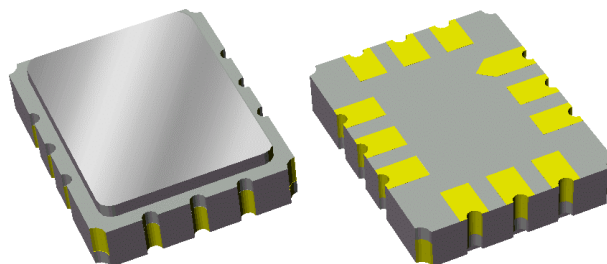


Preliminary Data Sheet

Part Number 855915
249.6 MHz SAW Filter

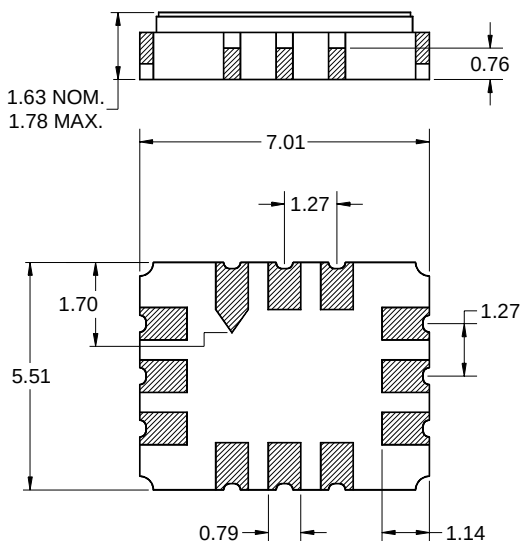
Features

- For 3G applications
- Usable bandwidth of 3.84 MHz
- High attenuation
- Single-ended operation at 50Ω
- Ceramic Surface Mount Package (SMP)
- Small size



Package

Surface Mount 7.01 x 5.51 x 1.63 mm

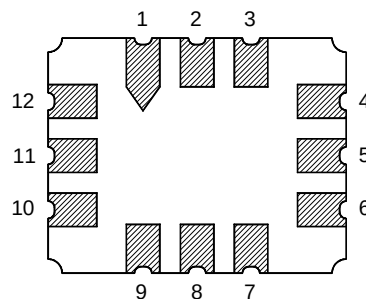


Dimensions shown are nominal in millimeters
All tolerances are ± 0.15 mm except overall
length and width ± 0.13 mm

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

Pin Configuration

Bottom View



Pin No.	Description
4	Output
10	Input
1,2,3,5,6	Case Ground
7,8,9,11,12	Case Ground

Preliminary Data Sheet

Electrical Specifications ⁽¹⁾

Temperature Range: ⁽²⁾ -10 to +80 °C

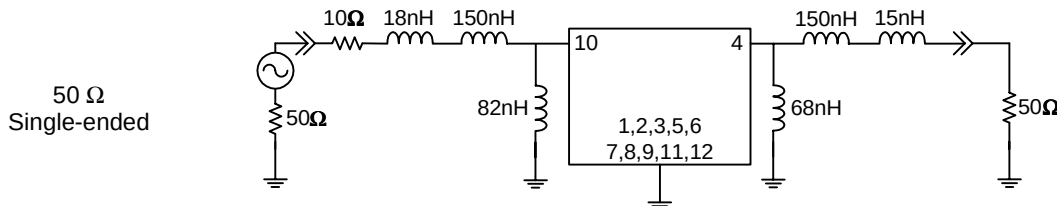
Parameter ⁽³⁾	Minimum	Typical	Maximum	Unit
Center Frequency	-	249.6	-	MHz
Maximum Insertion Loss at 249.6 MHz	-	16.11	20	dB
1 dB Lower Frequency	-	246.98	247.68	MHz
1 dB Upper Frequency	251.52	251.89	-	MHz
1 dB Bandwidth	3.84	4.89	5	MHz
40 dB Lower Frequency	244.1	244.27	-	MHz
40 dB Upper Frequency	-	254.41	255.1	MHz
40 dB Bandwidth	-	10.14	11	MHz
Passband Ripple 247.68 - 251.52 MHz	-	0.22	1	dB p-p
Group Delay Variation 247.68 - 251.52 MHz	-	27.15	50	nsec
Input VSWR 247.68 - 251.52 MHz	-	1.25:1	1.92:1	-
Output VSWR 247.68 - 251.52 MHz	-	1.34:1	1.92:1	-
Relative Attenuation 10 - 234.6 MHz	45	63.5	-	dB
264.6 - 450 MHz	45	55.63	-	dB
Source Impedance: ⁽⁴⁾	-	50	-	Ω
Load Impedance: ⁽⁴⁾	-	50	-	Ω

Notes:

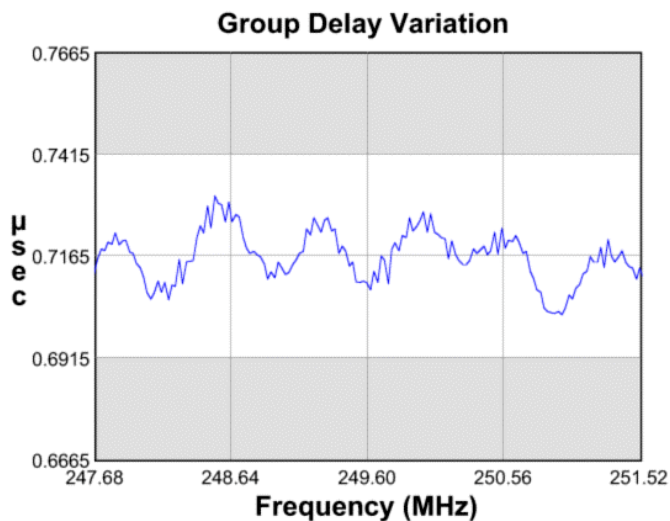
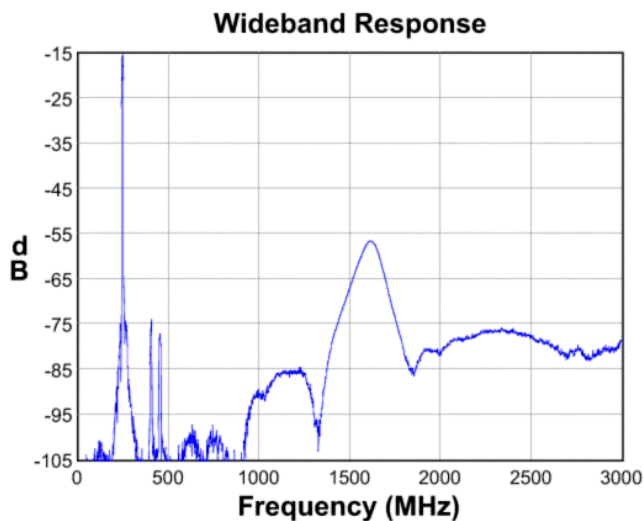
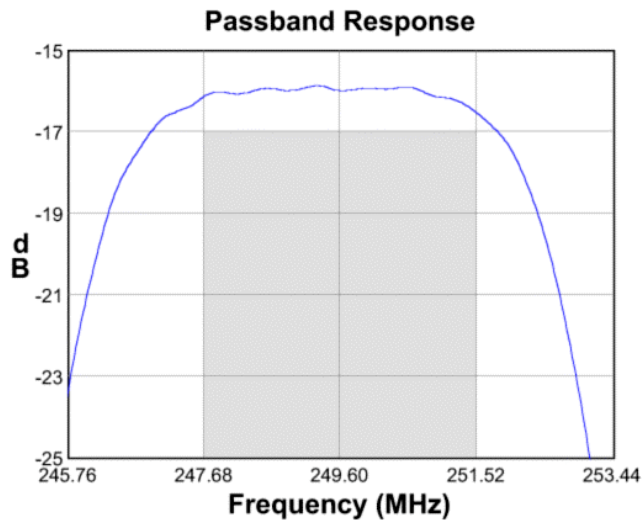
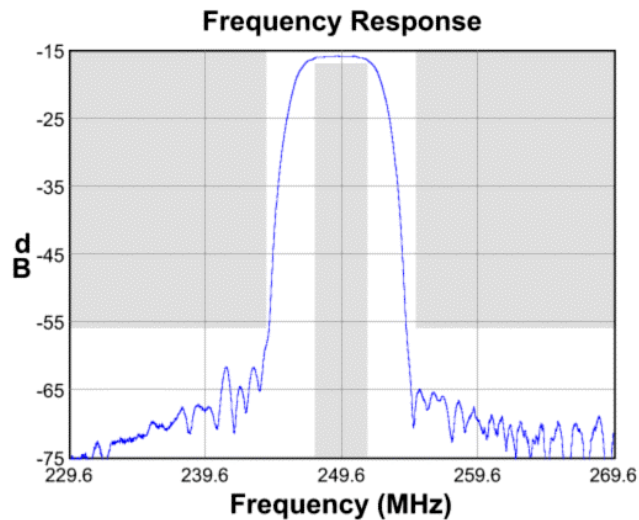
1. All specifications are based on the test circuit shown below
2. This specification is valid for room temperature only
3. Electrical margin has been built into the design to account for the variations due to manufacturing tolerances
4. This is the optimum impedance in order to achieve the performance shown

Test Circuit:

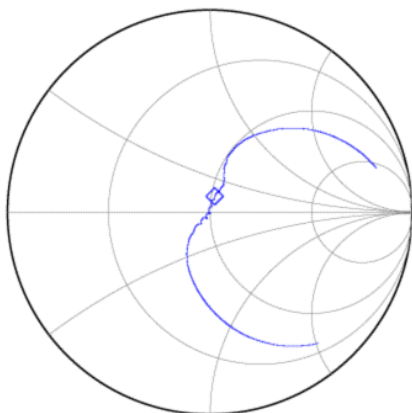
Actual matching values may vary due to PCB layout and parasitics



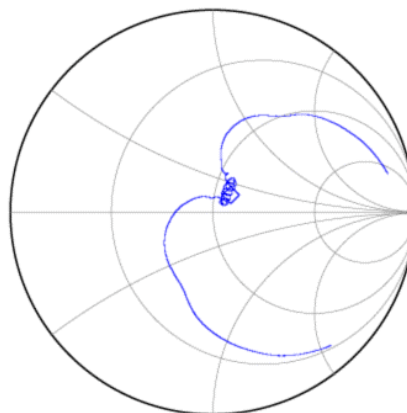
Typical Performance (at +25°C)



Input Smith Chart



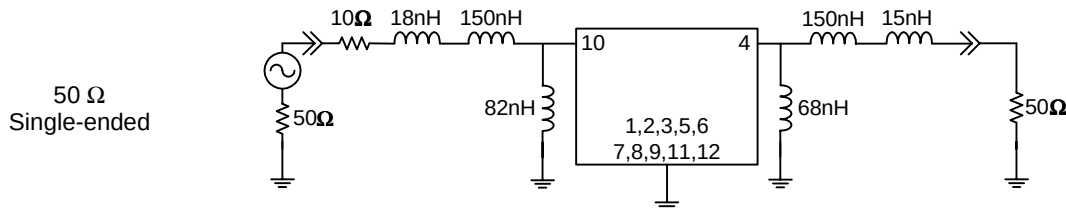
Output Smith Chart



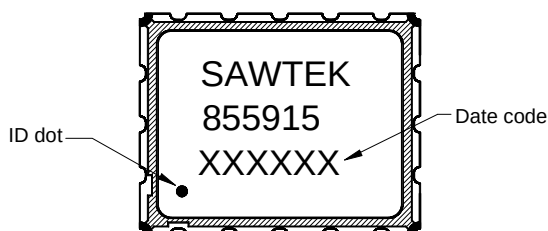
Preliminary Data Sheet

Matching Schematics

Actual matching values may vary due to PCB layout and parasitics

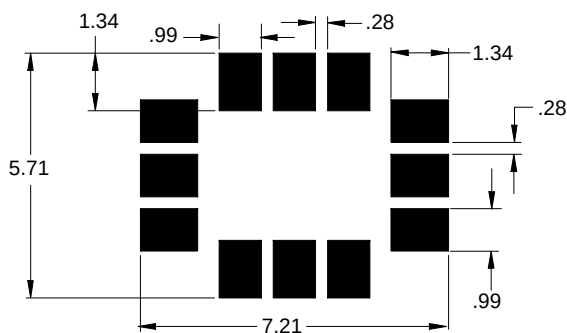


Marking



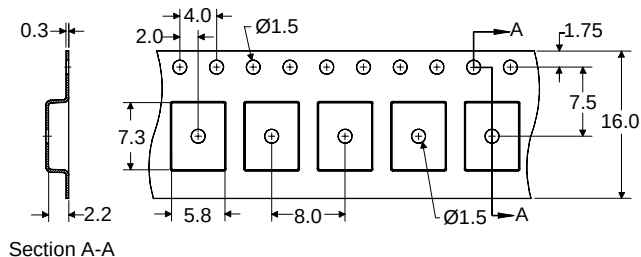
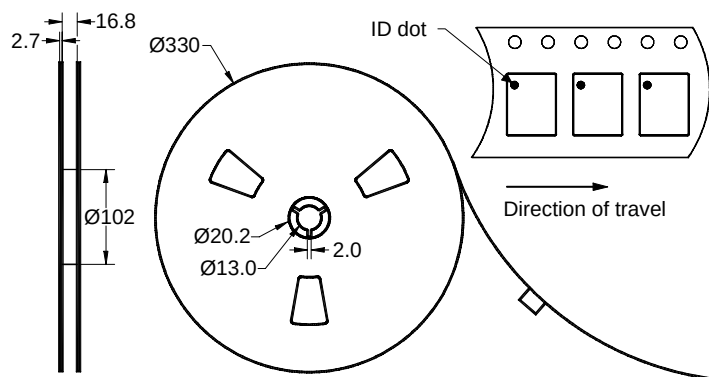
The date code consists of: day of the current year (Julian, 3 digits), last digit of the year (1 digit) and hour (2 digits)

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: 3000 units/reel

Preliminary Data Sheet

Maximum Ratings

Parameter	Symbol	Minimum	Maximum	Unit
Operating Temperature Range	T	-10	+80	°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](#)

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](#)