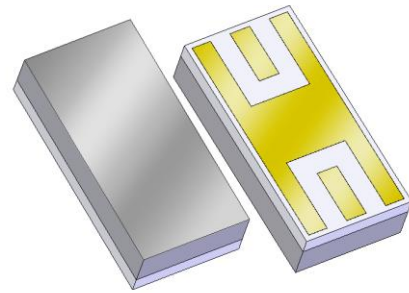


General Description

The 880272 is a dual-use GPS L2 BAW bandpass filter in a small hermetic package. The filter's 30 MHz bandwidth allows reception of both M-code and Y-code signals. It is optimized for low insertion loss and high rejection.

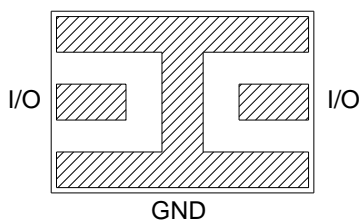


CSP: 3.26 X 1.60 X 0.84 mm

Product Features

- Usable bandwidth 30 MHz
- Single-ended operation
- Ceramic Chip-Scale Package (CSP)
- Hermetically sealed
- Small Package: 3.26 x 1.60 x 0.84 mm

Functional Block Diagram



Bottom View

Applications

- Civil and defense GPS Receivers
- L-Band

Pin Configuration - Single Ended

| Pin No. | Label |
|---------|----------------|
| I/O | Input / Output |
| GND | Ground |

Ordering Information

| Part No. | Description |
|------------|---------------------|
| 880272 | 1227 MHz BAW Filter |
| 880272-EVB | Evaluation board |

Absolute Maximum Ratings

| Parameter | Rating |
|-------------------------------------|----------------|
| Storage Temperature ⁽¹⁾ | -55 to +100 °C |
| Operable Temperature ⁽²⁾ | -40 to +85 °C |
| RF Input Power | TBD |

Notes:

1. Operation of this device outside the parameter ranges given may cause permanent damage.
2. Specifications are not guaranteed over all operable conditions

Electrical Specifications ⁽¹⁾

Test conditions unless otherwise noted: ⁽²⁾ Temp = -40 to +85 °C

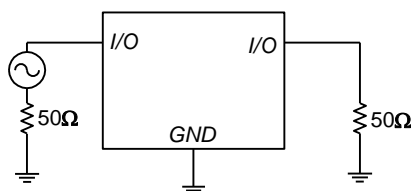
| Parameter ⁽³⁾ | Conditions | Min | Typical ⁽⁴⁾ | Max | Units |
|------------------------------------|-----------------|------|------------------------|-------|-------|
| 10 dB Center Frequency | | 1222 | 1227 | 1232 | MHz |
| Insertion Loss | @ Fo | - | 2.25 | 3.75 | dB |
| 3 dB Bandwidth ⁽⁵⁾ | | 30 | 35 | - | MHz |
| 40 dB Bandwidth ⁽⁵⁾ | | - | 100 | 110 | MHz |
| Amplitude Variation ⁽⁶⁾ | 1212 – 1242 MHz | - | 1.2 | 2 | dB |
| Input / Output VSWR | @ Fo | - | 1.8:1 | 2.2:1 | |
| Source Impedance ⁽⁷⁾ | Single-ended | - | 50 | - | Ω |
| Load Impedance ⁽⁷⁾ | Single-ended | - | 50 | - | Ω |

Notes:

1. All specifications are based on the Qorvo schematics for the reference designs shown on page 3.
2. In production, devices will be tested at room temperature to a guard banded 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 (25 °C ±5 °C).
5. Referenced to the insertion loss at the center frequency
6. Measured as maximum peak to adjacent valley amplitude variation over frequency range
7. Optimum impedance to achieve the performance shown

