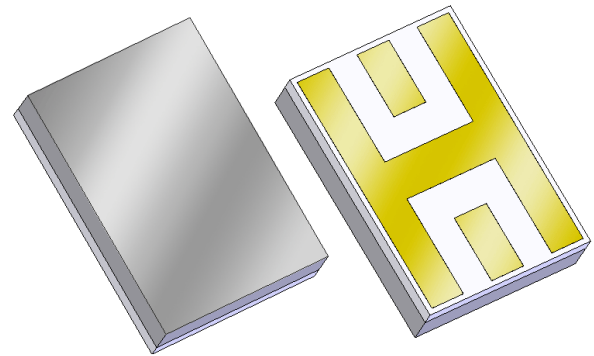


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1575.42 MHz GPS L1 BAW Filter

Applications

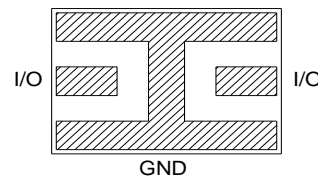
- For GPS L1 Applications
- For high-selectivity applications



Product Features

- Usable bandwidth 25 MHz
- Low loss
- High selectivity
- Single-ended operation
- Ceramic chip-scale Package (CSP)
- Small Size
- Hermetic **RoHS** compliant, **Pb-free**

Functional Block Diagram



Overall width, length, and thickness are the only critical dimensions. All other dimensions are for reference only.

Dimensions shown are nominal in millimeters
All tolerances are $\pm 0.13\text{mm}$ except overall length and width $\pm 0.25\text{mm}$

Body: *Sapphire*
Package: *Alumina*

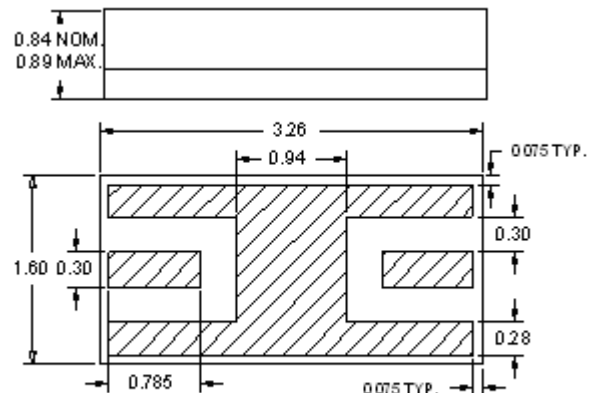
Terminations: *Au* plating 0.5 - 2.5 μm , over a 2.0 – 6.0 μm *Ni* plating

Pin Configuration

Pin #	SE-Balanced	Description
I/O		Input/Output
GND		Ground

Ordering Information

Part No.	Description
880094	packaged part
880094 Eval Board	evaluation board



Specifications

Electrical Specifications ⁽¹⁾

Specified Temperature Range: ⁽²⁾ -40 to +85 °C

Parameter ⁽³⁾	Conditions	Min	Typical ⁽⁴⁾	Max	Units
Center Frequency		-	1575.42	-	MHz
Maximum Insertion Loss	@ 1575.42 MHz	-	1.8	2.5	dB
3dB Bandwidth	Reference loss at 1575.42 MHz	30	35	-	MHz
20dB Lower Frequency Edge		1543.42	1548	-	MHz
20dB Upper Frequency Edge		-	1602	1607.42	MHz
VSWR	@ 1575.42 MHz	-	1.6	2.0	-
Source Impedance (single-ended) ⁽⁵⁾		-	50	-	Ω
Load Impedance (single-ended) ⁽⁵⁾		-	50	-	Ω

Notes:

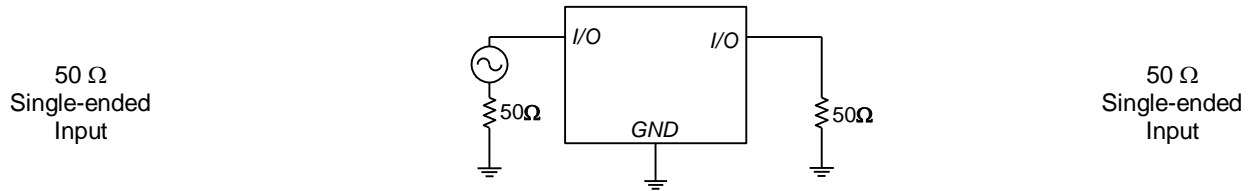
- All specifications are based on the TriQuint schematic for the main reference design shown on page 3
- In production, devices will be tested at room temperature to a guardbanded specification to ensure electrical compliance over temperature
- Electrical margin has been built into the design to account for the variations due to temperature drift and manufacturing tolerances
- Typical values are based on average measurements at room temperature
- This is the optimum impedance in order to achieve the performance shown

