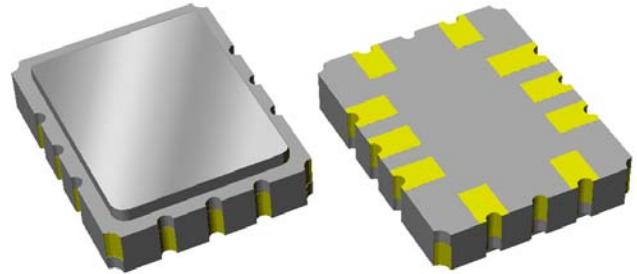


# Data Sheet

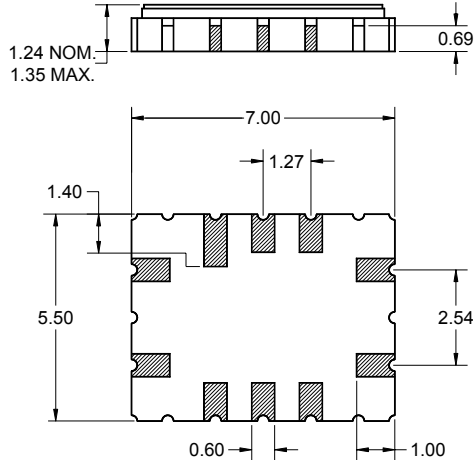
## Features

- For CDMA handset IF applications
- Usable bandwidth of 1.26 MHz
- Low loss
- High attenuation at tones
- Single-ended or balanced operation
- Ceramic Surface Mount Package (SMP)
- Small size



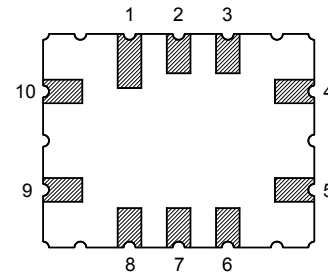
## Package

Surface Mount 7.00 x 5.50 x 1.24 mm



## Pin Configuration

Bottom View



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

Dimensions shown are nominal in millimeters  
 All tolerances are  $\pm 0.15\text{mm}$  except overall  
 length and width  $\pm 0.13\text{mm}$

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> -30 to +85 °C

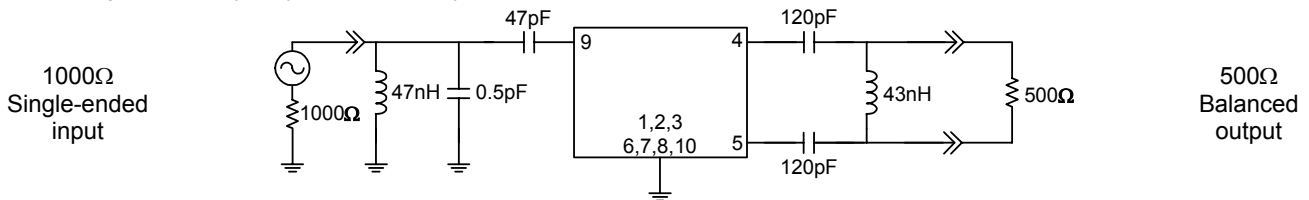
Parameter <sup>(3)</sup>	Minimum	Typical	Maximum	Unit
<b>Center Frequency, <math>f_0</math></b>	-	183.6	-	MHz
<b>Insertion Loss at 183.6 MHz</b>				
Excluding losses due to matching	-	7.4	9.2	dB
Including losses in matching test circuit shown below	-	9.8	11.6	dB
<b>Lower 5 dB Point</b>	-	182.893	182.970	MHz
<b>Upper 5 dB Point</b>	184.230	184.311	-	MHz
<b>Amplitude Variation</b> 183.3 - 183.9 MHz	-	0.4	1.25	dB p-p
<b>RMS Phase Variation</b> 182.97 - 184.23 MHz	-	1.6	3.2	deg RMS
<b>Attenuation <sup>(4)</sup></b>				
$f_0 - 2.05$ MHz	33	45	-	dB
$f_0 - 1.70$ MHz	33	40	-	dB
$f_0 - 1.25$ MHz	33	40	-	dB
$f_0 - 0.90$ MHz	33	38	-	dB
$f_0 + 0.90$ MHz	33	40	-	dB
$f_0 + 1.25$ MHz	33	36	-	dB
$f_0 + 1.70$ MHz	33	40	-	dB
$f_0 + 2.05$ MHz	33	40	-	dB
<b>Rejection <sup>(4)</sup></b>				
10.0 - 171.6 MHz	45	60	-	dB
171.6 - 174.6 MHz	38	50	-	dB
174.6 - 182.7 MHz	33	38	-	dB
184.5 - 192.6 MHz	33	36	-	dB
192.6 - 195.6 MHz	38	48	-	dB
195.6 - 367.2 MHz	45	50	-	dB
<b>Optimal Source Impedance <sup>(5)</sup></b>	-	800 $\Omega$   49nH	-	$\Omega$
<b>Optimal Load Impedance <sup>(5)</sup></b>	-	380 $\Omega$   39.5nH	-	$\Omega$

