
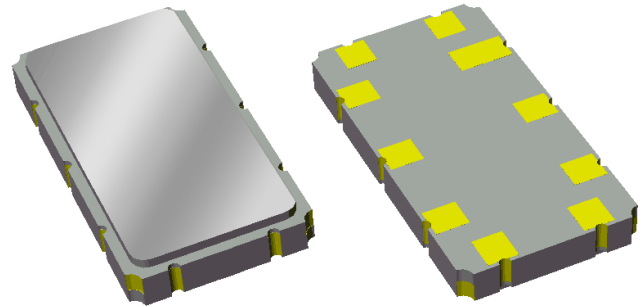


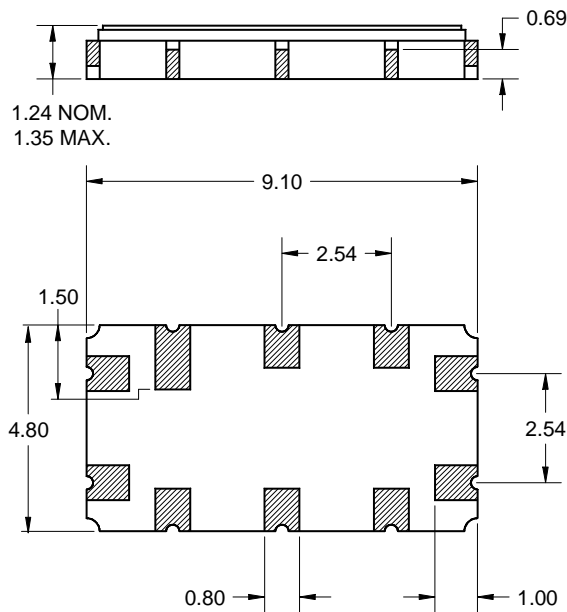
## Features

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



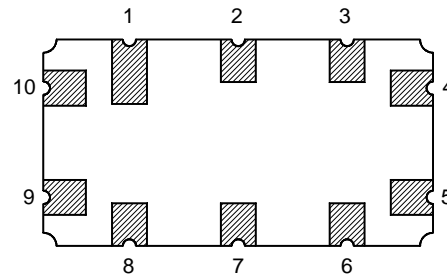
## Package

Surface Mount 9.10 x 4.80 x 1.24 mm  
SMP-35C



## Pin Configuration

Bottom View



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

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

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

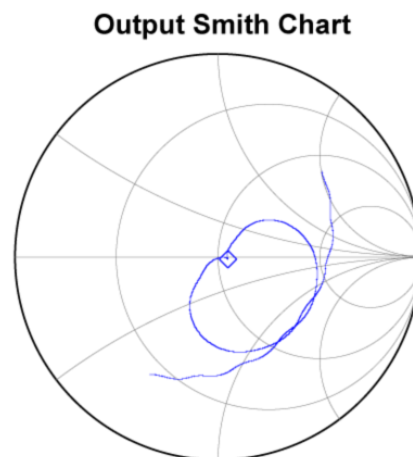
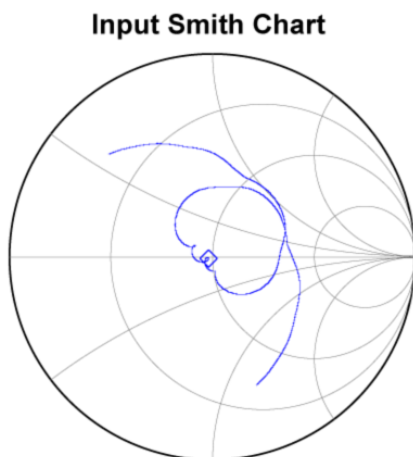
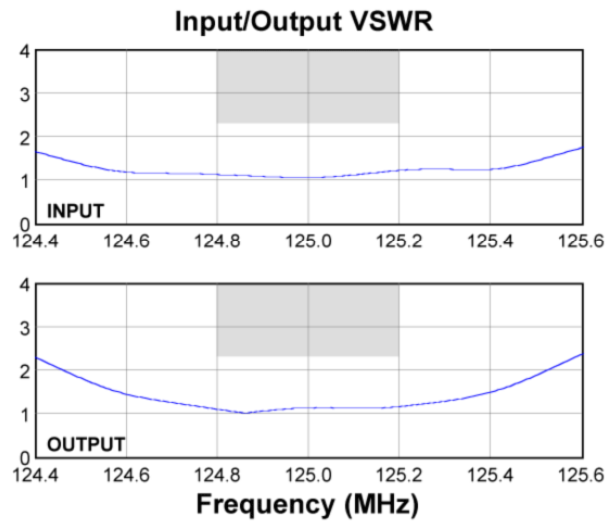
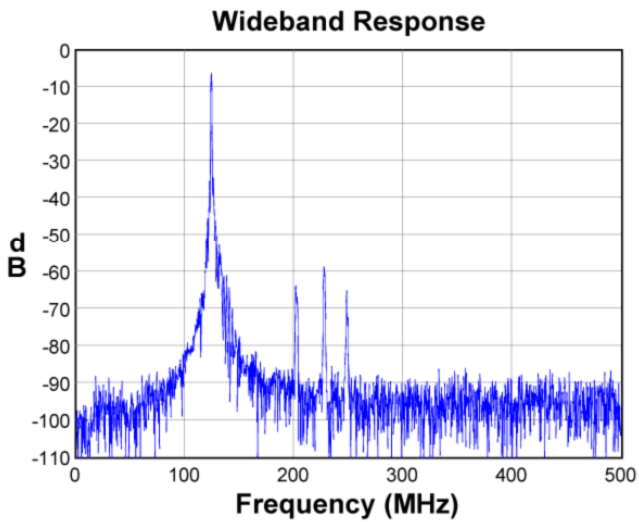
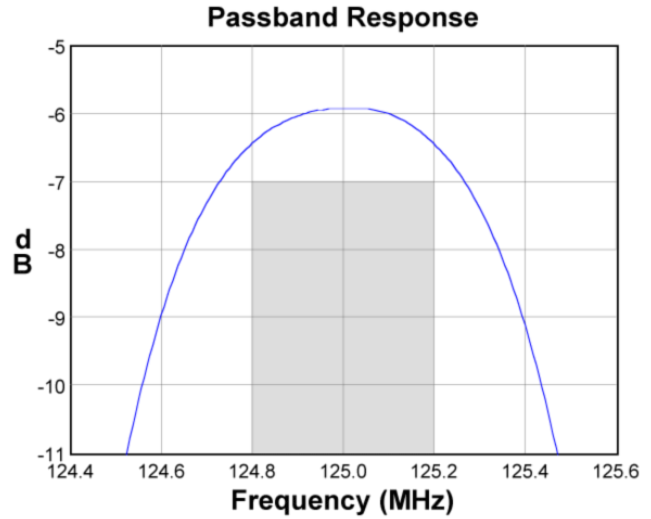
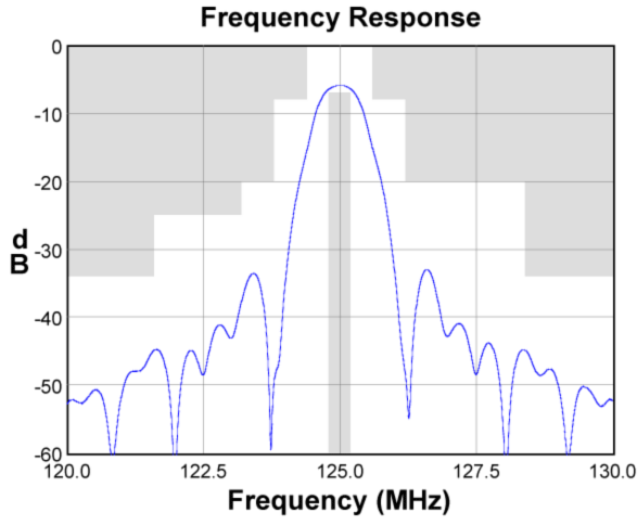
Operating Temperature Range: <sup>(2)</sup> -10 to +85 °C

Parameter <sup>(3)</sup>	Minimum	Typical <sup>(4)</sup>	Maximum	Unit
Center Frequency	-	125	-	MHz
Insertion Loss at Fo	4	5.9	7	dB
1 dB Lower Frequency	-	124.73	124.8	MHz
