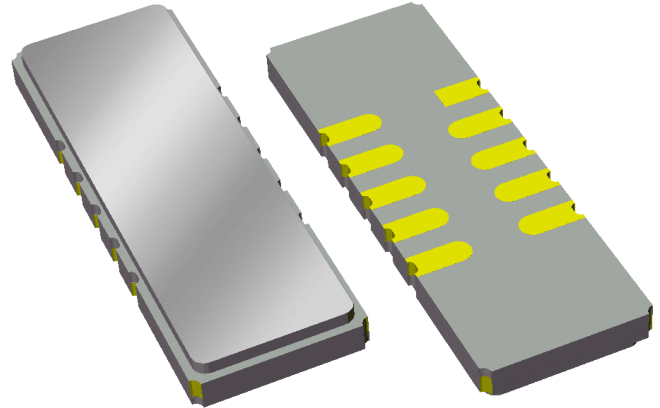


Preliminary Data Sheet

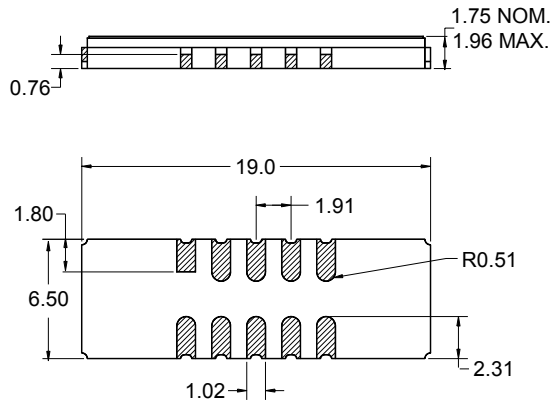
Features

- For broadband applications
- Typical 3 dB bandwidth of 5.7 MHz
- High attenuation
- Single-ended operation
- Ceramic Surface Mount Package (SMP)
- Small size
- Replaces Sawtek P/N 851553 (BW 3dB=5.5 MHz)



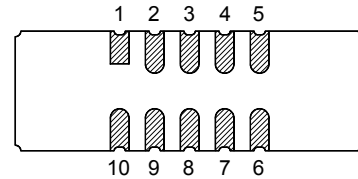
Package

Surface Mount 19.00 x 6.50 x 1.75 mm



Pin Configuration

Bottom View



Pin No.	Description
5	RF output
10	RF input
1,6	Ground
2,3,4	Case ground
7,8,9	Case ground

