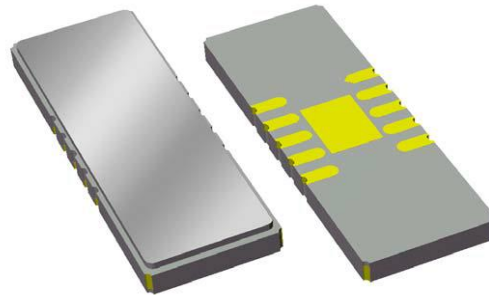


Applications

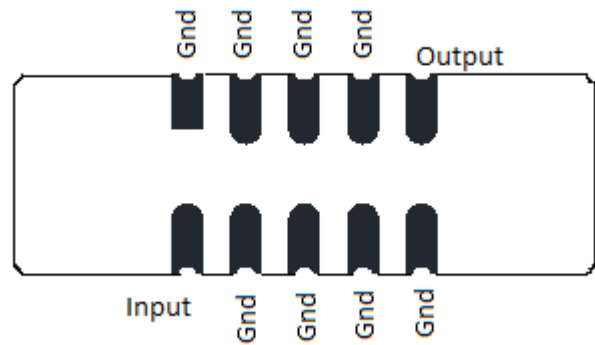
- For broadband applications



Product Features

- High Attenuation
- Typical 3 dB bandwidth of 2.2 MHz
- Single-ended operation
- Matching required for operation at 50 Ω
- Replaces Sawtek P/N 851546 (BW 3 dB =2.0 MHz)
- Ceramic Surface Mount Package (SMP)
- Hermetically sealed

Functional Block Diagram



General Description

The 855739 is a 70 MHz, SAW-based IF Filter. It's High Selectivity makes it an excellent choice for a wide range of applications such as instrumentation, test and measurement, military, terrestrial microwave and Network Infrastructure. 855739 has a single-ended input and output and comes in an industry standard hermetically sealed surface mount package that is RoHS compliant and Pb-free.

Pin Configuration

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

Ordering Information

Part No.	Description
855739	Packaged part
855739-EVB	Evaluation board

Standard T/R size = 1,000 units/reel

Absolute Maximum Ratings

Parameter	Rating
Storage Temperature ⁽¹⁾	- 40 to + 85 ° C
Operating Temperature ⁽¹⁾	0 to + 70 ° C

1. Operation of this device outside the parameter ranges given may cause permanent damage

Electrical Specifications ⁽¹⁾

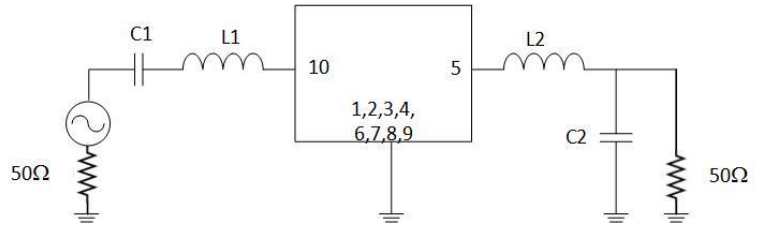
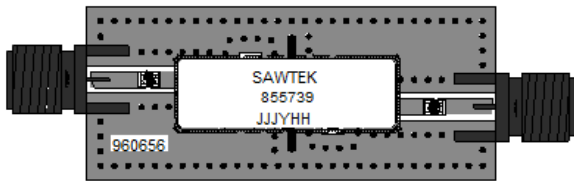
Operating Temperature Range ⁽²⁾ 0 ° C to + 70 ° C.

