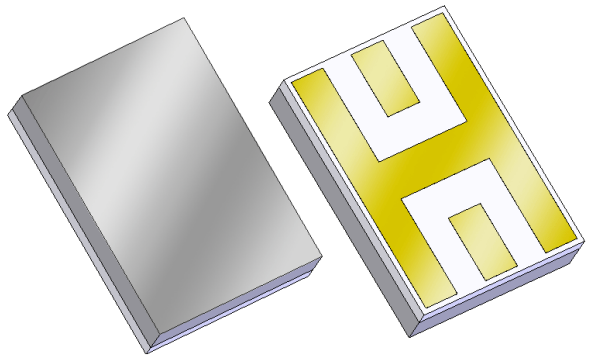
880094

1575.42 ***MHz GPS L1 BAW Filter***

Applications

- For GPS L1 Applications
- For high-selectivity applications



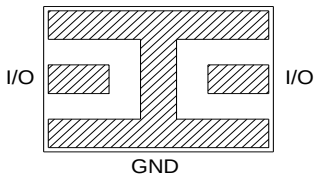
Product Features

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

Pin Configuration

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

Functional Block Diagram



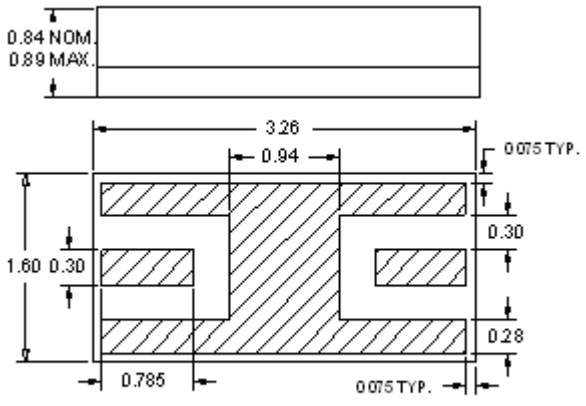
Overall width, length, and thickness are the only critical dimensions. All other dimensions are for reference only.

Dimensions shown are nominal in millimeters
All tolerances are ±0.13mm except overall length and width ±0.25mm

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

Ordering Information

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



Specifications

Electrical Specifications [1]

Specified Temperature Range: [2] -40 to +85 ºC

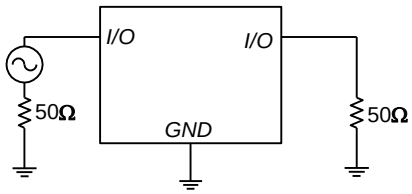
Parameter [3]	Conditions	Min	Typical [4]	Max	Units
Center Frequency		-	1575.42	-	MHz
Maximum Insertion Loss	@ 1575.42 MHz	-	1.8	2.5	dB
3dB Bandwidth	Reference loss at 1575.42 MHz	30	35	-	MHz
20dB Lower Frequency Edge		1543.42	1548	-	MHz
20dB Upper Frequency Edge		-	1602	1607.42	MHz
VSWR	@ 1575.42 MHz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

Notes:
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. This is the optimum impedance in order to achieve the performance shown

Reference Design

Schematic

50 Ω
Single-ended
Input

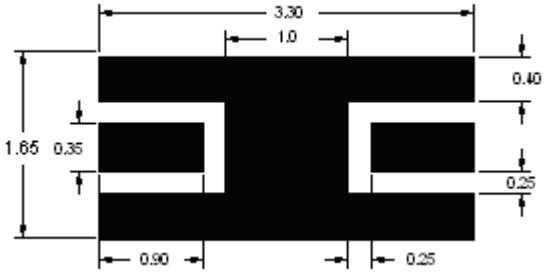


50 Ω
Single-ended
Input

PC Board

Refer to **PCB Layout** for more information.

