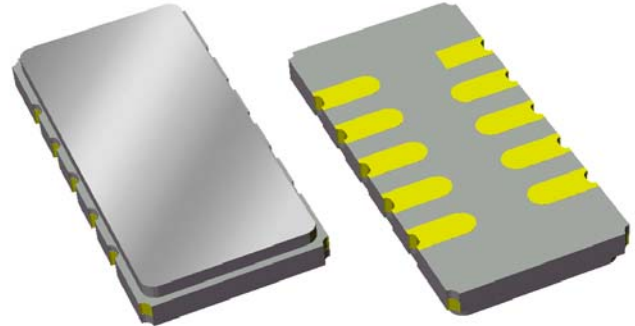


**Data Sheet**

**Features**

- For GSM/EDGE applications
- Usable bandwidth 180 KHz
- Low loss
- High attenuation
- Single ended and differential operation
- Ceramic Surface Mount Package (SMP)
- Hermetic

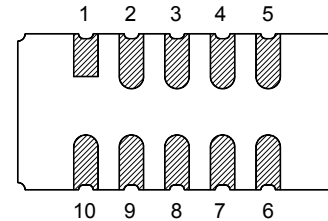
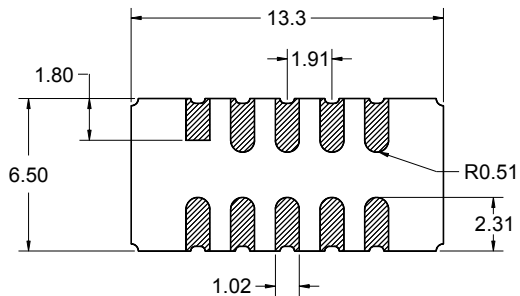
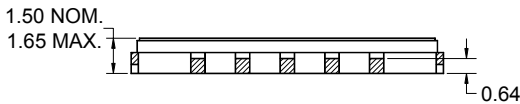


**Package**

Surface Mount 13.3 x 6.50 x 1.50 mm

**Pin Configuration**

Bottom View



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

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

Body:  $Al_2O_3$  ceramic  
Lid: Kovar, Ni plated  
Terminations: Au plating 0.5 - 1.0 $\mu$ m,  
over a 2 - 6 $\mu$ m Ni plating

# Data Sheet

## Electrical Specifications <sup>(1)</sup>

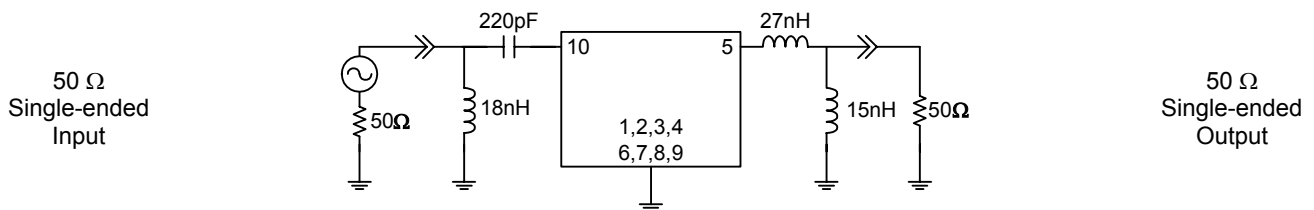
Operating Temperature Range: <sup>(2)</sup> -20 to +85 °C