Parameter ⁽³⁾	Conditions	Min	Typ ⁽³⁾	Max	Units
Center Frequency		-	70	-	MHz
Minimum Insertion Loss		-	23	24.25	dB
Lower 1 dB Bandedge ⁽⁴⁾ Upper 1 dB Bandedge		- 70.87	69 71	69.13 -	MHz
Lower 3 dB Bandedge ⁽⁴⁾ Upper 3 dB Bandedge		- 71.06	68.9 71.1	68.94 -	MHz
Lower 40 dB Bandedge ⁽⁴⁾ Upper 40 dB Bandedge		68.21 -	68.3 71.7	- 71.79	MHz
Amplitude Variation	69.35 – 70.65 MHz	-	0.6	1	dB p-p
Phase Linearity	69.35 – 70.65 MHz	-	1.7	3	Deg p-p
Group Delay Variation	69.35 – 70.65 MHz	-	70	110	nsec
Absolute Delay	-	-	2.3	-	µs
⁽⁴⁾ Relative Attenuation	10.00 – 67.75 MHz 72.25 – 125.00 MHz 125.00 – 145.00 MHz 145.00 – 200.00 MHz	50 50 45 50	60 60 50 60	- - - -	dB
Source Impedance ⁽⁵⁾		-	50	-	Ω
Load Impedance ⁽⁵⁾		-	50	-	Ω
Substrate		-	LiTaO ₃	-	-
Temperature Coefficient of Frequency		-	23	-	Ppm/° C

Notes:

1. All specifications are based on the TriQuint schematic shown on page 3
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.

Evaluation Board



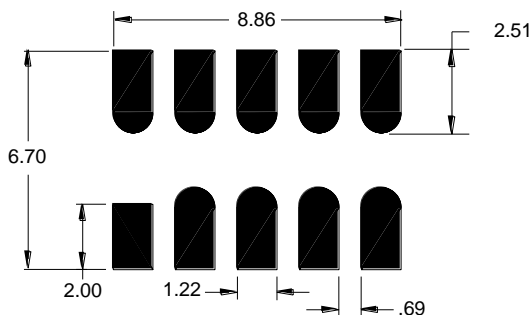
Notes:

1. Matching component values shown are for the specified TriQuint evaluation board. Value adjustment may be required in end user product circuits depending on component manufacturer and PCB material.
2. PCB: 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

Bill of Material

Reference Des.	Value	Description	Manuf.	Part Number
L1	680 nH	Coil Wire-wound,805CS	Coilcraft	0805CS-681NXJBC
L2	39 nH	Coil Wire-wound, 805CS	Coilcraft	0805CS-390NXJBC
C1	9 pF	Ceramic Chip, 805	Murata	GRM40COG090J50V
C2	120 pF	Ceramic Chip, 805	Murata	GRM40COG121J50V
SMA	N/A	SMA connector	Radiall USA	9602-1111-018
PCB	N/A	3-layer	Multiple	960656