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Reference Design

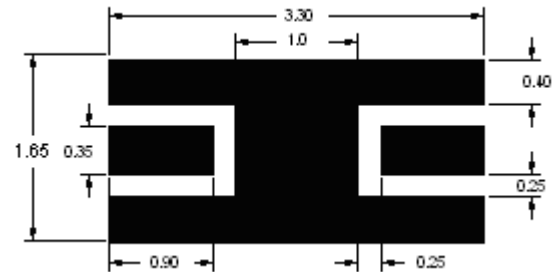
Schematic



PC Board

Refer to [PCB Layout](#) for more information.

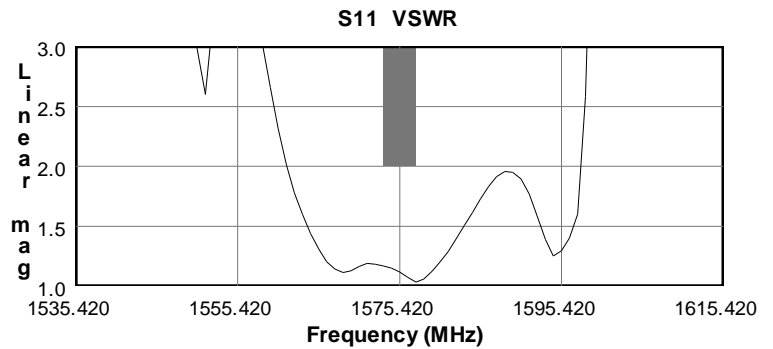
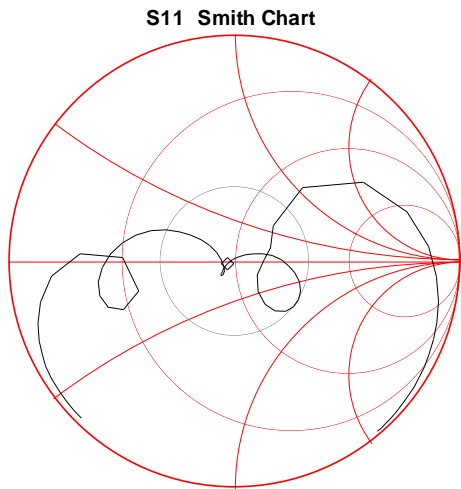
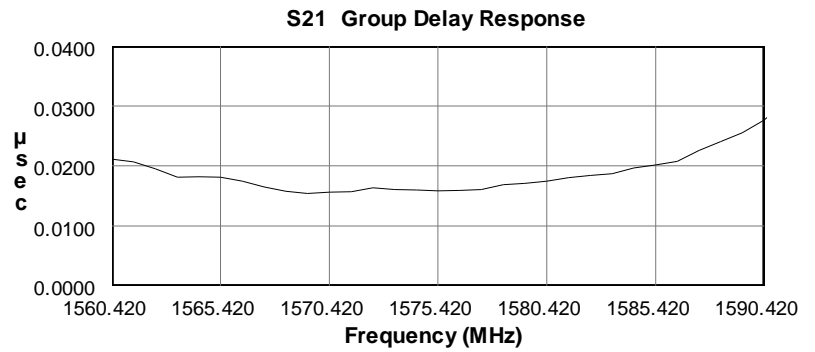
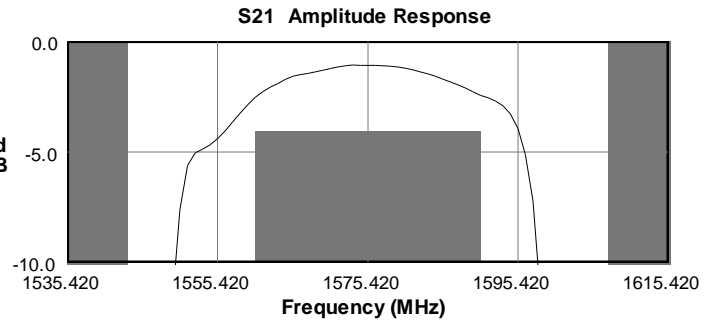
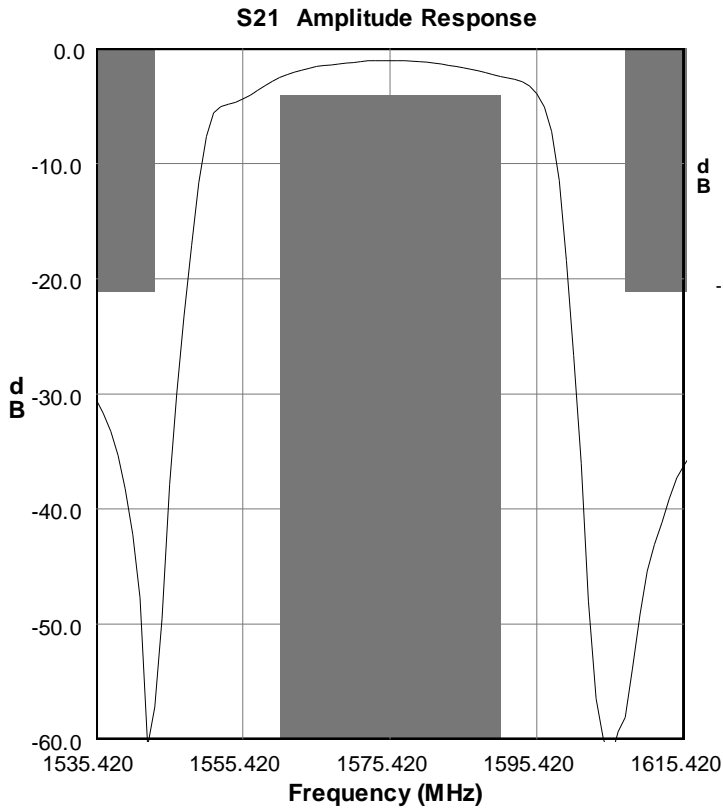
Mounting Configuration



