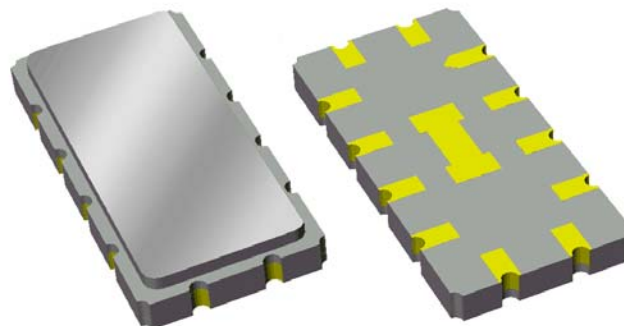


Data Sheet

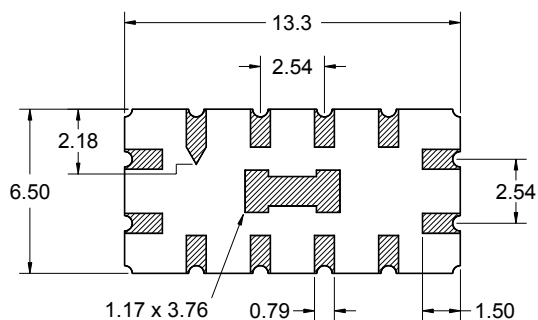
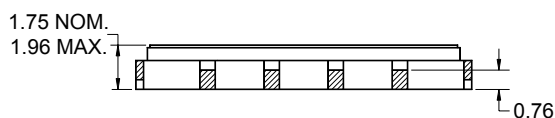
Features

- Usable bandwidth of 4 MHz
- Typical 3 dB bandwidth of 4.6 MHz
- Low loss
- High attenuation
- Single-ended operation, 50Ω
- Ceramic Surface Mount Package (SMP)
- Hermetic



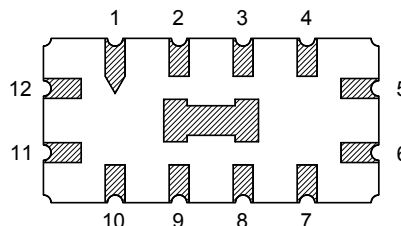
Package

Surface Mount 13.30 x 6.50 x 1.75 mm



Pin Configuration

Bottom View



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

Dimensions shown are nominal in millimeters
All tolerances are ± 0.15 mm except overall
length and width ± 0.10 mm

Body: Al_2O_3 ceramic

Lid: Kovar, Ni plated

Terminations: Au plating 0.5 - 1.0μm,
over a 2 - 6μm Ni plating

Data Sheet

Electrical Specifications ⁽¹⁾

Operating Temperature: ⁽²⁾ +25 °C

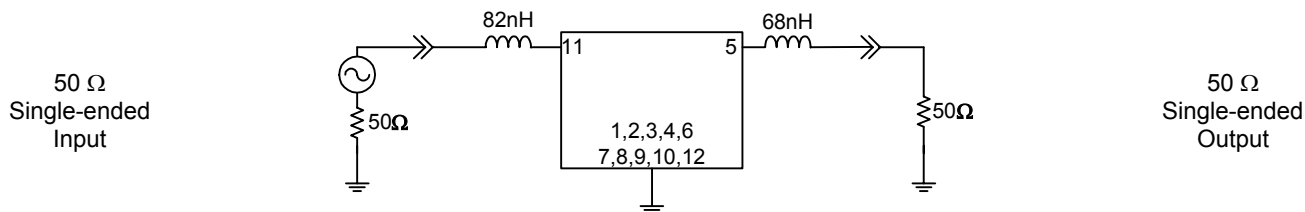
Parameter	Minimum	Typical	Maximum	Unit
Center Frequency	139.6	140	140.4	MHz
Insertion Loss at F ₀	-	10.85	12.5	dB
1 dB Bandwidth	3.4	3.9	-	MHz
3 dB Bandwidth	4	4.6	-	MHz
40 dB Bandwidth	-	7.46	9.1	MHz
Passband Ripple 138.4 - 141.6 MHz	-	0.42	1	dB
Phase Linearity 138.4 - 141.6 MHz	-	2	6	deg
Group Delay Variation 138.4 - 141.6 MHz	-	27	100	nsec
Absolute Delay	-	1.2	-	μsec
Temperature Coefficient	-	-23	-	ppm/°C
Source Impedance ⁽³⁾	-	50	-	Ω
Load Impedance ⁽³⁾	-	50	-	Ω

Notes:

1. All specifications are based on the test circuit shown below
2. All specifications are tested at room temperature only
3. This is the optimum impedance in order to achieve the performance shown