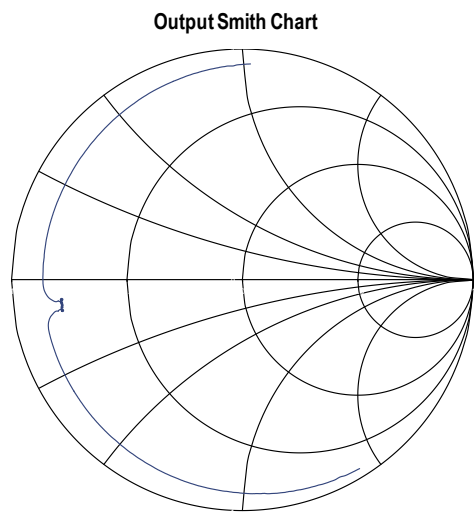
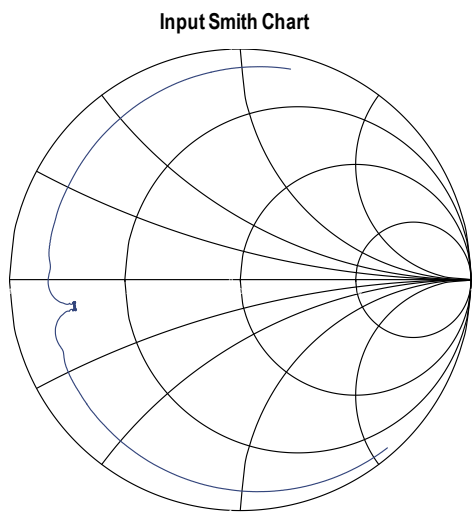
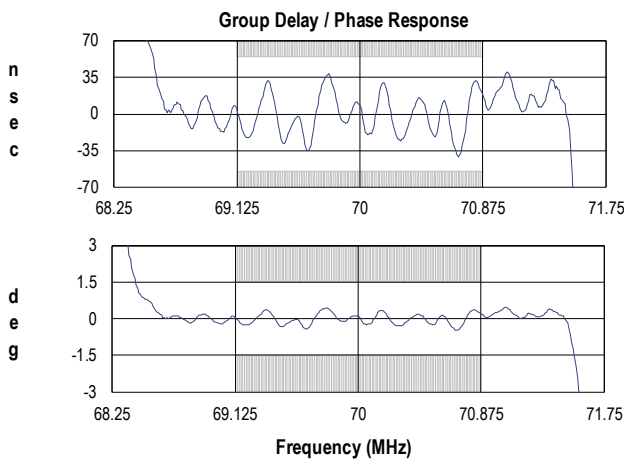
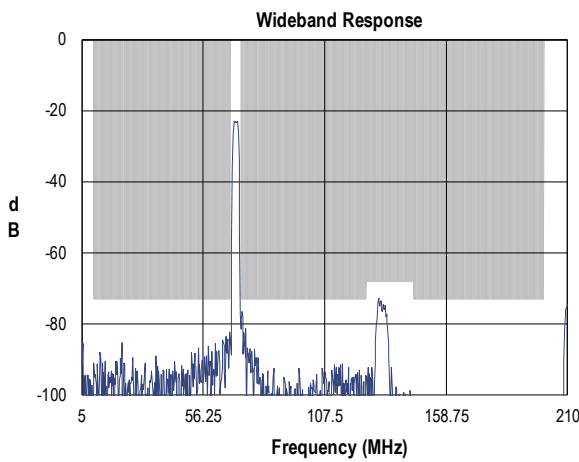
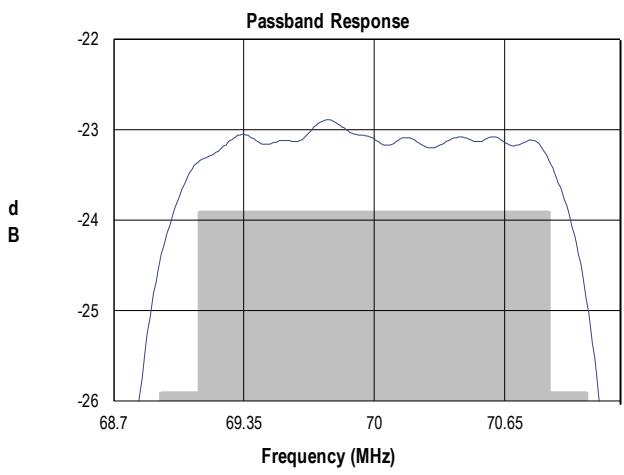
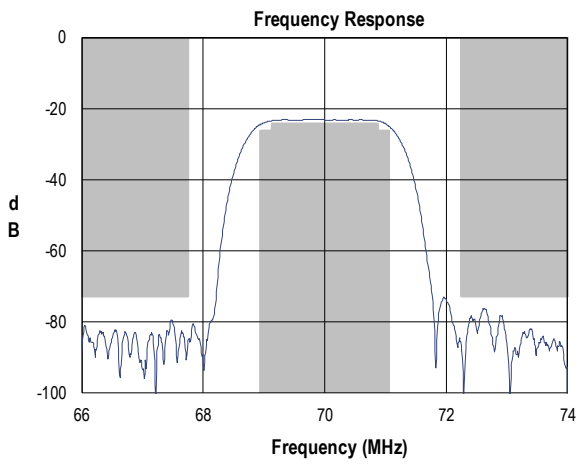
PCB Mounting Pattern



Notes:

1. All dimensions are in millimeters. Angles are in degrees.
2. This drawing specifies the mounting pattern used on the TriQuint evaluation board for this product. Some modification may be necessary to suit end user assembly materials and processes.

