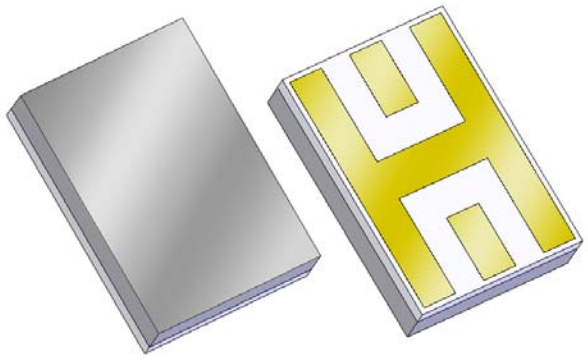
880374

1090 MHz IFF BAW Filter

Applications

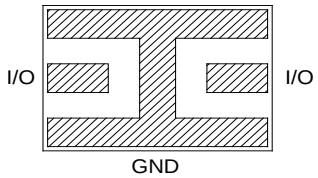
- For SSR/IFF Applications
- For high-selectivity applications



Product Features

- Usable bandwidth 16 MHz
- Low loss
- High selectivity
- Single-ended operation
- Ceramic chip-scale Package (CSP)
- Small Size
- Hermetic **RoHS** compliant, **Pb**-free

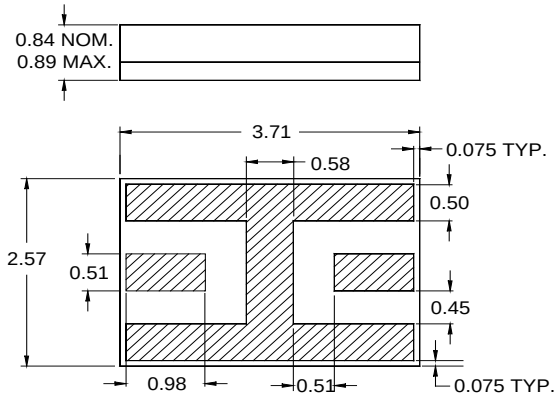
Functional Block Diagram



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 ±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



Pin Configuration

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

Ordering Information

Part No.	Description
880374	packaged part
880374 Eval Board	evaluation board

Specifications

Electrical Specifications [1]

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

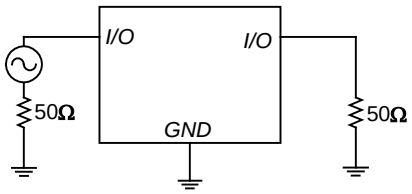
Parameter [3]	Conditions	Min	Typical [4]	Max	Units
Center Frequency		-	1090	-	MHz
Maximum Insertion Loss	@ 1090 MHz	-	3.0	4.0	dB
3dB Bandwidth	Reference loss at 1090 MHz	16	22	-	MHz
40dB Lower Frequency Edge		1067.5	1073	-	MHz
40dB Upper Frequency Edge		-	1107	1112.5	MHz
VSWR	@ 1090 MHz	-	1.7	2.0	-
Source 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