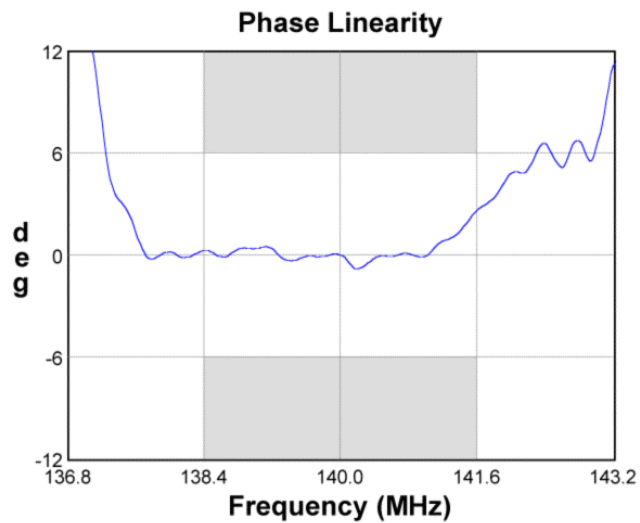
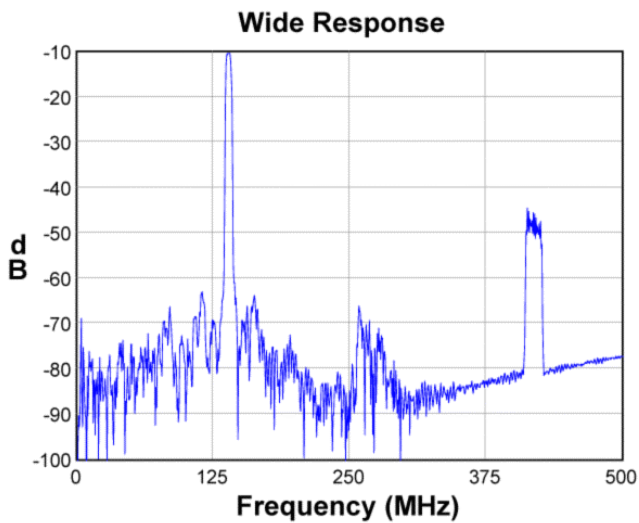
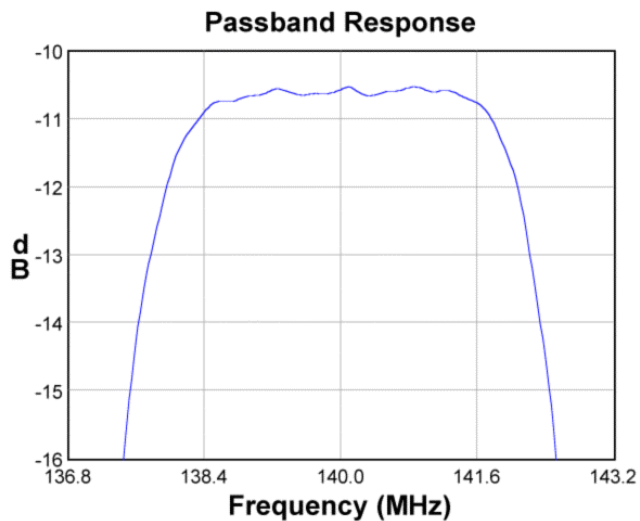
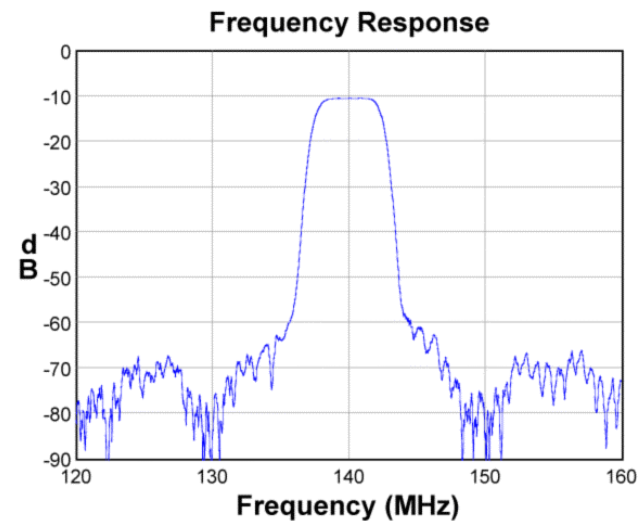
Test Circuit:

Actual matching values may vary due to PCB layout and parasitics

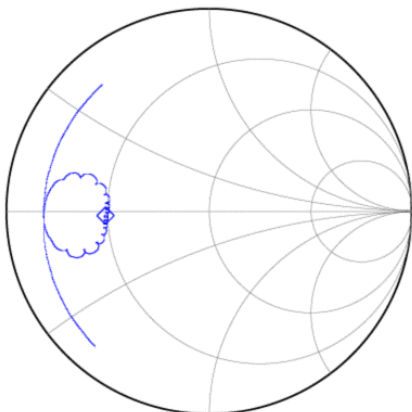


Data Sheet

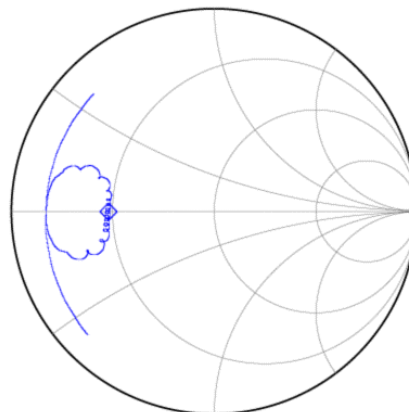
Typical Performance (at +25°C)