1 dB Upper Frequency	125.2	125.26	-	MHz
8 dB Lower Frequency	124.4	124.43	-	MHz
8 dB Upper Frequency	-	125.55	125.6	MHz
20 dB Lower Frequency	123.8	124.12	-	MHz
20 dB Upper Frequency	-	125.88	126.2	MHz
Amplitude Variation 124.8 - 125.2 MHz	-	0.55	1.0	dB p-p
Passband Ripple	-	0.01	0.2	dB
Group Delay Variation 124.8 - 125.2 MHz 124.9 - 125.1 MHz	- -	68 37	300 100	nsec nsec
Absolute Delay 124.8 - 125.2 MHz	0.7	0.93	1.7	µsec
Absolute Attenuation 10.0 - 112.0 MHz	55	70	-	dB
112.0 - 115.5 MHz	43	65	-	dB
115.5 - 119.0 MHz	40	59	-	dB
119.0 - 121.6 MHz	34	45	-	dB
121.6 - 123.2 MHz	25	37	-	dB
123.2 - 123.8 MHz	20	33	-	dB
126.2 - 126.8 MHz	20	33	-	dB
126.8 - 128.4 MHz	25	37	-	dB
128.4 - 131.0 MHz	34	45	-	dB
131.0 - 134.5 MHz	40	59	-	dB
134.5 - 138.0 MHz	43	68	-	dB
138.0 - 450.0 MHz	55	58	-	dB
Input/Output VSWR 124.8 - 125.2 MHz	-	1.3	2.3	-
Source Impedance <sup>(5)</sup>	-	50	-	Ω
Load Impedance <sup>(5)</sup>	-	50	-	Ω

