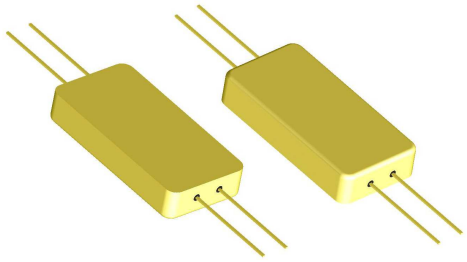
857162

1000 MHz SAW Non Dispersive Delay Line

Applications

- RADAR processing and simulation
- EW receivers
- Communication systems



Product Features

- Usable bandwidth 600 MHz
- Low amplitude variation
- No matching required for 50 ohm environment
- Single-ended operation
- Kovar 4 pin flatpack
- Small Size
- Dimensions: 1 x 0.5 x 0.2 in.

Functional Block Diagram

Top view

General Description

The 857162 is a high-performance non-dispersive SAW delay line with a center frequency of 1000 MHz and a usable bandwidth of 600 MHz. It is suitable for a wide variety of applications, including RADAR and EW receivers.

It features wide bandwidth with excellent attenuation, and is designed to be used with a single ended input and output.

Pin Configuration

Pin # SE	Description
1	Input
2	Input Return
3	Output
4	Output Return

Ordering Information

Part No.	Description
857162	packaged part

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Specifications

Electrical Specifications [1]

Specified Temperature Range: [2] -55 to +85 ºC

Parameter [3]	Conditions	Min	Typical [4]	Max	Units
Center Frequency		-	1000	-	MHz
Insertion Loss	700 – 1300 MHz	-	30	34	dB
3 dB Bandwidth		675	700	-	MHz
Amplitude Variation [5]	700 – 1300 MHz	-	1.1	2.5	dB
Absolute Delay		-	1.5	-	µs
Absolute Attenuation [6]	10 – 450 MHz	70	82	-	dB
	1625 – 2000 MHz	70	76	-	dB
Input VSWR	700 – 1300 MHz	-	4.75:1	5.5:1	
Output VSWR	700 – 1300 MHz	-	4.85:1	5.5:1	
Source Impedance (single-ended) [7]		-	50	-	Ω
Load Impedance (single-ended) [7]		-	50	-	Ω

Notes:
1. All specifications are based on the TriQuint schematic for the main reference design 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. Typical values are based on average measurements at room temperature.
5. Is defined as the difference between the maximum and minimum loss within the specified frequency range.
6. Relative to 0 dB.
7. This is the optimum impedance in order to achieve the performance shown.

Absolute Maximum Ratings

Parameter	Rating
Operating Temperature	-55 to +85 °C
Storage Temperature	-55 to +105 °C

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

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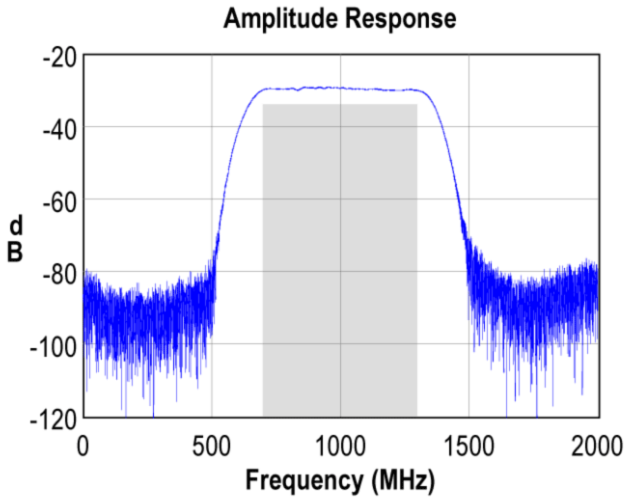
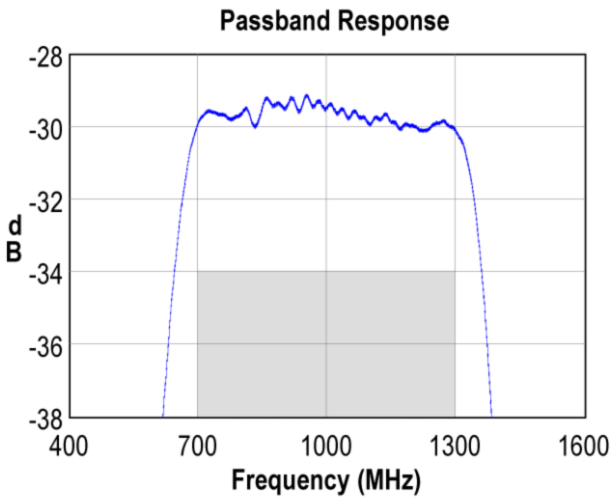
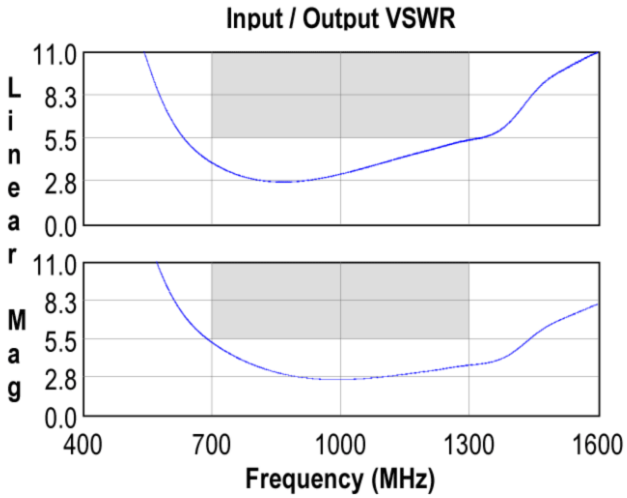
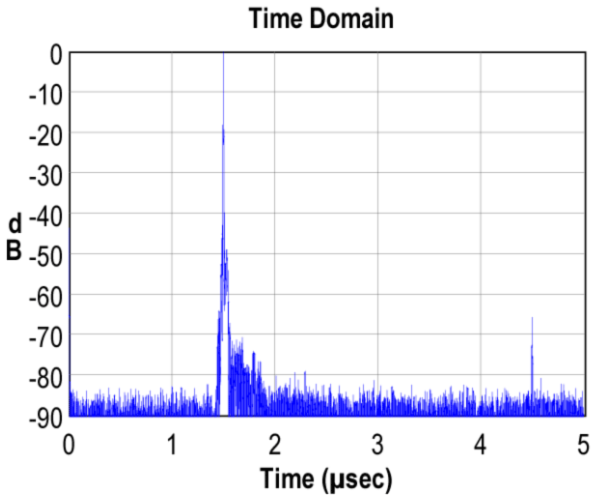
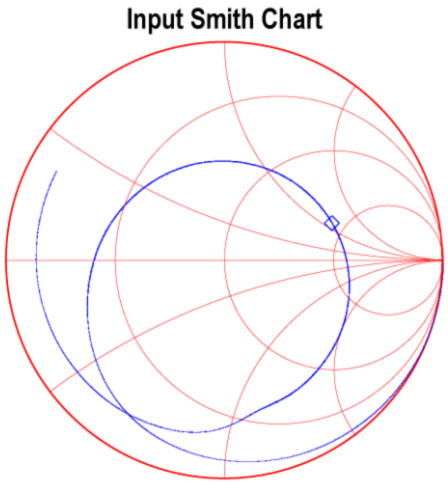
Typical Performance (at room temperature)