Parameter <sup>(3)</sup>	Minimum	Typical	Maximum	Unit
<b>Center Frequency</b>	-	170.6	-	MHz
<b>Insertion Loss at Fo</b>	-	5.59	8	dB
<b>1 dB Lower Frequency</b>	-	170.44	170.51	MHz
<b>1 dB Upper Frequency</b>	170.69	170.75	-	MHz
<b>13 dB Lower Frequency</b>	170.2	170.27	-	MHz
<b>13 dB Upper Frequency</b>	-	170.95	171.0	MHz
<b>27 dB Lower Frequency</b>	170.0	170.11	-	MHz
<b>27 dB Upper Frequency</b>	-	171.11	171.2	MHz
<b>40 dB Lower Frequency</b>	169.8	170.00	-	MHz
<b>40 dB Upper Frequency</b>	-	171.23	171.4	MHz
<b>43 dB Lower Frequency</b>	169.0	169.94	-	MHz
<b>43 dB Upper Frequency</b>	-	171.28	172.2	MHz
<b>47 dB Lower Frequency</b>	167.4	169.85	-	MHz
<b>47 dB Upper Frequency</b>	-	171.60	173.8	MHz
<b>Amplitude Variation</b> 170.51 - 170.69 MHz	-	0.29	1	dB p-p
<b>Group Delay Ripple</b> 170.51 - 170.69 MHz	-	421	1000	nsec
<b>Minimum Rejection</b> 171.4 - 171.6 MHz	40	-	-	dB
<b>Input Power Level</b>	-	-	20	dBm
<b>Passband Input IP3</b>	30	-	-	dBm
<b>Input/Output VSWR</b>	-	-	2:1	-
<b>Optimal Source Impedance: <sup>(4)</sup></b>	-	50	-	Ω
<b>Optimal Load Impedance: <sup>(4)</sup></b>	-	50	-	Ω

