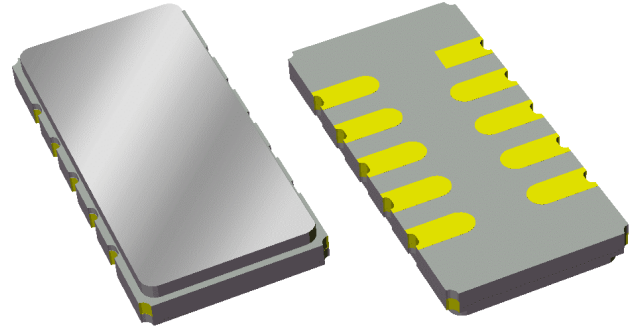


Preliminary Data Sheet

Features

- For broadband applications
- Typical 3 dB bandwidth of 14.1 MHz
- High attenuation
- No impedance matching required for operation at 50 Ω
- Single-ended operation
- Ceramic Surface Mount Package (SMP)
- Small size
- Replaces Sawtek P/N 851925 (BW 3dB=14 MHz)

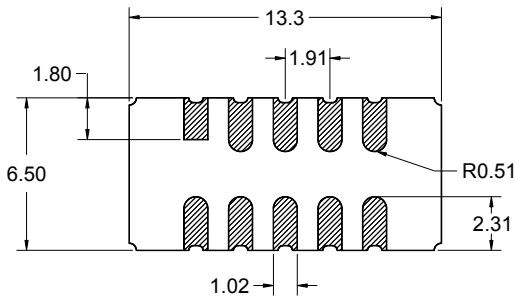
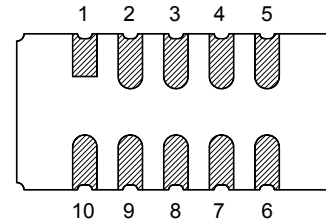
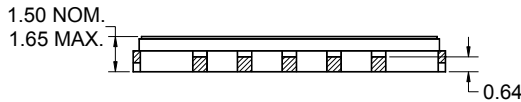


Package

Surface Mount 13.30 x 6.50 x 1.50 mm

Pin Configuration

Bottom View



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

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

Body: Al_2O_3 ceramic
 Lid: Kovar, Ni plated
 Terminations: Au plating 0.5 - 1.0µm,
 over a 2 - 6µm Ni plating

Preliminary Data Sheet

Electrical Specifications ⁽¹⁾

Operating Temperature Range: ⁽²⁾ 0 to +70 °C

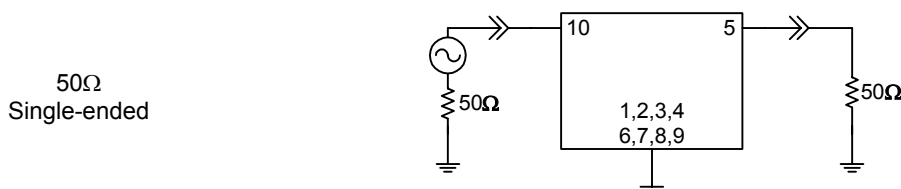
Parameter ⁽³⁾	Minimum	Typical	Maximum	Unit
Center Frequency	-	140	-	MHz
Minimum Insertion Loss	-	23.3	24.5	dB
Lower 1 dB Bandedge ⁽⁴⁾	-	133.26	134.11	MHz
Upper 1 dB Bandedge	145.89	146.67	-	MHz
Lower 3 dB Bandedge ⁽⁴⁾	-	132.93	133.77	MHz
Upper 3 dB Bandedge	146.23	147.00	-	MHz
Lower 40 dB Bandedge ⁽⁴⁾	130.87	131.58	-	MHz
Upper 40 dB Bandedge	-	148.33	149.13	MHz
Amplitude Variation 134.11 - 145.89 MHz	-	0.31	0.70	dB
Phase Linearity 134.11 - 145.89 MHz	-	2.06	6.00	deg
Group Delay Variation 134.11 - 145.89 MHz	-	27	55	nsec
Absolute Delay	-	1.50	-	μsec
Relative Attenuation ⁽⁴⁾				
15 - 50 MHz	42	49	-	dB
50 - 127 MHz	48	55	-	dB
156 - 240 MHz	48	53	-	dB
240 - 290 MHz	43	49	-	dB
290 - 310 MHz	42	48	-	dB
310 - 350 MHz	44	48	-	dB
Source Impedance ⁽⁵⁾	-	50	-	Ω
Load Impedance ⁽⁵⁾	-	50	-	Ω
Substrate Material	-	YZ LiNbO ₃	-	-
Temperature Coefficient of Frequency	-	-94	-	ppm/°C

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 temperature drift and manufacturing tolerances
- All attenuation measurements are measured relative to minimum insertion loss
- This is the optimum impedance in order to achieve the performance shown

