
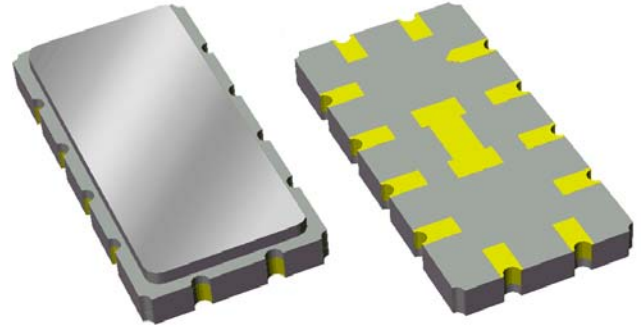


**Data Sheet**

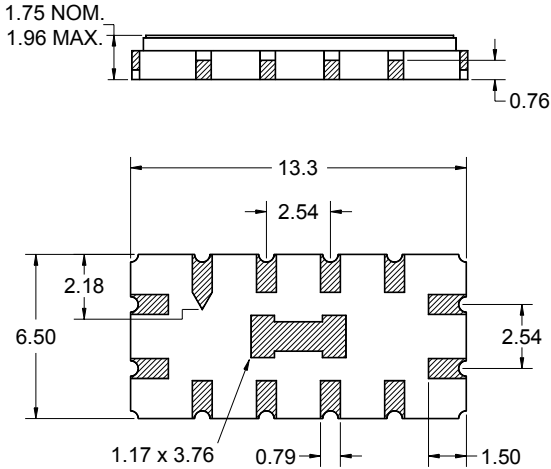
**Features**

- 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 



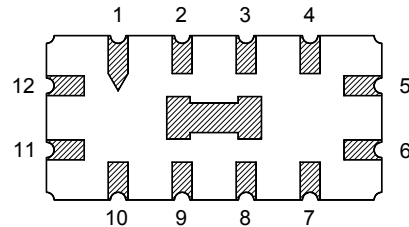
**Package**

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  $\pm 0.15\text{mm}$  except overall  
length and width  $\pm 0.10\text{mm}$

Body:  $\text{Al}_2\text{O}_3$  ceramic  
Lid: Kovar, Ni plated  
Terminations: Au plating 0.5 - 1.0 $\mu\text{m}$ ,  
over a 2 - 6 $\mu\text{m}$  Ni plating

**Data Sheet**
**Electrical Specifications <sup>(1)</sup>**
**Operating Temperature Range: <sup>(2)</sup> -10 to +85 °C**

Parameter <sup>(3)</sup>	Minimum	Typical	Maximum	Unit
<b>Center Frequency</b>	-	125	-	MHz
<b>Insertion Loss at Fo</b>	4	5.7	7	dB
<b>1 dB Lower Frequency</b>	-	124.719	124.8	MHz
<b>1 dB Upper Frequency</b>	125.2	125.307	-	MHz
<b>8 dB Lower Frequency</b>	124.4	124.494	-	MHz
<b>8 dB Upper Frequency</b>	-	125.547	125.6	MHz
<b>20 dB Lower Frequency</b>	123.8	124.313	-	MHz
<b>20 dB Upper Frequency</b>	-	125.742	126.2	MHz
<b>Amplitude Variation</b> 124.8 - 125.2 MHz	-	0.62	1	dB p-p
<b>Group Delay Variation</b> 124.8 - 125.2 MHz	-	194	300	nsec
<b>Absolute Delay</b> 124.8 - 125.2 MHz	0.7	1.230	1.7	µsec
<b>Absolute Attenuation</b> 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
<b>Input/Output VSWR</b> 124.8 - 125.2 MHz	-	1.51/1.79	2.3	-
<b>Source Impedance <sup>(4)</sup></b>	-	50	-	Ω
<b>Load Impedance <sup>(4)</sup></b>	-	50	-	Ω