Input Smith Chart



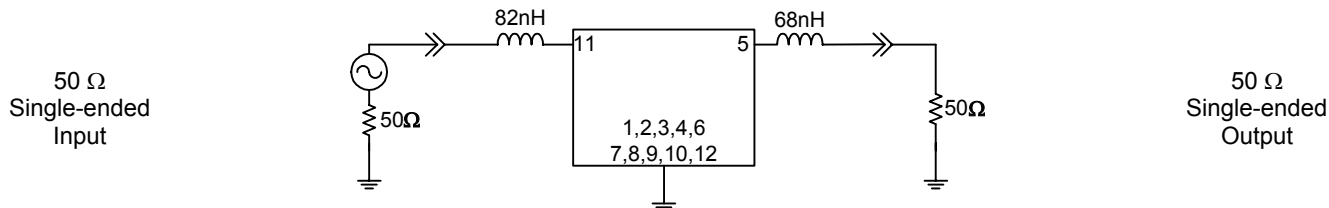
Output Smith Chart



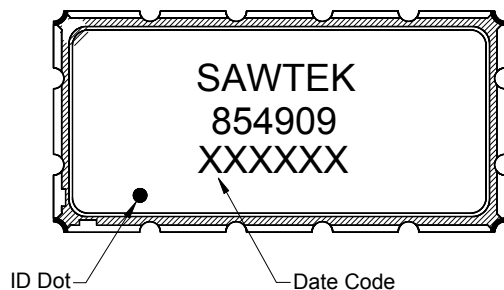
Data Sheet

Matching Schematics

Actual matching values may vary due to PCB layout and parasitics

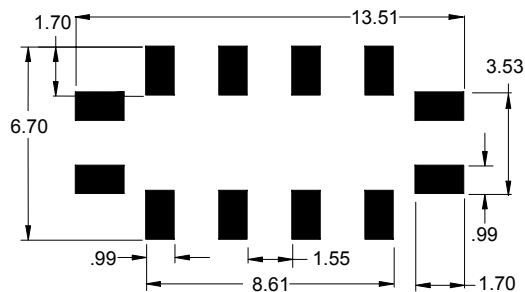


Marking



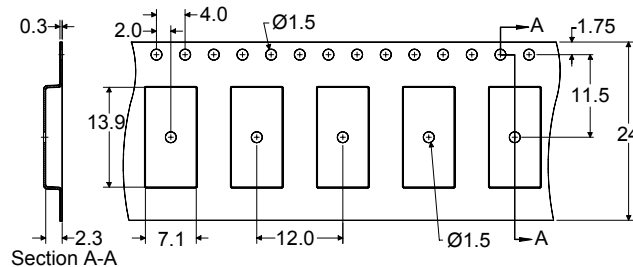
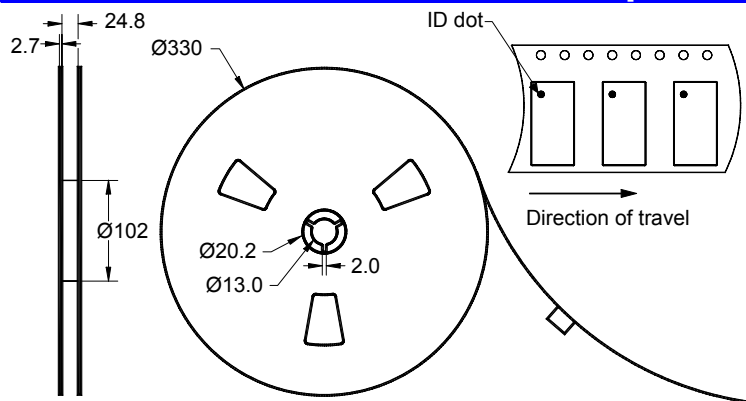
The date code consists of: day of the current year (Julian, 3 digits), last digit of the year (1 digit) and hour (2 digits)

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	Maximum	Unit
Storage Temperature Range	T _{stg}	-40	+85	° C

Warnings

- Electrostatic Sensitive Device (ESD)
- Avoid ultrasonic exposure



Material Content

- Does not contain lead (Pb) or other RoHS restricted materials

Links to Additional Technical Information

[PCB Layout Tips](#)[Qualification Flowchart](#)[Soldering Profile](#)[S-Parameters](#)[Other Technical Information](#)

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