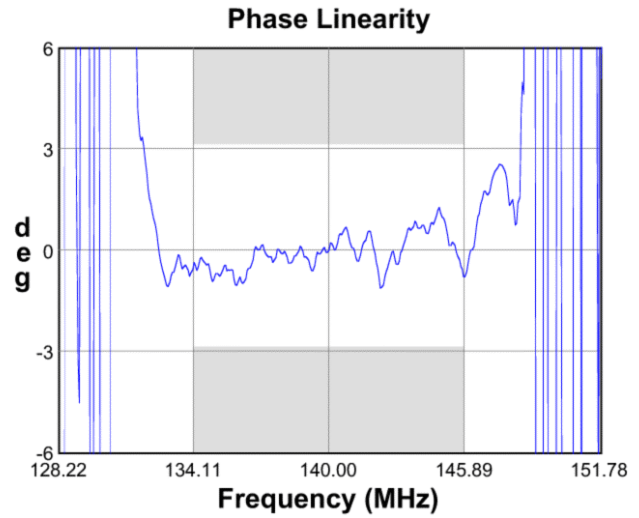
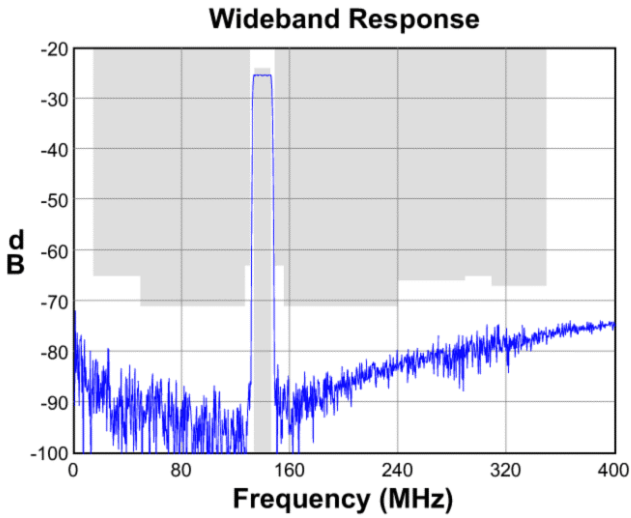
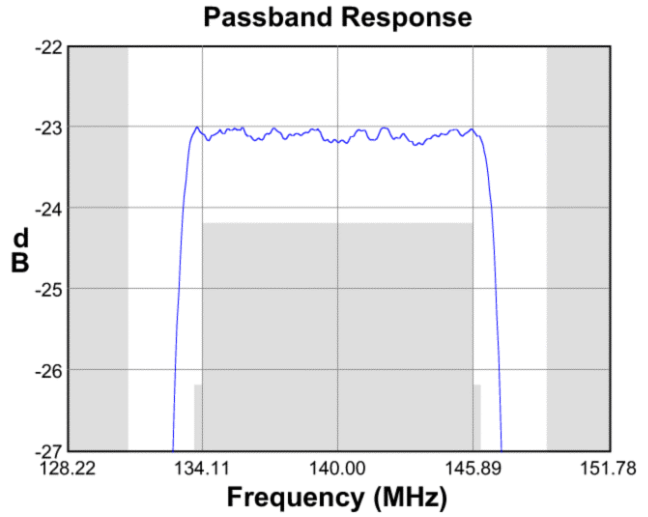
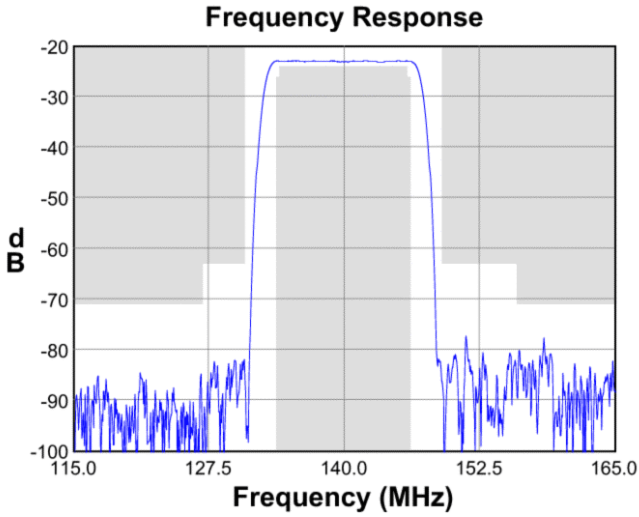
Test Circuit:

Actual matching values may vary due to PCB layout and parasitics

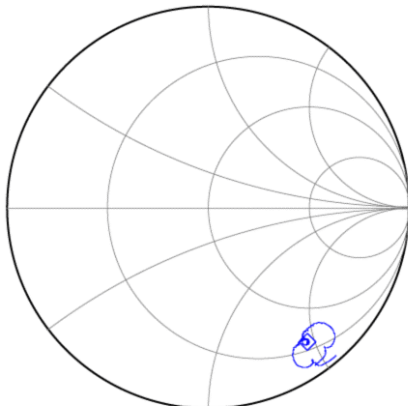


Preliminary Data Sheet

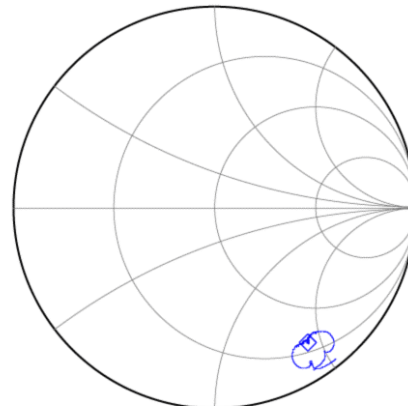
Typical Performance (at +25°C)



Input Smith Chart



Output Smith Chart

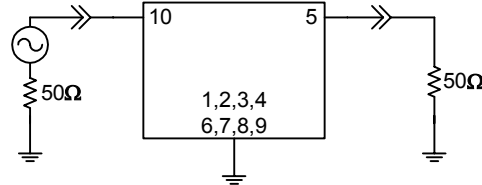


Preliminary Data Sheet

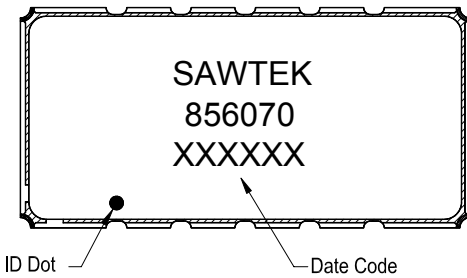
Matching Schematics

Actual matching values may vary due to PCB layout and parasitics

50Ω
Single-ended

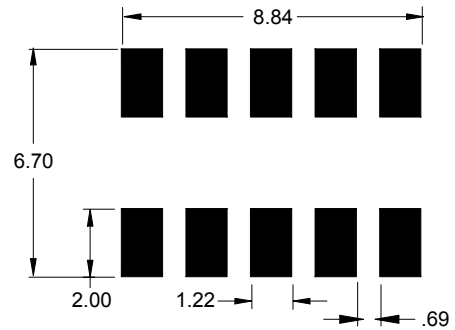


Marking



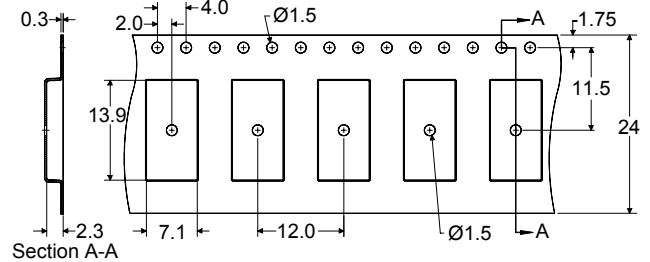
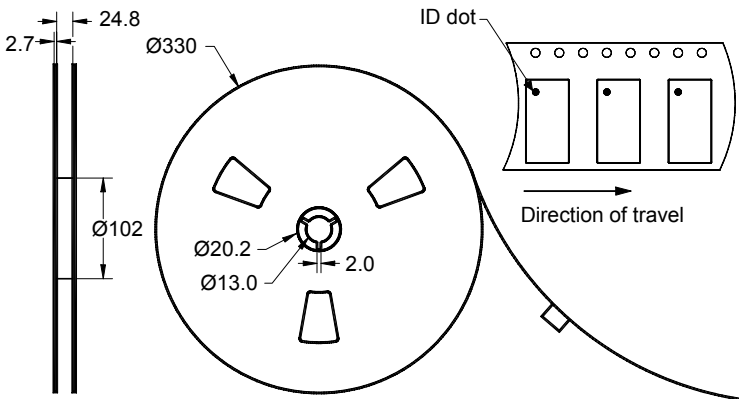
The date code consists of: day of the current year (Julian, 3 digits), last digit of the year (1 digit) and hour (2 digits)

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

Preliminary Data Sheet

Maximum Ratings

Parameter	Symbol	Minimum	Typical	Maximum	Unit
Operating Temperature Range	T	0	+25	+70	°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](#)

Sawtek's liability is limited only to the Surface Acoustic Wave (SAW) component(s) described in this data sheet. Sawtek does not accept any liability for applications, processes, circuits or assemblies which are implemented using any Sawtek component described in this data sheet.

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[representatives or distributors](#)