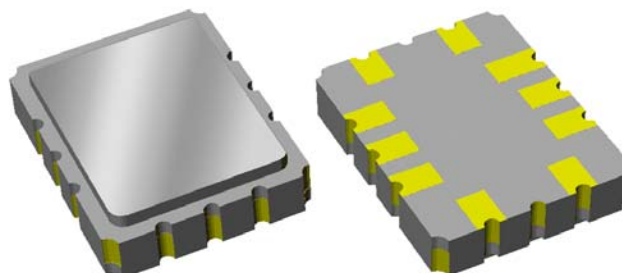


Data Sheet

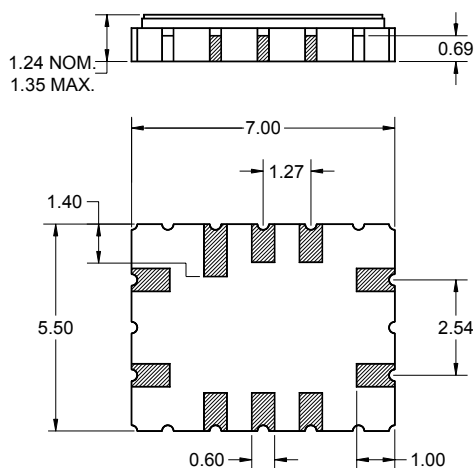
Features

- 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



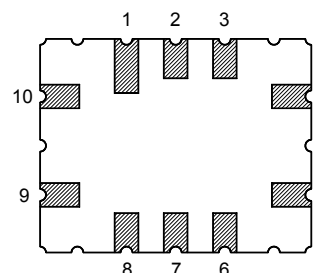
Package

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 ± 0.15 mm except overall
length and width ± 0.13 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⁾ -30 to +85 °C

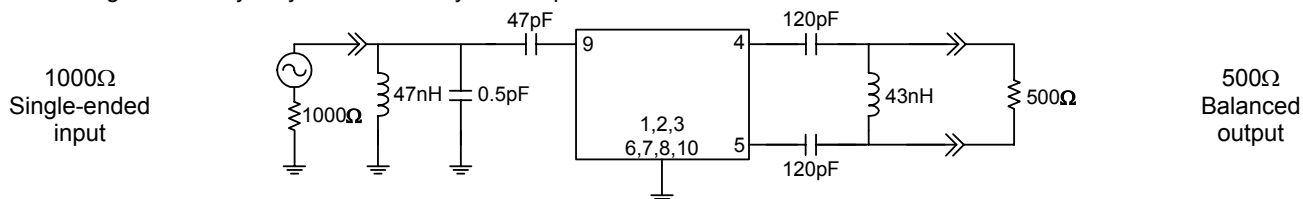
Parameter ⁽³⁾	Minimum	Typical	Maximum	Unit
Center Frequency, f_0	-	183.6	-	MHz
Insertion Loss at 183.6 MHz				
Excluding losses due to matching	-	7.4	9.2	dB
Including losses in matching test circuit shown below	-	9.8	11.6	dB
Lower 5 dB Point	-	182.893	182.970	MHz
Upper 5 dB Point	184.230	184.311	-	MHz
Amplitude Variation 183.3 - 183.9 MHz	-	0.4	1.25	dB p-p
RMS Phase Variation 182.97 - 184.23 MHz	-	1.6	3.2	deg RMS
Attenuation ⁽⁴⁾				
$f_0 - 2.05$ 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
Rejection ⁽⁴⁾				
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
Optimal Source Impedance ⁽⁵⁾	-	800 Ω 49nH	-	Ω
Optimal Load Impedance ⁽⁵⁾	-	380 Ω 39.5nH	-	Ω

Notes:

1. All specifications are based on the test circuit shown below
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 manufacturing tolerances
4. Relative to insertion loss at 183.6 MHz
5. This is the complex conjugate of the unmatched filter's impedance resulting in maximum power transfer

