

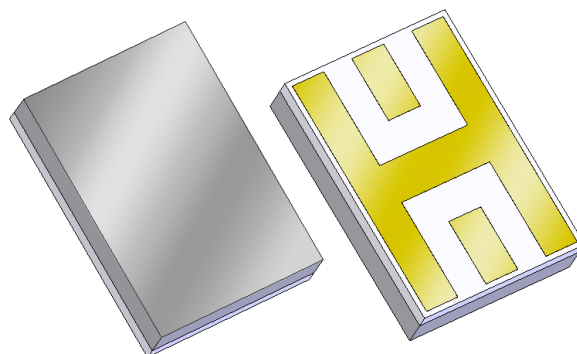


# 880367

## 1030 MHz IFF BAW Filter

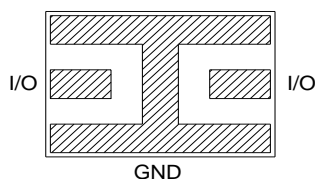
### General Description

880367 is a RF filter designed in a small hermetic package for high selectivity applications.



CSP: 3.71 x 2.57 x 0.84 mm

### Functional Block Diagram



Bottom View

### Product Features

- Usable bandwidth of 14.5 MHz
- Low Loss
- High Selectivity
- Single-Ended Operation
- 50  $\Omega$  Impedance at Input / Output
- Ceramic Chip-Scale Package (CSP)
- Small Size
- Hermetically Sealed

### Applications

- For SSR/IFF applications
- For high selectivity applications

### Pin Configuration - Single Ended

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

### Ordering Information

Part No.	Description
1062365	880367 1030 MHz IFF BAW Filter
1072904	Evaluation board



# 880367

## 1030 MHz IFF BAW Filter

### Absolute Maximum Ratings

Parameter	Rating
Storage Temperature	-55 to 100°C
Operation Temperature	-40 to 85°C
RF Input Power <sup>(1)</sup> - Test conditions: PW = 200ms; DC = 50% @ +25 °C	42 dBm

Exceeding any one or a combination of the Absolute Maximum Rating conditions may cause permanent damage to the device. Extended application of Absolute Maximum Rating conditions to the device may reduce device reliability.

<sup>(1)</sup> Input Power for both Input & Output ports

### Minimum Lifetime Ratings

Conditions	Rating
RF Input Power <sup>(1)</sup> , Pin 1 & Pin 2	>10K hours

<sup>(1)</sup> Input Power: CW, 24 dBm, @ +71 °C

### Electrical Specifications <sup>(1)</sup>

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

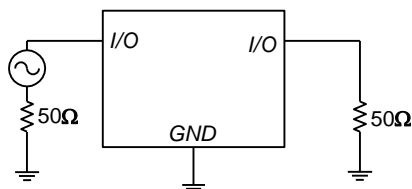
Parameter <sup>(3)</sup>	Conditions	Min	Typical <sup>(4)</sup>	Max	Units
Center Frequency	-	-	1030	-	MHz
Maximum Insertion Loss	@ Fo	-	3.0	4.0	dB
3 dB Bandwidth	Reference Loss @ Fo	14	20	-	MHz
40 dB Lower Frequency Edge		1009	1013	-	MHz
40 dB Upper Frequency Edge		-	1046	1051	MHz
Input/Output VSWR	@ Fo	-	1.7	2.0	-
Source Impedance <sup>(5)</sup>	Single-ended	-	50	-	Ω
Load Impedance <sup>(5)</sup>	Single-ended	-	50	-	Ω

#### Notes:

1. All specifications are based on the Qorvo schematics for the reference designs shown on page 3.
2. Devices tested at room temperature to a guard banded specification to ensure electrical compliance over temperature range.
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. Optimum impedance to achieve the performance shown