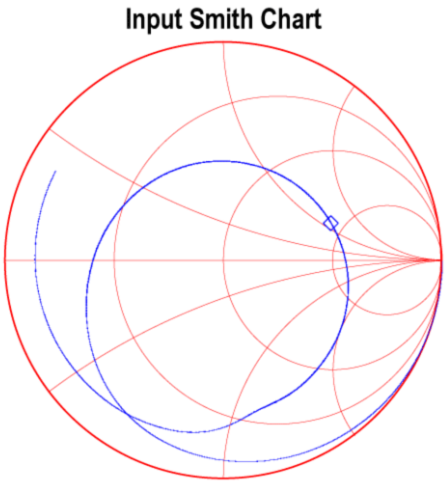












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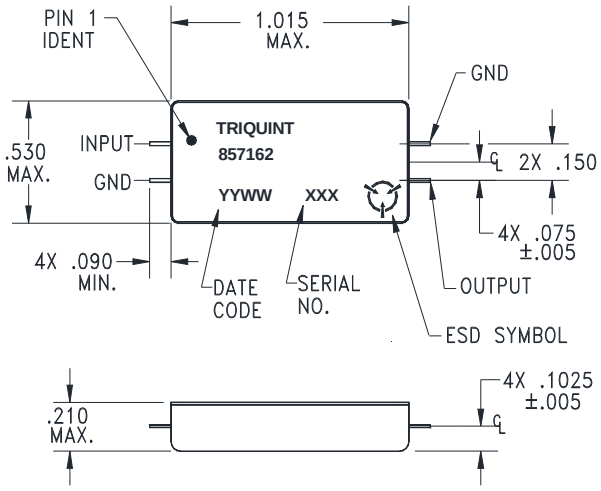
Mechanical Information

Package Information, Dimensions and Marking



Package Style: 4-Pin FlatPack
Dimensions: 1 x 0.5 x 0.2 in. typical

Package and Leads: Au over Ni over Kovar

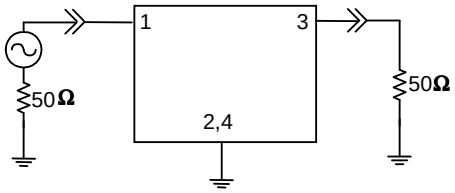
All dimensions shown are nominal in inches

The date code consists of:
last 2 digits of the year (2 digit) and work week (2 digits)

Reference Design – 50Ω SE Input, 50Ω SE Output

Schematic

50 Ω
Single-ended
Input



50 Ω
Single-ended
Output

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Product Compliance Information

ESD Information

Caution! ESD-Sensitive Device

ESD Rating: TBD
Test: Human Body Model (HBM)
Standard: JEDEC Standard JESD22-A114

ESD Rating: TBD
Test: Machine Model (MM)
Standard: JEDEC Standard JESD22-A115

MSL Rating

Devices are Hermetic, therefore MSL is not applicable.

Solderability

Compatible with SN63 solder.

Contact Information

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