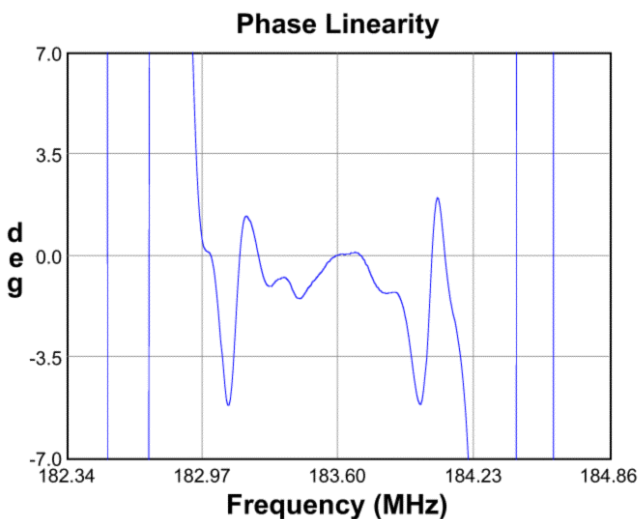
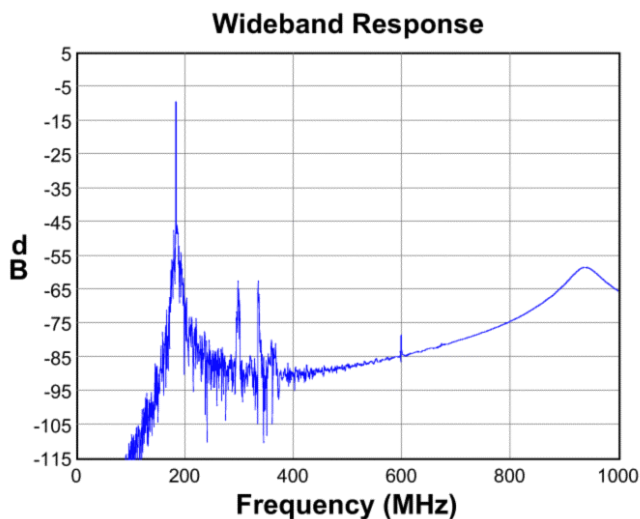
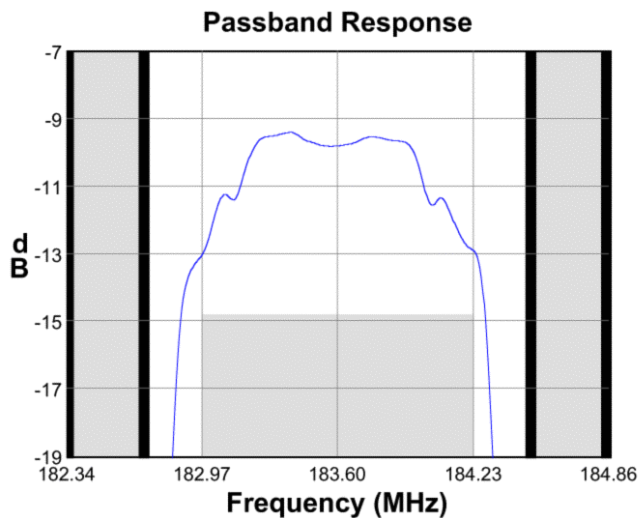
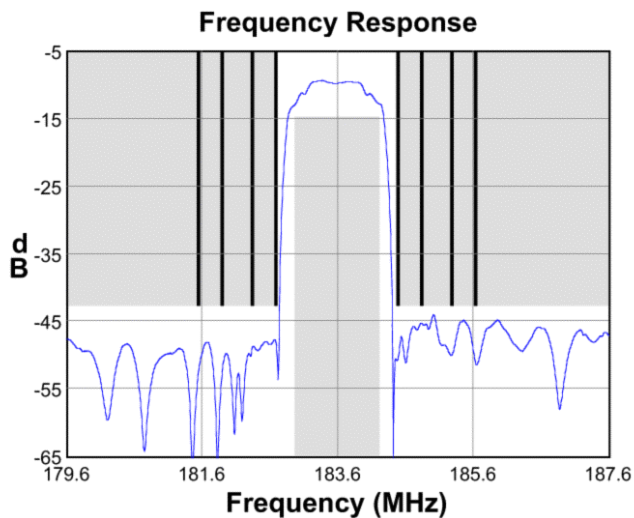
Test Circuit:

Actual matching values may vary due to PCB layout and parasitics

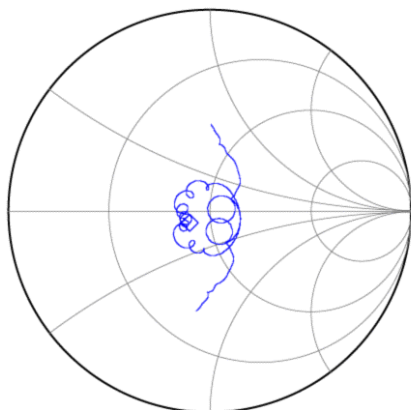


Data Sheet

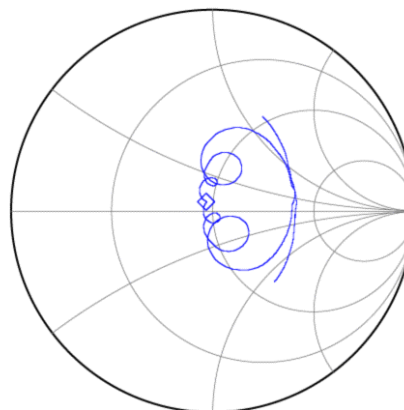
Typical Performance (at +25°C)