Notes:

1. All dimensions are in millimeters.
2. This footprint represents a recommendation only.

Typical Performance (at room temperature)

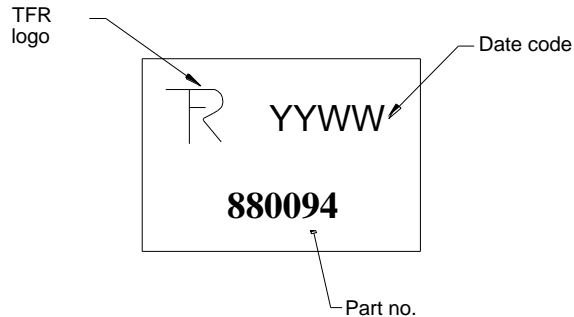


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Mechanical Information

Marking



The date code consists of: YY = last digit of year,
WW = 2 digit week

Tape and Reel Information

Tape and Reel available upon request
EIA-481

Tinning available per J-STD-001

Absolute Maximum Ratings

Parameter	Rating
Operating Temperature	-40 to +85 °C
Storage Temperature	-55 to +100 °C
Maximum Input Power	+23 dBm

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

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Product Compliance Information

ESD Information



Caution! ESD-Sensitive Device

Value: Passes ≥ 8000 V min.
Test: Human Body Model (HBM)
Standard: JEDEC Standard JESD22-A114

Value: Passes ≥ 1600 V min.
Test: Machine Model (MM)
Standard: JEDEC Standard JESD22-A115

Refer to [ESD Sensitivity](#) for data

Solderability

Compatible with the latest version of J-STD-020, lead free solder, 260°C

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

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

For the latest specifications, additional product information, worldwide sales and distribution locations, and information about TriQuint:

Web: www.triquint.com
Email: info-sales@tqs.com

Tel: +1.407.886.8860
Fax: +1.407.886.7061

For technical questions and application information:

Email: info-defense@tqs.com

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