### Notes:

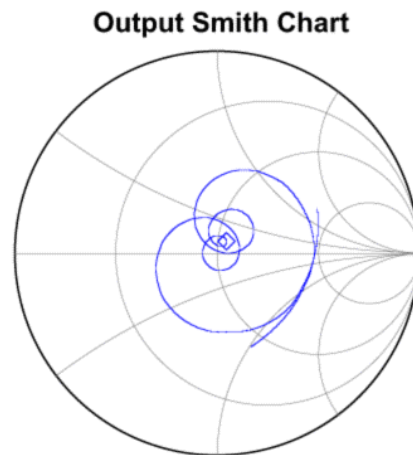
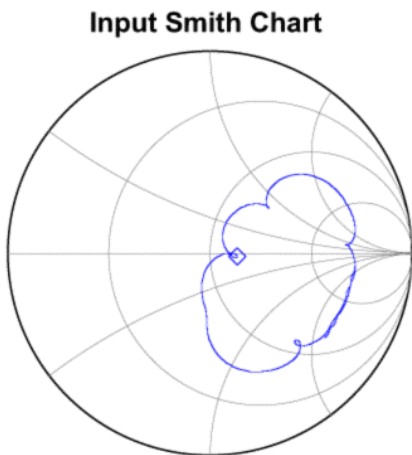
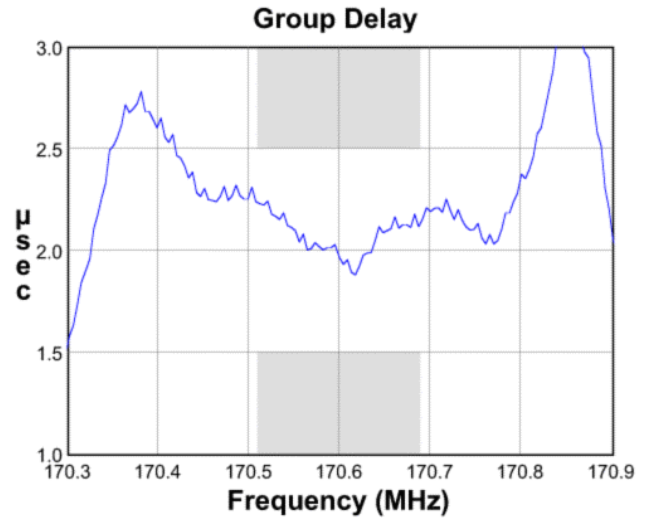
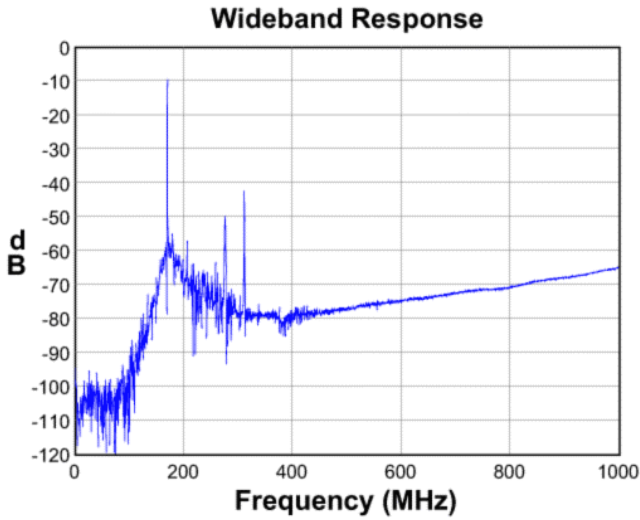
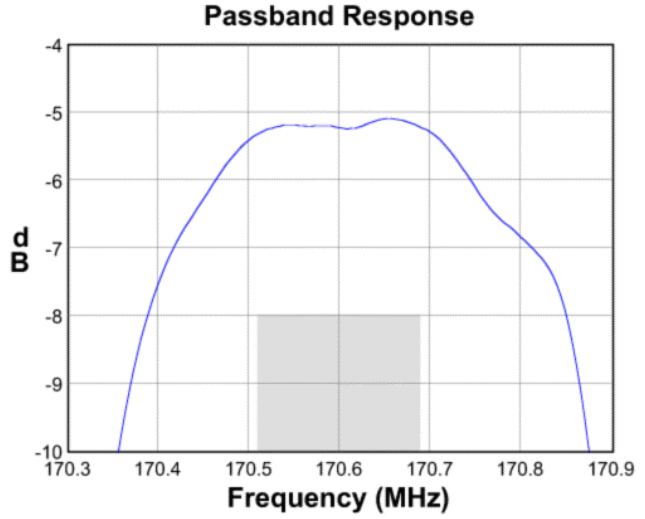
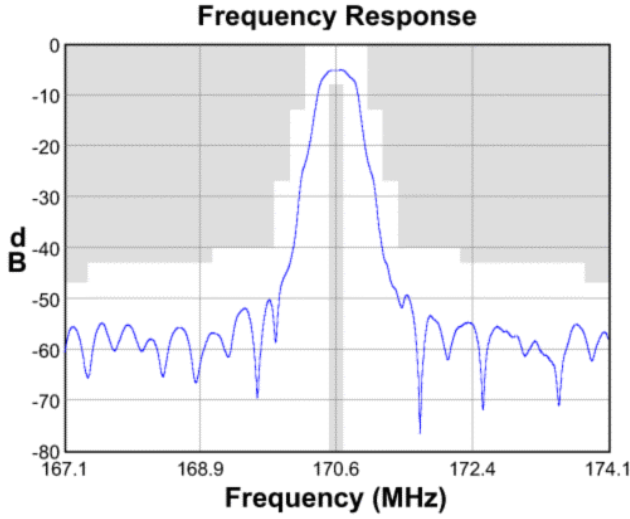
1. All specifications are based on the Sawtek reference test system
2. In production, devices will be tested at room temperature to a guardbanded specification to ensure electrical compliance over temperature
3. Electrical margin has been built into the design to account for the variations due to temperature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