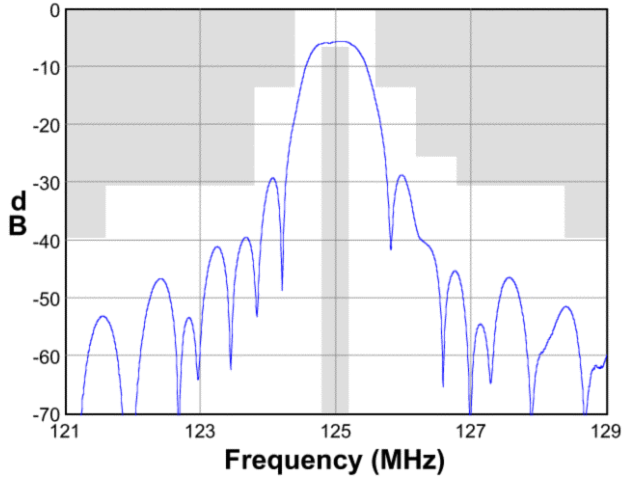
**Notes:**

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

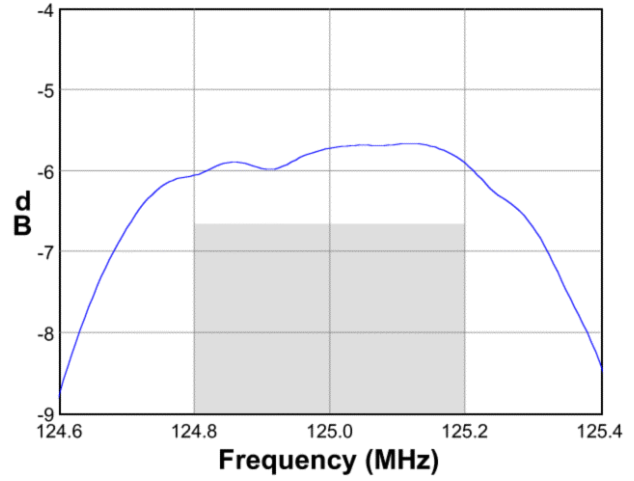
**Data Sheet**

**Typical Performance (at +25°C)**

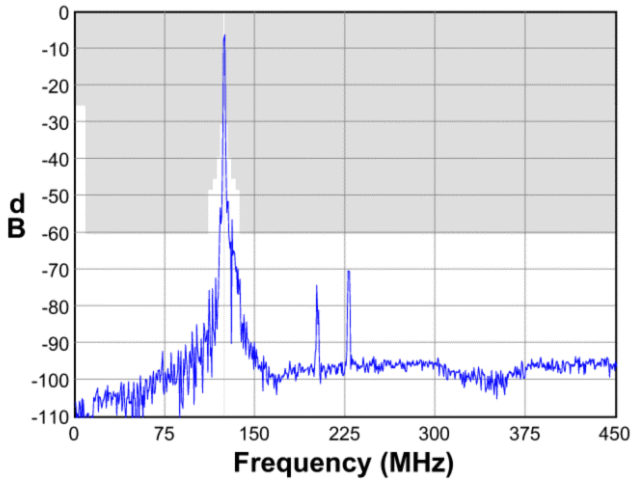
**Frequency Response**



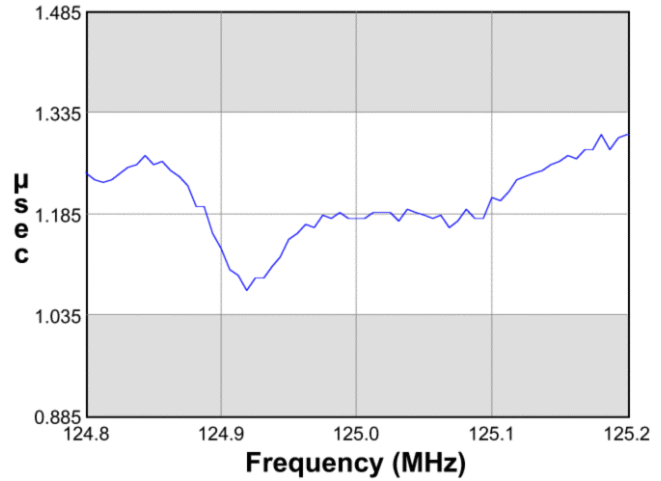
**Passband Response**



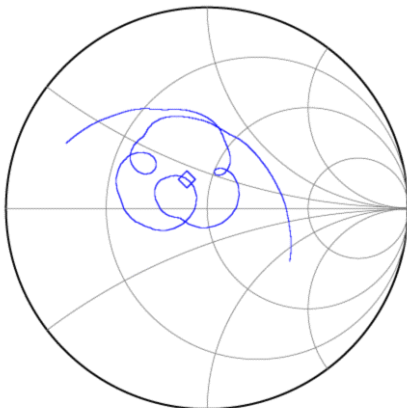
**Wideband Response**



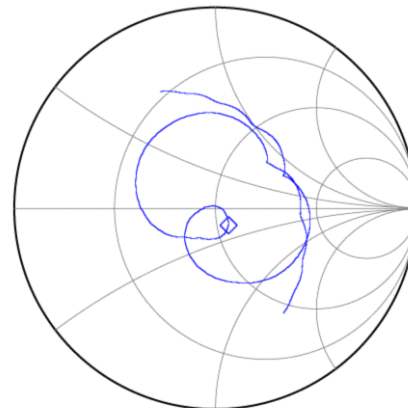
**Group Delay Variation**



**Input Smith Chart**



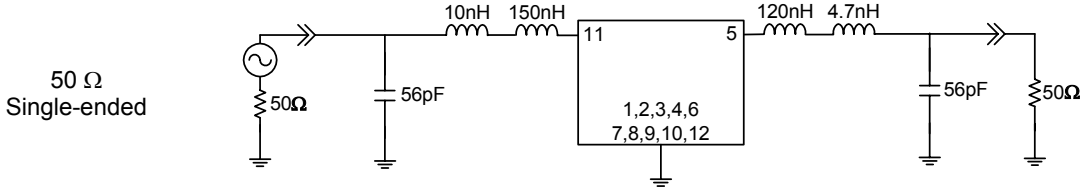
**Output Smith Chart**



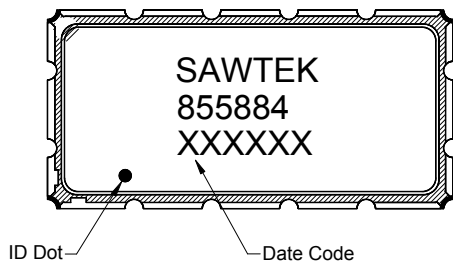