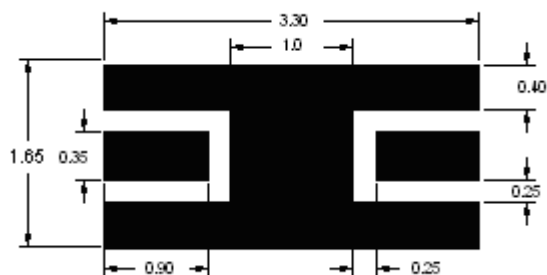
Matching Schematics

50 Ω
Single-ended
Input



50 Ω
Single-ended
Output

PCB Mounting Pattern

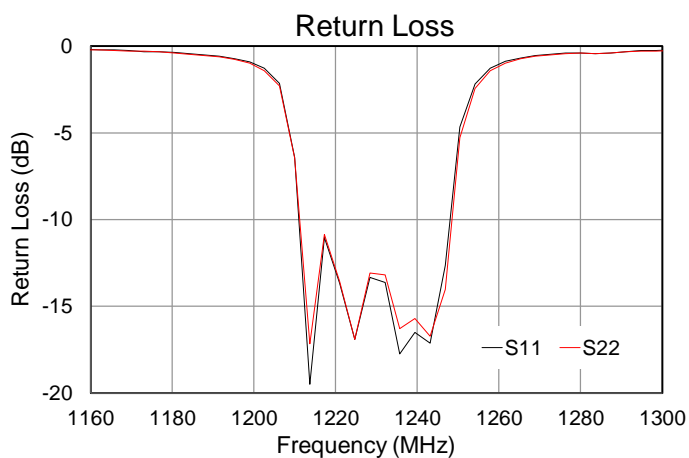
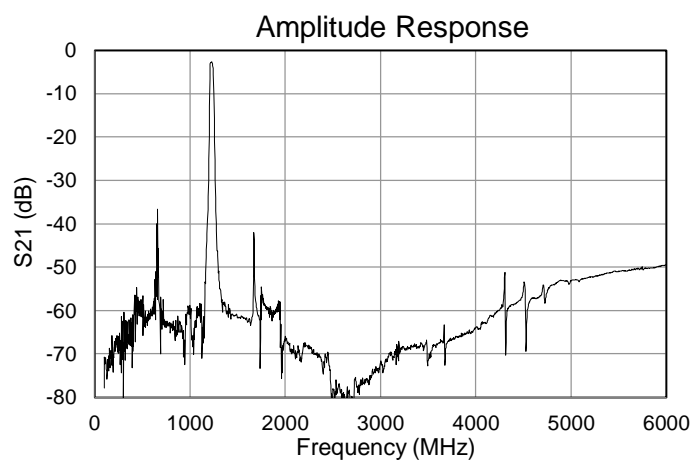
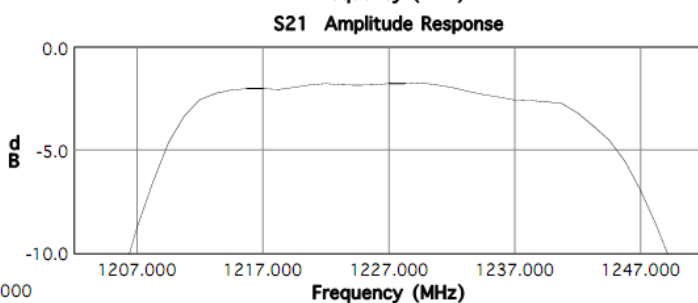
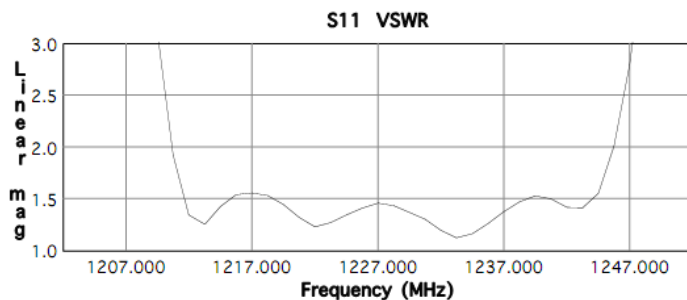
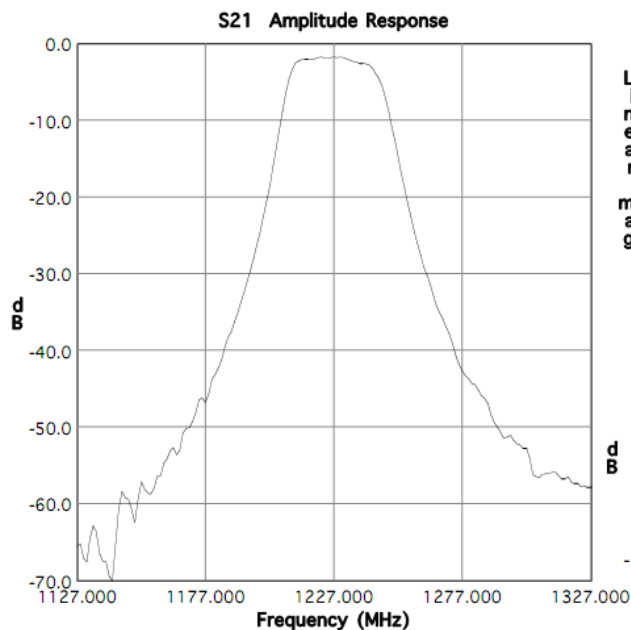