### Test Circuit:



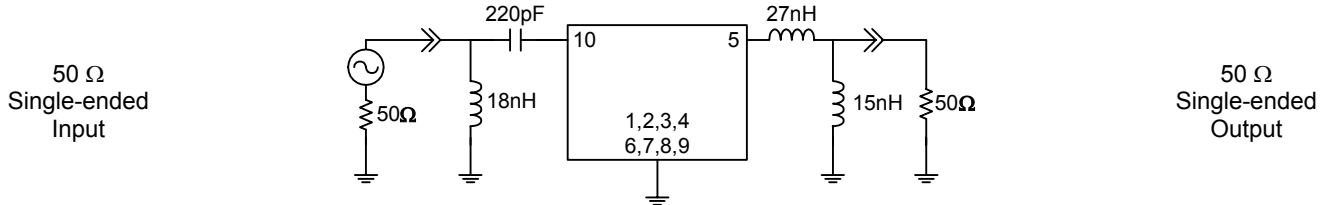
**Data Sheet**

**Typical Performance (at +25°C)**

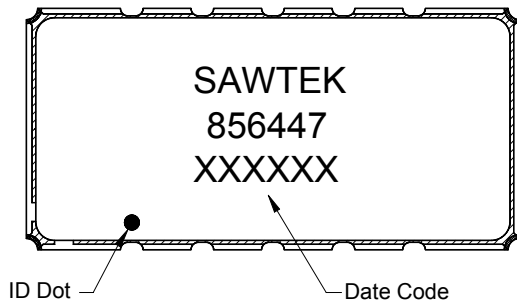


**Data Sheet**

**Matching Schematics**

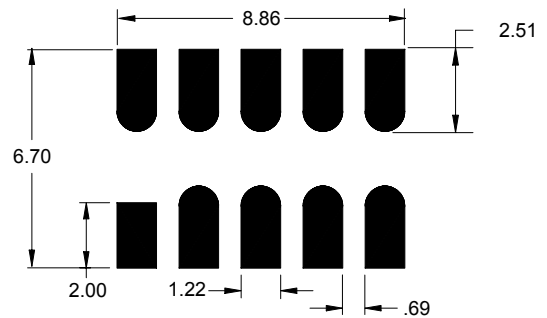


**Marking**



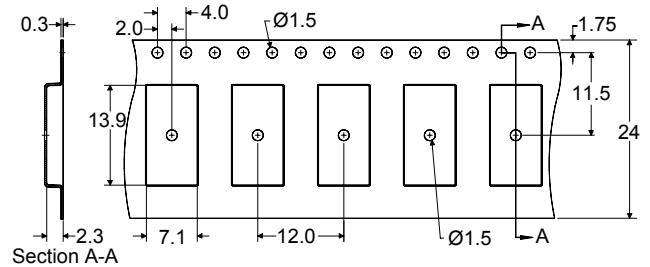
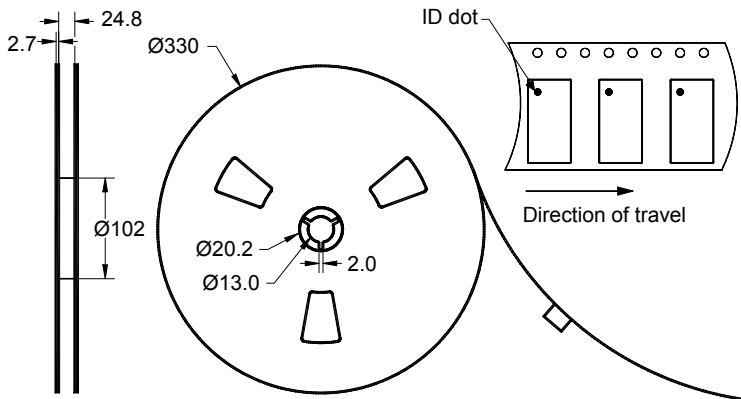
The date code consists of: day of the current year (Julian, 3 digits), last digit of the year (1 digit) and hour (2 digits)

**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	Maximum	Unit
Operating Temperature Range	T	-20	+85	°C
Storage Temperature Range	T <sub>stg</sub>	-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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[Representatives or distributors](#)