**Data Sheet**

**Matching Schematics**

Actual matching values may vary due to PCB layout and parasitics

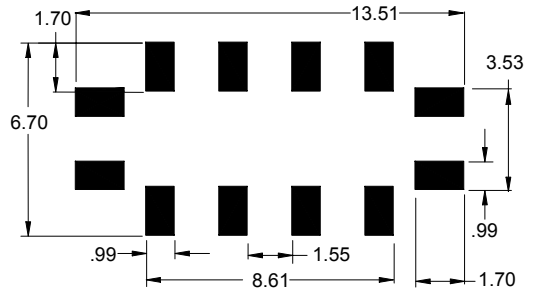


**Marking**



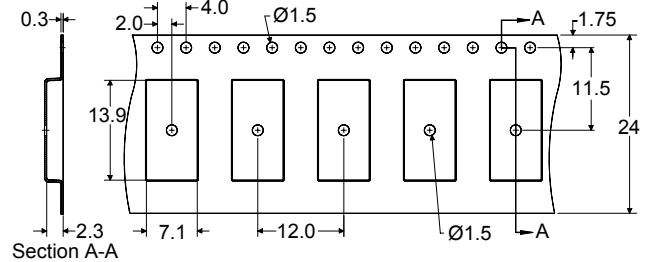
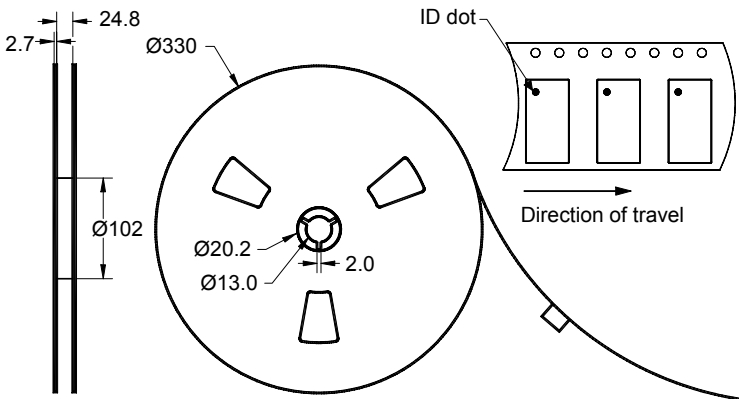
The date code consists of: day of the current year (Julian, 3 digits), last digit of the year (1 digit) and hour (2 digits)

**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 <sub>stg</sub>	-40	-	+125	°C
Input Power	P <sub>in</sub>	-	-	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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