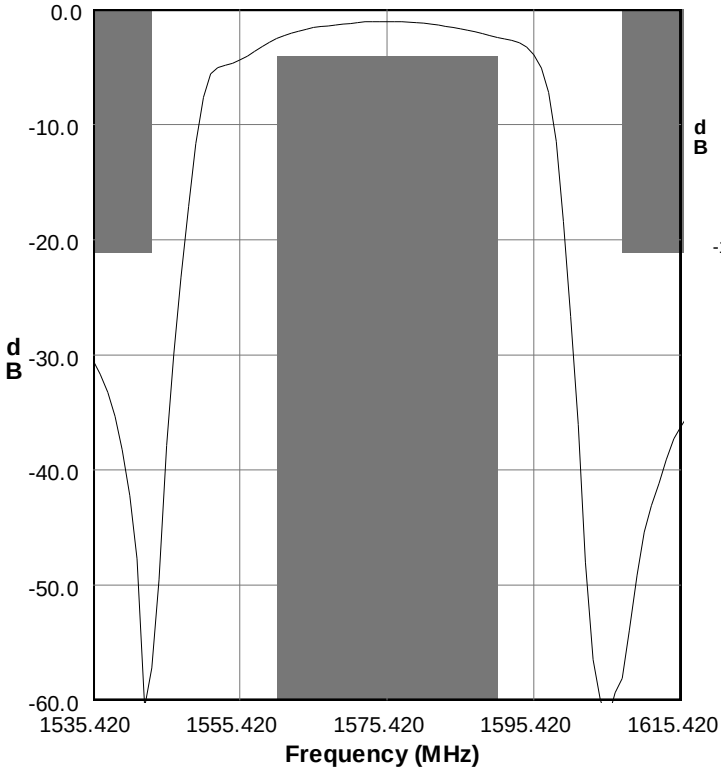
Mounting Configuration



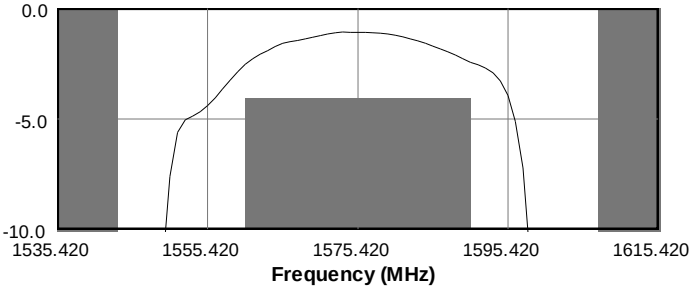
Notes:
1. All dimensions are in millimeters.
2. This footprint represents a recommendation only.

Typical Performance (at room temperature)

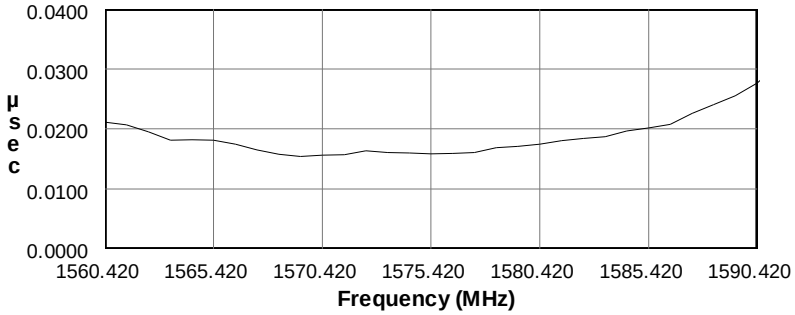
S21 Amplitude Response



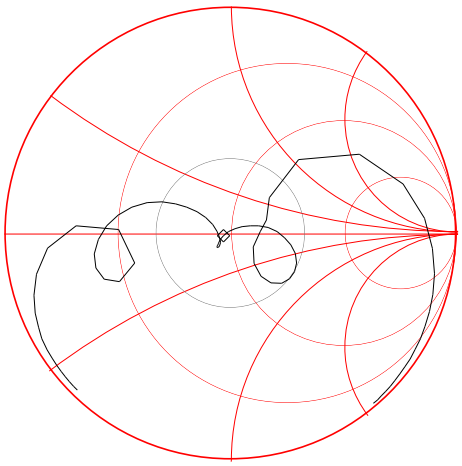
S21 Amplitude Response



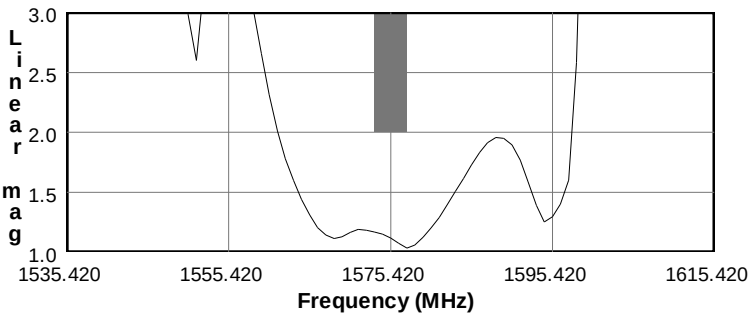
S21 Group Delay Response



S11 Smart Chart

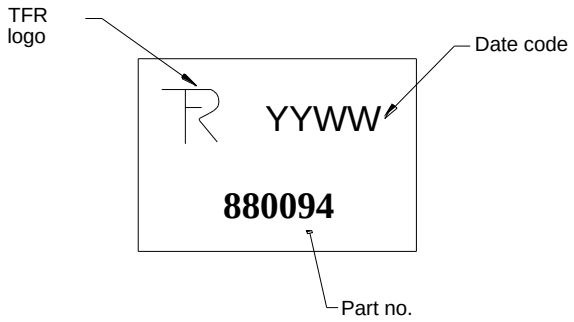


S11 VSWR



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.