131 - 134.5 MHz | 40 | 51 | - | dB |
| 134.5 - 138 MHz | 43 | 59 | - | dB |
| 138 - 450 MHz | 55 | 72 | - | dB |
| Input/Output VSWR 124.8 - 125.2 MHz | - | 1.51/1.79 | 2.3 | - |
| Source Impedance ⁽⁴⁾ | - | 50 | - | Ω |
| Load Impedance ⁽⁴⁾ | - | 50 | - | Ω |

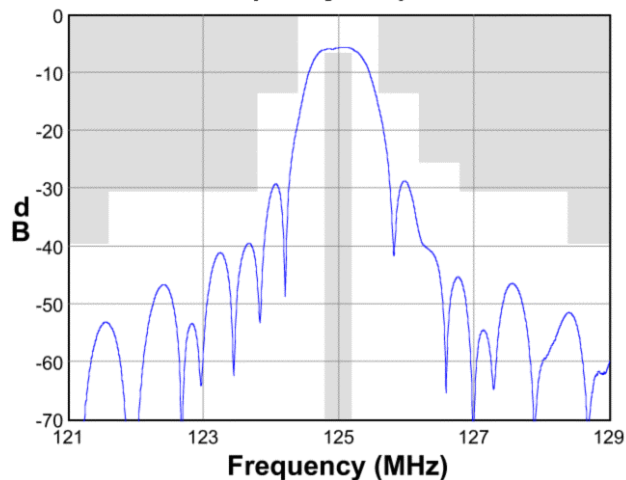
Notes:

1. All specifications are based on the test circuit shown on page 4
2. In production, devices will be tested at room temperature to a guardbanded specification to ensure electrical compliance over temperature
3. Electrical margin has been built into the design to account for the variations due to temperature drift and manufacturing tolerances
4. This is the optimum impedance in order to achieve the performance shown

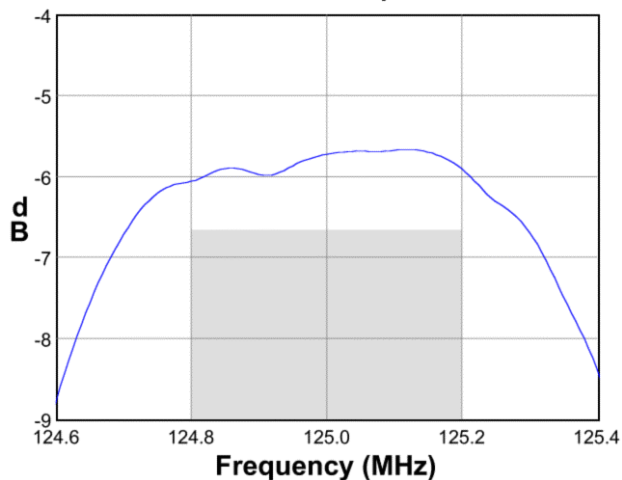
Data Sheet

Typical Performance (at +25°C)