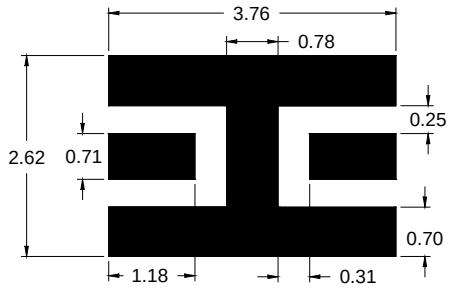


50 Ω
Single-ended
Input

PC Board

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

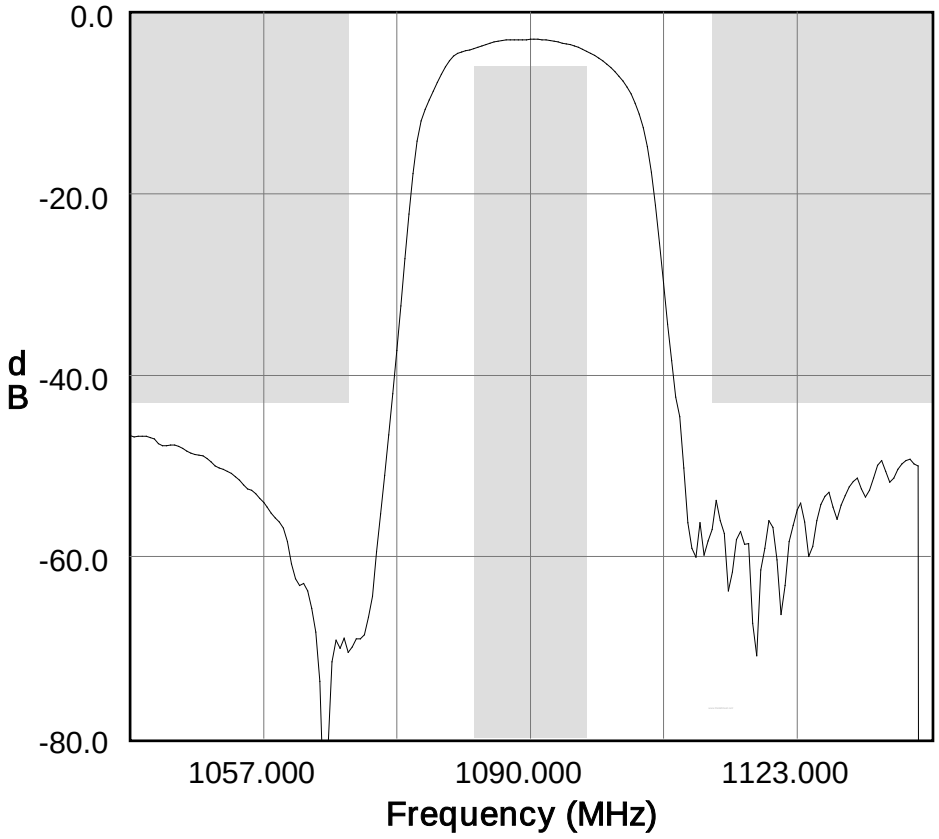
Mounting Configuration



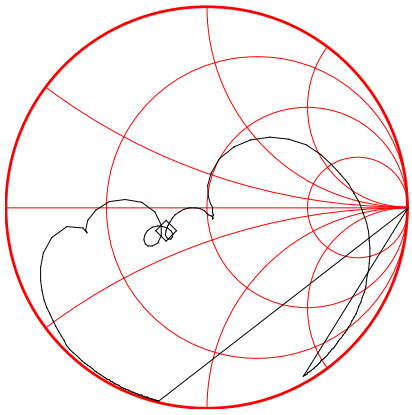
Notes:
1. All dimensions are in millimeters.
2. This footprint represents a recommendation only.

Typical Performance (at room temperature)

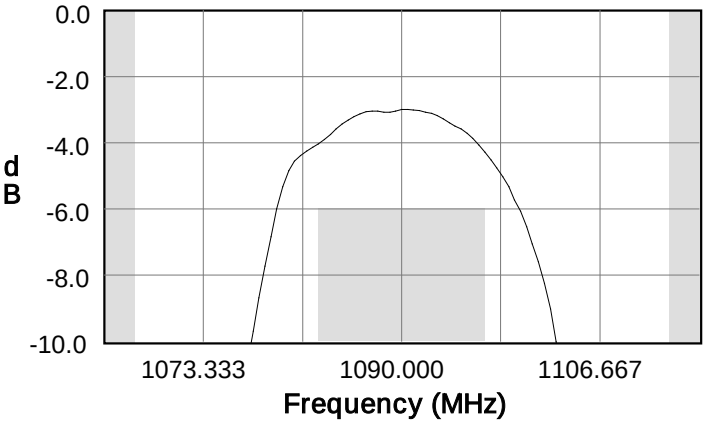
S21 Amplitude Response



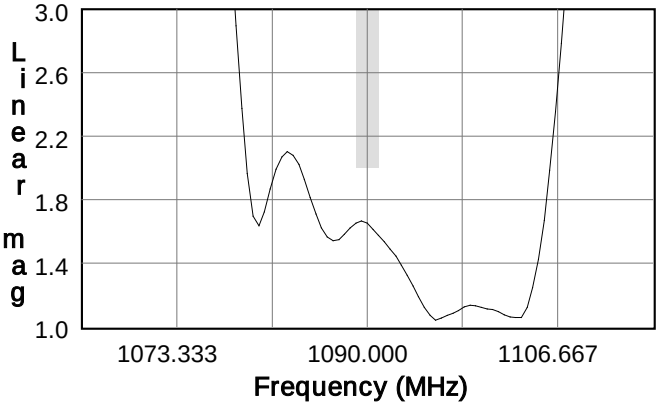
S11 Smith Chart



S21 Amplitude Response

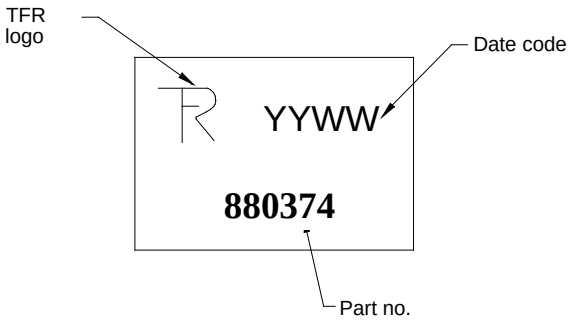


S11 VSWR



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.

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 ≥ 800 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 ($C_{15}H_{12}Br_4O_2$) 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 **Tel:** +1.407.886.8860
Email: info-sales@tqs.com **Fax:** +1.407.886.7061

For technical questions and application information:

Email: info-defense@tqs.com

Important Notice

The information contained herein is believed to be reliable. TriQuint makes no warranties regarding the information contain herein. TriQuint assumes no responsibility or liability whatsoever for any of the information contained herein. TriQuint assumes no responsibility or liability whatsoever for the use of the information contained herein. The information contained herein is provided "AS IS, WHERE IS" and with all faults, and the entire risk associated with such information is entirely with the user. All information contained herein is subject to change without notice. Customers should obtain and verify the latest relevant information before placing orders for TriQuint products. The information contained herein or any use of such information does not grant, explicitly or implicitly, to any party any patent rights, licenses, or any other intellectual property rights, whether with regard to such information itself or anything described by such information.

TriQuint products are not warranted or authorized for use as critical components in medical, life-saving, or life-sustaining applications, or other applications where a failure would reasonably be expected to cause severe personal injury or death.