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

Preliminary Data Sheet

Electrical Specifications ⁽¹⁾

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

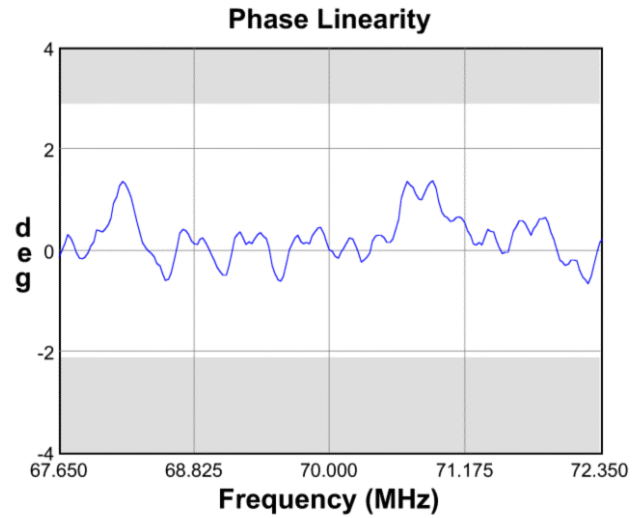
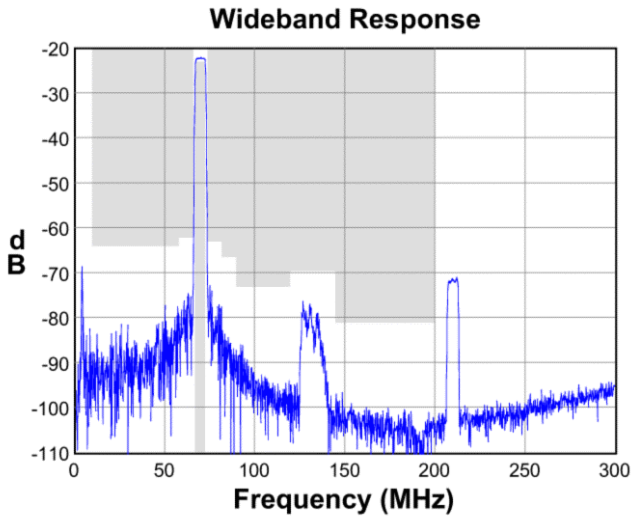
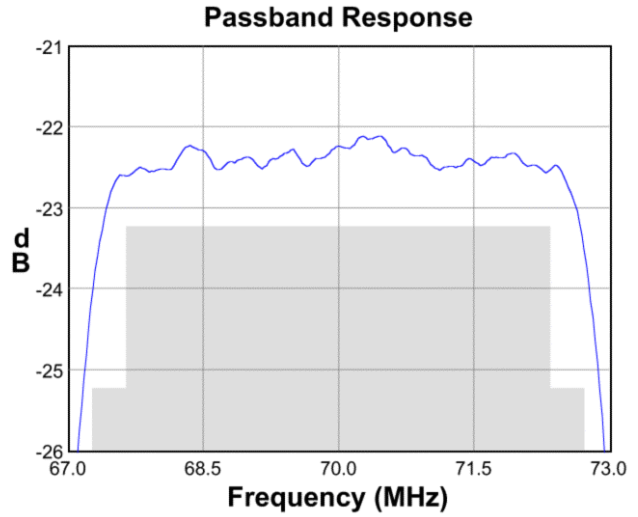
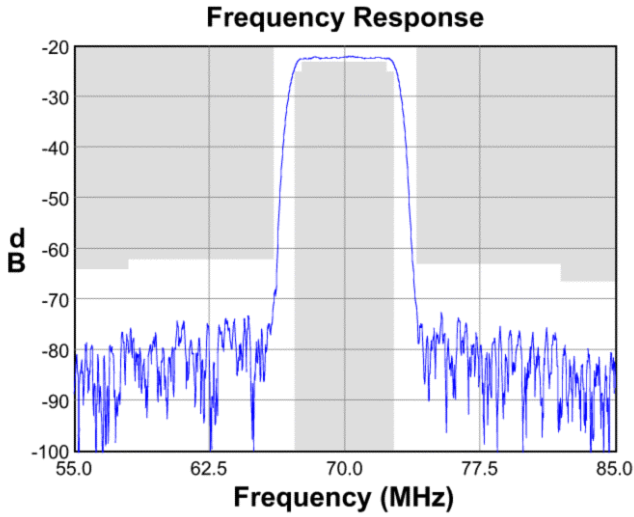
Parameter ⁽³⁾	Minimum	Typical	Maximum	Unit
Center Frequency	-	70	-	MHz
Minimum Insertion Loss	-	22.2	24	dB
Lower 1 dB Bandedge ⁽⁴⁾	-	67.45	67.65	MHz
Upper 1 dB Bandedge	72.35	72.66	-	MHz
Lower 3 dB Bandedge ⁽⁴⁾	-	67.17	67.27	MHz
Upper 3 dB Bandedge	72.73	72.89	-	MHz
Lower 40 dB Bandedge ⁽⁴⁾	66.08	66.28	-	MHz
Upper 40 dB Bandedge	-	73.76	73.92	MHz
Amplitude Variation 67.65 - 72.35 MHz	-	0.61	1.1	dB p-p
Phase Linearity 67.65 - 72.35 MHz	-	2.6	5.0	deg p-p
Group Delay Variation 67.65 - 72.35 MHz	-	55.7	110	nsec
Absolute Delay	-	2.065	-	μsec
Relative Attenuation ⁽⁴⁾				
10 - 58 MHz	42.0	55	-	dB
58 - 66 MHz	37.0	47	-	dB
74 - 82 MHz	41.0	47	-	dB
82 - 90 MHz	44.5	54	-	dB
90 - 120 MHz	51.0	60	-	dB
120 - 145 MHz	47.5	54	-	dB
145 - 200 MHz	59.0	65	-	dB
Source Impedance: ⁽⁵⁾	-	50	-	Ω
Load Impedance: ⁽⁵⁾	-	50	-	Ω
Substrate Material	-	LiTaO ₃	-	-
Temperature Coefficient of Frequency	-	-23	-	ppm/°C

Notes:

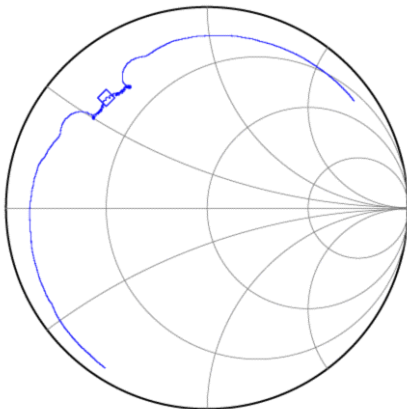
1. All specifications are based on the matching schematic shown on page 4
2. In production, devices will be tested at room temperature to a guardbanded specification to ensure electrical compliance over temperature
3. Electrical margin has been built into the design to account for the variations due to temperature drift and manufacturing tolerances
4. All attenuation measurements are measured relative to minimum insertion loss
5. This is the optimum impedance in order to achieve the performance shown

Preliminary Data Sheet

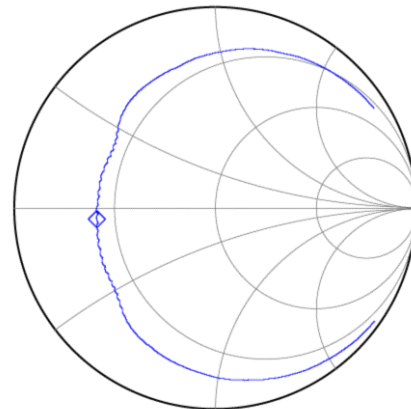
Typical Performance (at +25°C)



Input Smith Chart



Output Smith Chart




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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