Input Smith Chart

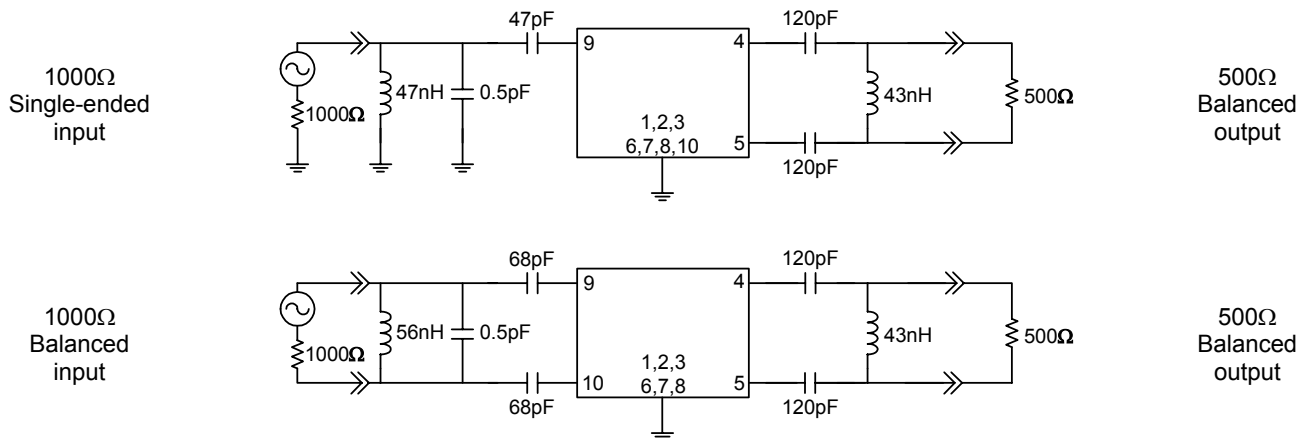


Output Smith Chart

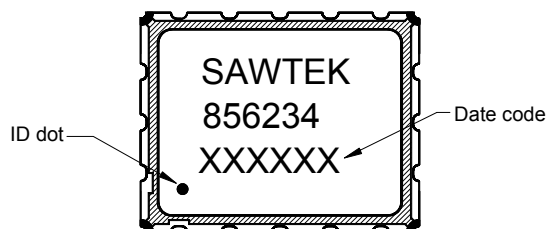


Data Sheet

Actual matching values may vary due to PCB layout and parasitics

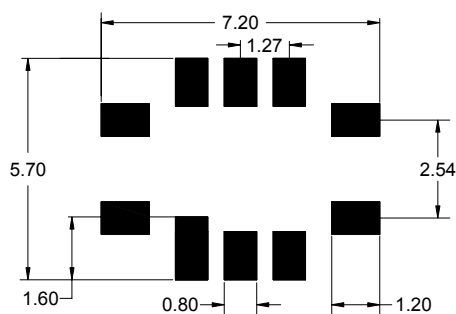


Marking



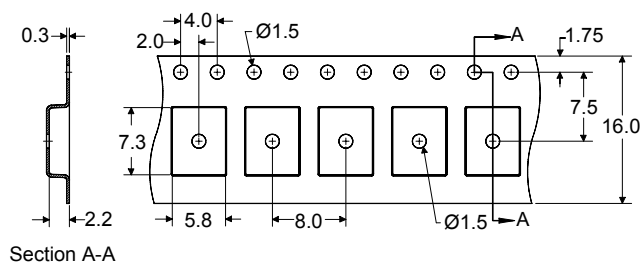
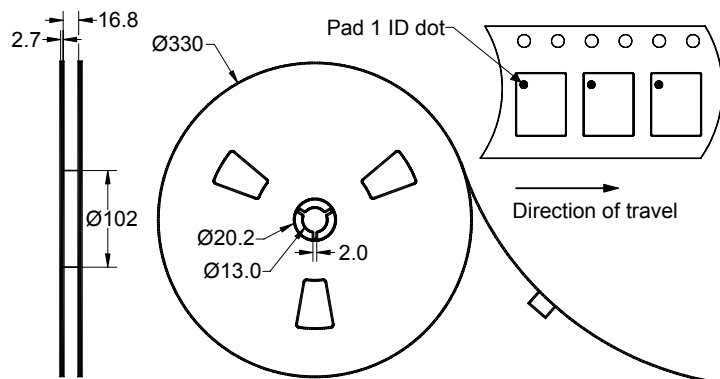
The date code consists of: day of the current year (Julian, 3 digits), last digit of the year (1 digit) and hour (2 digits)

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: 3000 units/reel

Data Sheet

Maximum Ratings

Parameter	Symbol	Minimum	Maximum	Unit
Operating Temperature Range	T	-30	+85	°C
Storage Temperature Range	T _{stg}	-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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Contact Information



PO Box 609501
Orlando, FL 32860-9501
USA

Phone: +1 (407) 886-8860
Fax: +1 (407) 886-7061
Email: custservice@sawtek.com
Web: www.sawtek.com

Or contact one of our worldwide
network of [sales offices](#),
[representatives or distributors](#)