**Notes:**

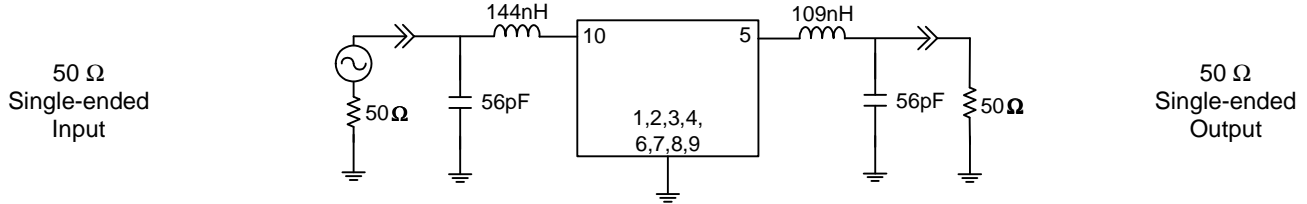
1. All specifications are based on the test circuit shown on page 4
2. In production, devices will be tested at room temperature to a guardbanded specification to ensure electrical compliance over temperature
3. Electrical margin has been built into the design to account for the variations due to temperature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

**Typical Performance (at room temperature)**

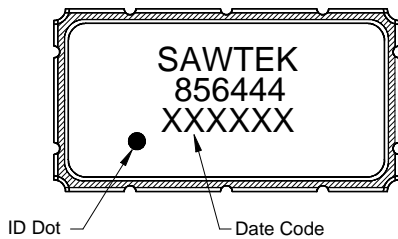


**Matching Schematics**

Actual matching values may vary due to PCB layout and parasitics

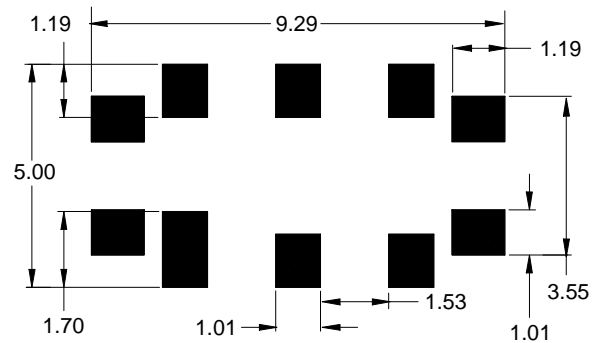


**Marking**



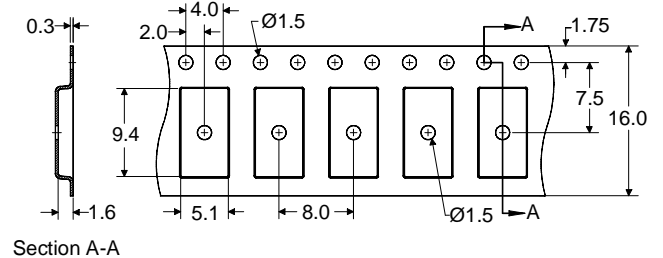
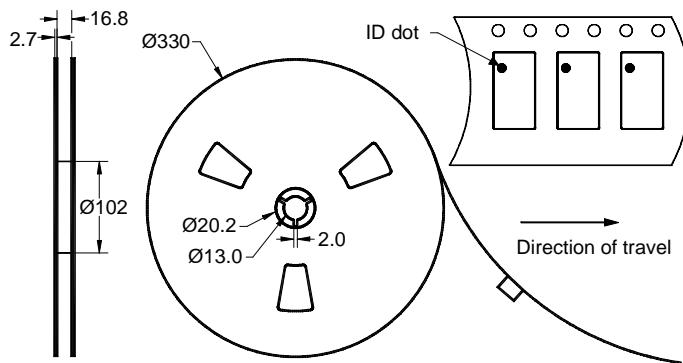
The date code consists of: day of the current year (Julian, 3 digits), last digit of the year (1 digit) and hour (2 digits)

**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

### Maximum Ratings

Parameter	Symbol	Minimum	Maximum	Unit
Operating Temperature Range	T	-10	+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 JESD22-B102, Pb-free process, 260C 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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