### Notes:

- All specifications are based on the test circuit shown below
- In production, devices will be tested at room temperature to a guardbanded specification to ensure electrical compliance over temperature
- Electrical margin has been built into the design to account for the variations due to manufacturing tolerances
- Relative to insertion loss at 183.6 MHz
- This is the complex conjugate of the unmatched filter's impedance resulting in maximum power transfer

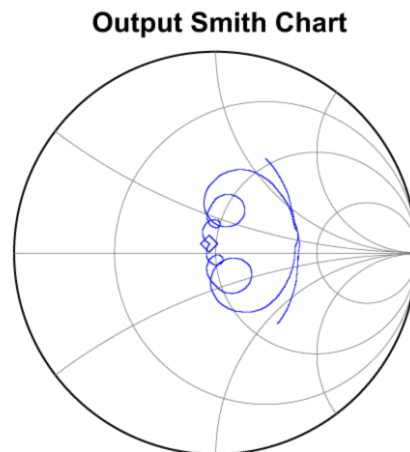
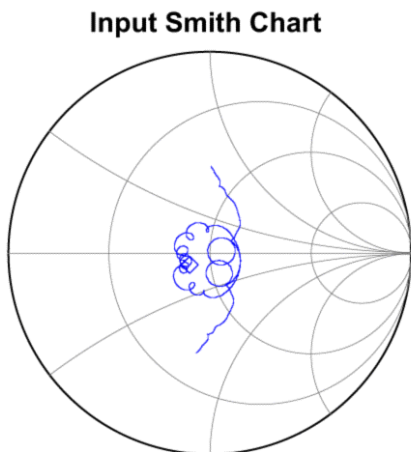
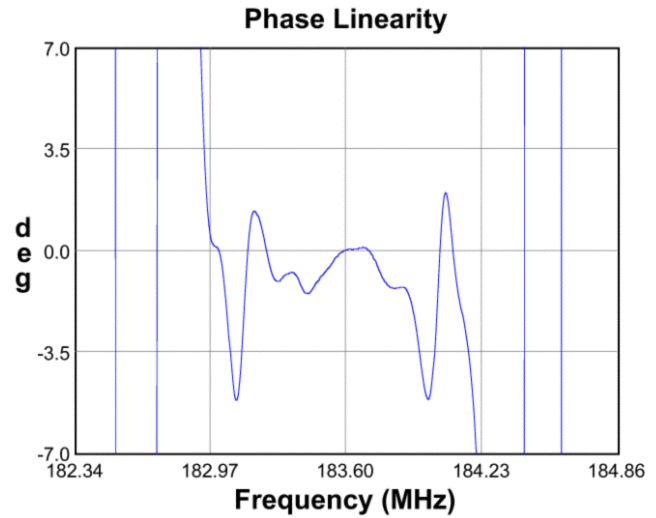
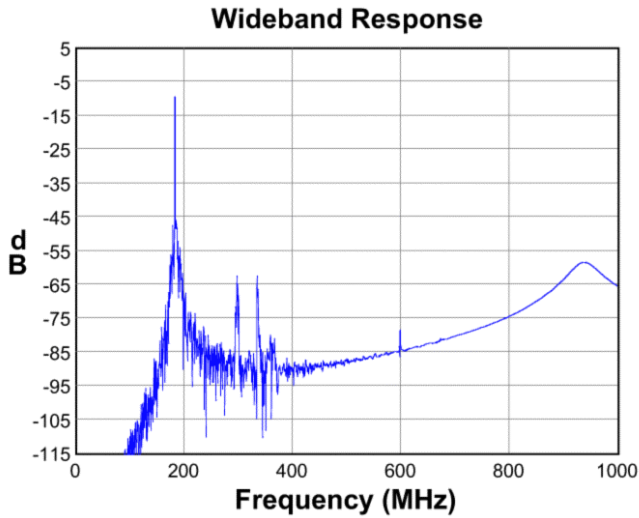
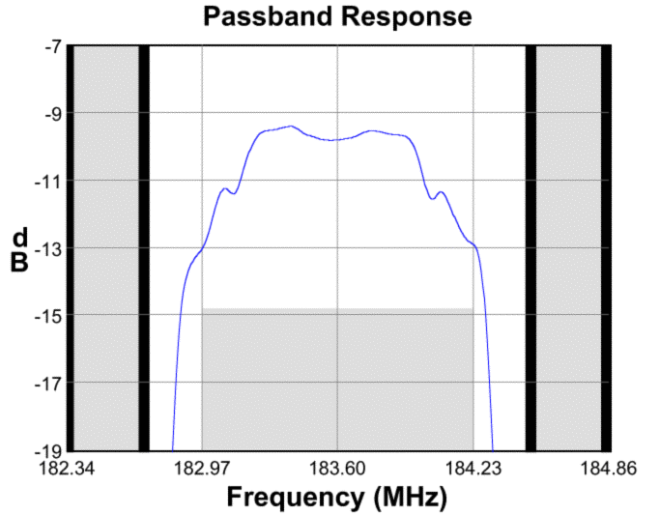
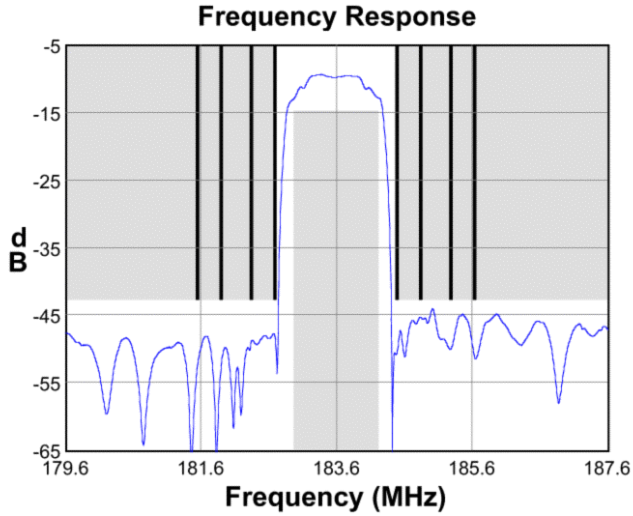
### Test Circuit:

Actual matching values may vary due to PCB layout and parasitics



**Data Sheet**

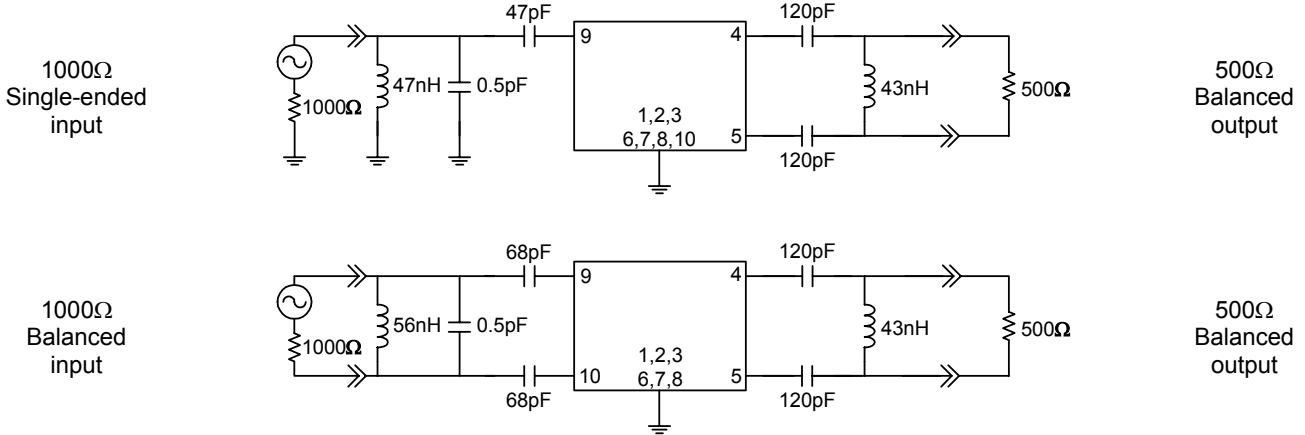
**Typical Performance (at +25°C)**



**Data Sheet**

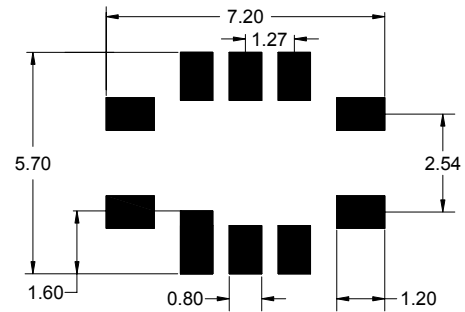
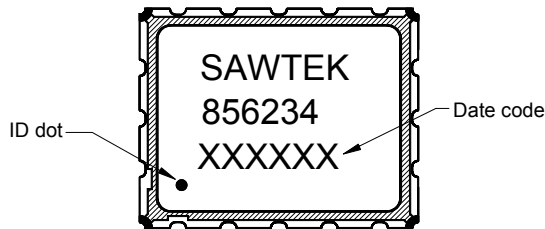
**Matching Schematics**

Actual matching values may vary due to PCB layout and parasitics



**Marking**

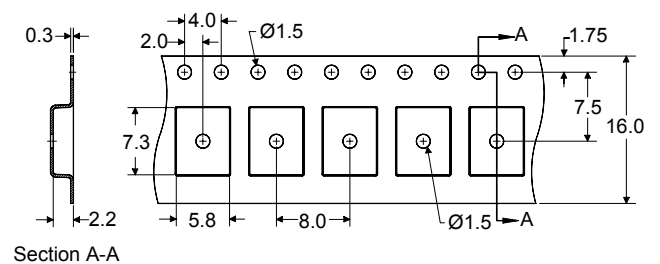
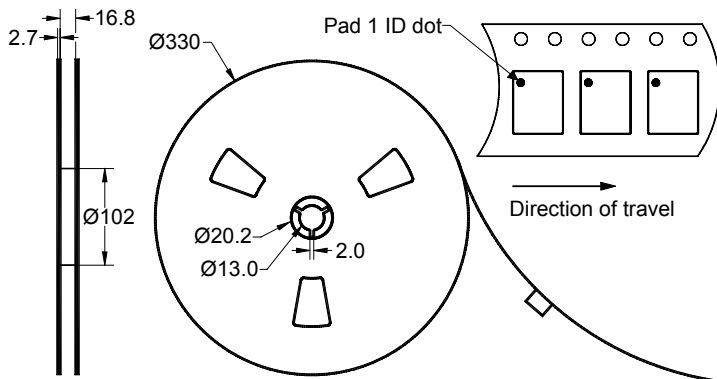
**PCB Footprint**



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: 3000 units/reel

# Data Sheet

## Maximum Ratings

Parameter	Symbol	Minimum	Maximum	Unit
Operating Temperature Range	T	-30	+85	°C
Storage Temperature Range	T <sub>stg</sub>	-40	+85	°C

### Warnings

- Electrostatic Sensitive Device (ESD) 
- Avoid ultrasonic exposure

## Links to Additional Technical Information

[PCB Layout Tips](#)

[Qualification Flowchart](#)

[Soldering Profile](#)

[S-Parameters](#)

[Other Technical Information](#)

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