Notes:

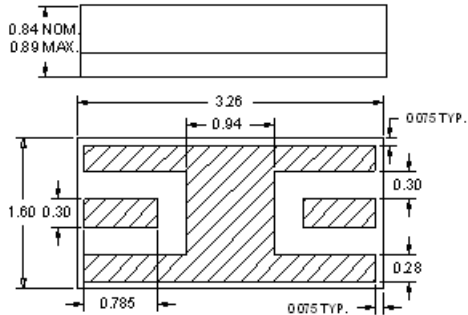
1. All dimensions are in millimeters. Angles are in degrees.
2. This drawing specifies the mounting pattern used on the Qorvo evaluation board for this product. Some modification may be necessary to suit end user assembly materials and processes.

Typical Performance

Test conditions unless otherwise stated: Temp. = 25 °C



Package Information, Marking and Dimensions

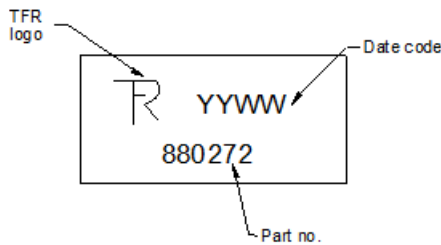


Package Style: CSP
Dimensions: 3.26 x 1.60 x 0.84 mm

Body: *Sapphire*
Package: *Alumina*
Terminations: *Au* plating 0.5 – 1.0µm, over a 2-6µm *Ni* plating

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

The date code consists of, YY = last 2 digits of the year, and WW = 2 digits of worked week



Tape and Reel Information

Tape and reel available upon request (EIA-481)

Handling Precautions

| Parameter | Rating | Standard |
|----------------------------------|----------|--------------------------|
| ESD – Human Body Model (HBM) | Class 2 | ANSI/ ESD / JEDEC JS-001 |
| ESD – Charged Device Model (CDM) | Class C3 | ANSI/ ESD / JEDEC JS-002 |
| MSL – Moisture Sensitivity Level | Level 1 | IPC/JEDEC J-STD-020 |



Caution!
ESD-Sensitive Device

Solderability

Compatible with both lead-free (260°C max. reflow temp.) and tin/lead (245°C max. reflow temp.) soldering processes. Solder profiles available upon request.

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:

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

Contact Information

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

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Tel: 1-844-890-8163

Email: customer.support@qorvo.com

For technical questions and application information: Email: appsupport@qorvo.com

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