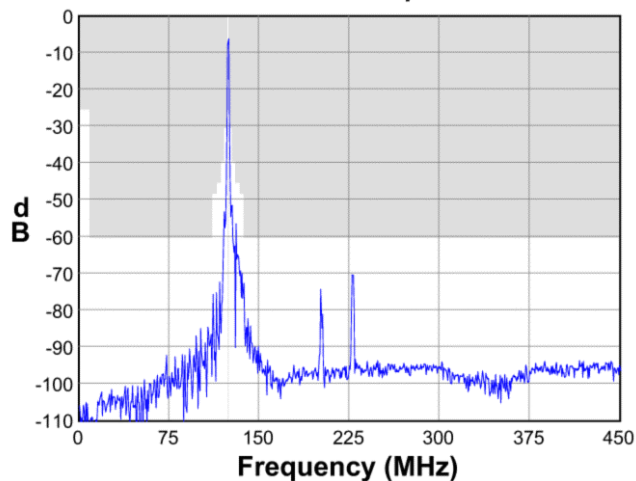
Frequency Response



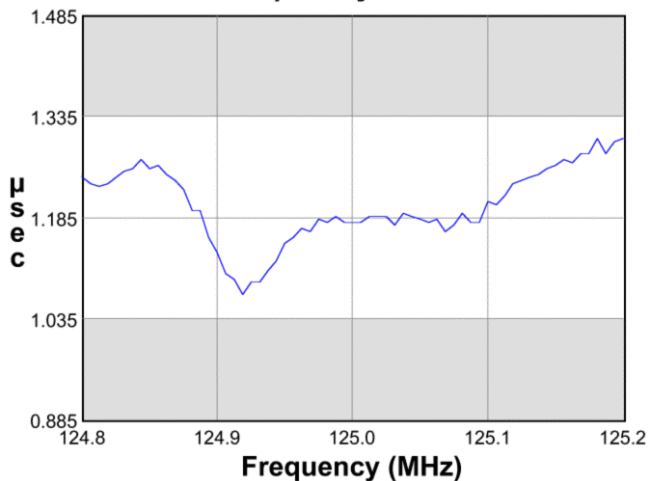
Passband Response



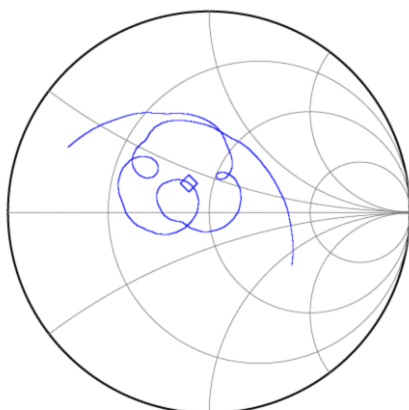
Wideband Response



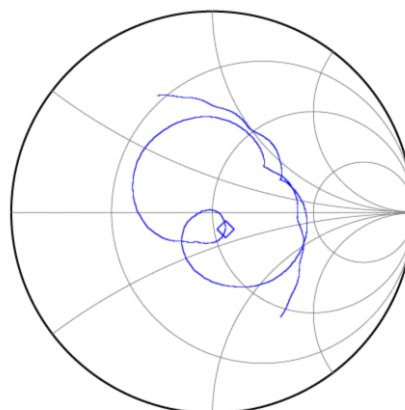
Group Delay Variation



Input Smith Chart



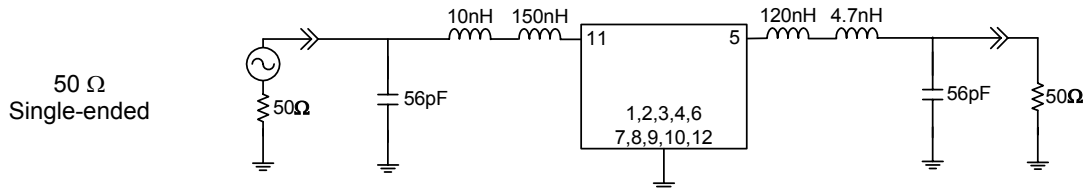
Output Smith Chart



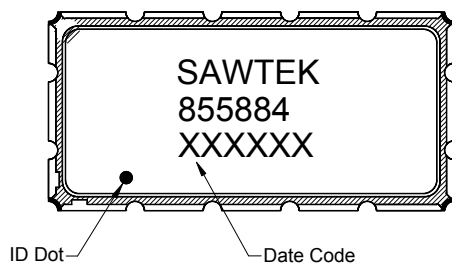
Data Sheet

Matching Schematics

Actual matching values may vary due to PCB layout and parasitics

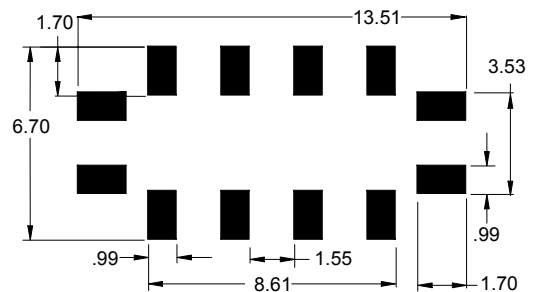


Marking



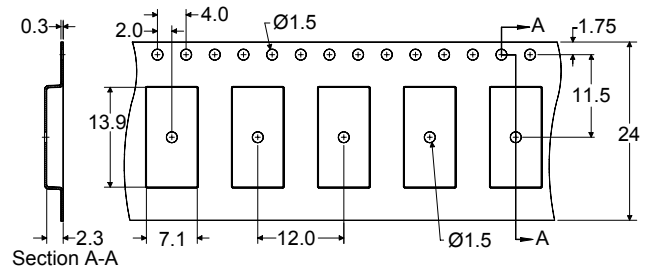
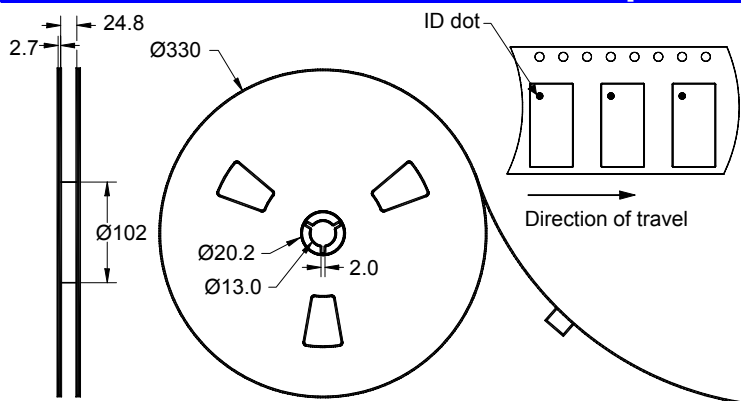
The date code consists of: day of the current year (Julian, 3 digits), last digit of the year (1 digit) and hour (2 digits)

PCB Footprint



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 | Typical | Maximum | Unit |
|-----------------------------|------------------|---------|---------|---------|------|
| Operating Temperature Range | T | -10 | +25 | +85 | °C |
| Storage Temperature Range | T _{stg} | -40 | - | +125 | °C |
| Input Power | P _{in} | - | - | 10 | dBm |

Important Notes

Warnings

- Electrostatic Sensitive Device (ESD)
- Avoid ultrasonic exposure



RoHS Compliance

- This product complies with EU directive 2002/95/EC (RoHS)



Solderability

- Compatible with JEDEC J-STD-020C Pb-free process, **260°C** peak reflow temperature ([see soldering profile](#))

Links to Additional Technical Information

[PCB Layout Tips](#)[Qualification Flowchart](#)[Soldering Profile](#)[S-Parameters](#)[RoHS information](#)[Other Technical Information](#)

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