Performance Plots



Package Information, Marking and Dimensions

Package Style: SMP-75B
 Dimensions: 19.00 x 6.50 x 1.75 mm

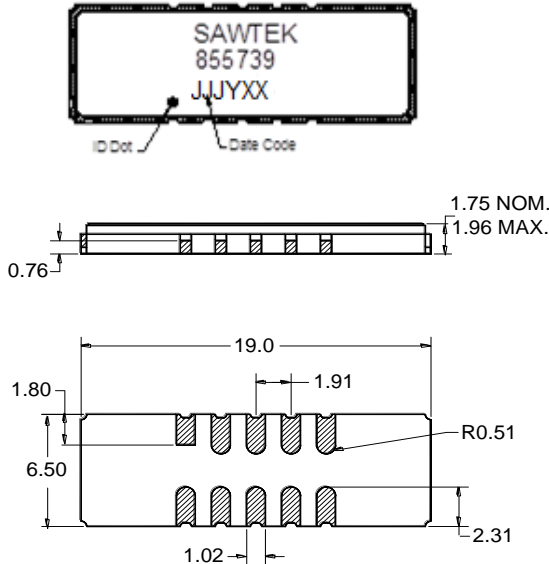
Body: Al_2O_3 ceramic
 Lid: Kovar, Ni plated
 Terminations: Au plating 0.5 - 1.0 μ m, over a 2-6 μ m Ni plating

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

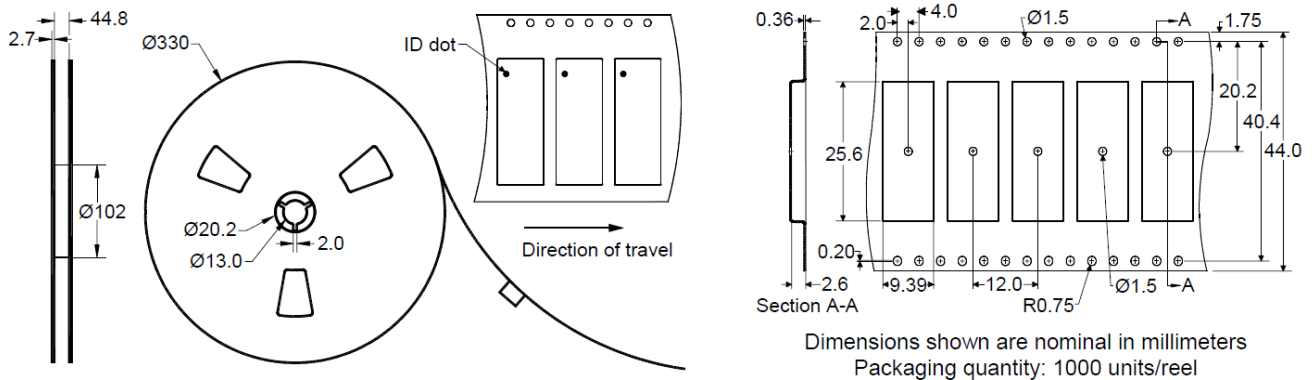
The date code consists of day of the current year (Julian, 3 digits), Y = last digit of the year, and X = The hour of the day military (2 digits)

Notes:

1. All dimensions shown are typical in millimeters
2. An ink stamp "PROTO" may be added after laser marking for prototypes.
3. Add the letter C after the date code for parts produced in Costa Rica.



Tape and Reel information



Dimensions shown are nominal in millimeters
 Packaging quantity: 1000 units/reel

Standard T/R size = 1000 units/reel. All dimensions are in millimeters.

Product Compliance Information

ESD Sensitivity Ratings



Caution! ESD-Sensitive Device

ESD Class: TBD
Test: Human Body Model (HBM)
Standard: JEDEC JS-001

ESD Class: TBD
Test: Charge Device Model (CDM)
Standard: JEDEC JES-002

MSL Rating

Not applicable. Hermetic package

Solderability

Compatible with both lead-free (260°C maximum reflow temperature) and tin/lead (245°C maximum reflow temperature) soldering processes.

Refer to [Soldering Profile](#) for recommended guidelines.

RoHS Compliance

This part is compliant with EU 2002/95/EC RoHS directive (Restrictions on the Use of Certain Hazardous Substances in Electrical and Electronic Equipment).

This product also has the following attributes:

- Halogen Free (Chlorine, Bromine)
- Antimony Free
- TBBP-A (C₁₅H₁₂Br₄O₂) Free
- PFOS Free
- SVHC Free

Contact Information

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Tel: 877-800-8584

For information about the merger of RFMD and TriQuint as Qorvo:

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For technical questions and application information:

Email: flapplication.engineering@tqs.com

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