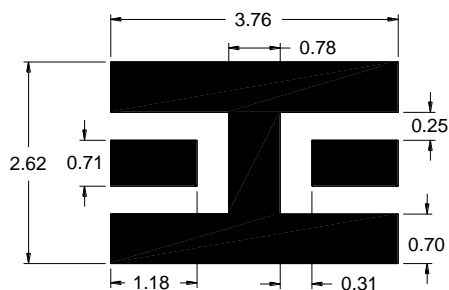
### Matching Schematics

50  $\Omega$   
Single-ended  
Input



50  $\Omega$   
Single-ended  
Output

### PCB Mounting Pattern



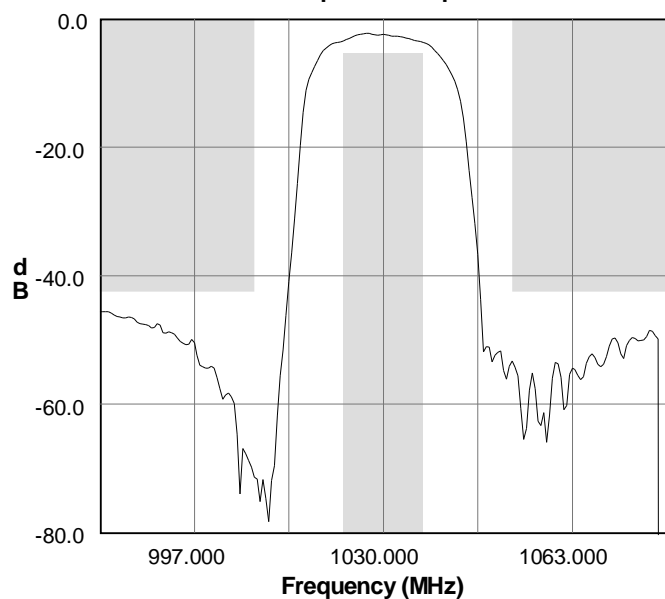
#### Notes:

1. All dimensions are in millimeters.
2. Modifications may be necessary to suit end user assembly materials and processes.

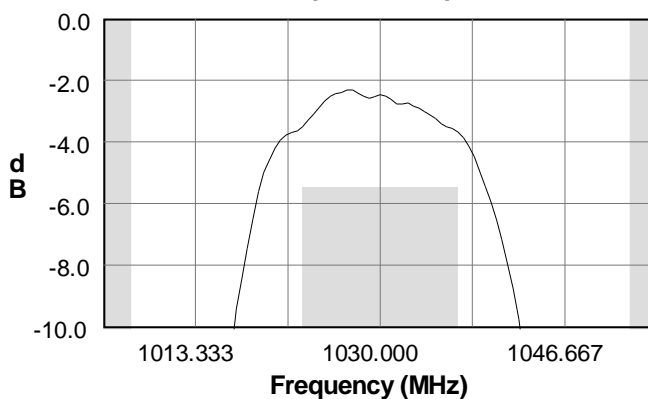
### Typical Performance

Test conditions unless otherwise stated: Temp. = 25 °C ±5 °C

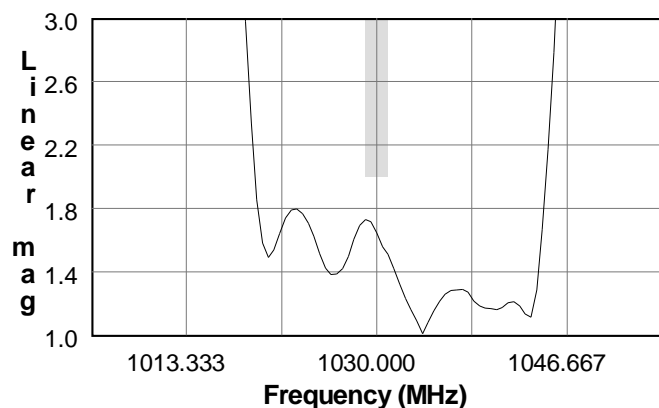
**S21 Amplitude Response**



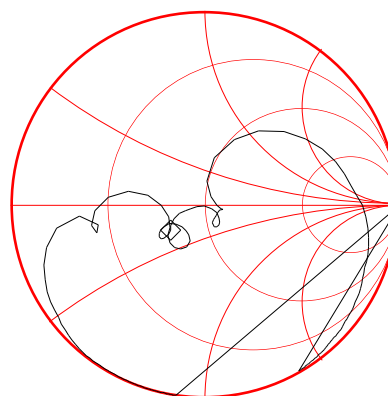
**S21 Amplitude Response**



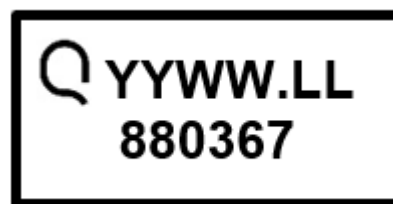
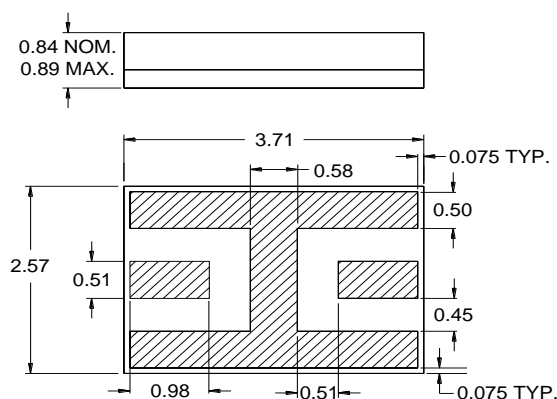
**S11 VSWR**



**S11 Smith Chart**



### Device Package Information, Marking and Dimensions



Package Style: CSP  
Dimensions: 3.71 x 2.57 x 0.84 mm

Package Base: Sapphire  
Package Lid: Alumina  
Terminations: Au plating over Ni (0.33 ~ 0.83  $\mu\text{m}$  Au, 2.0 ~ 6.0  $\mu\text{m}$  Ni)

All dimensions shown are nominal in millimeters.  
All tolerances are  $\pm 0.13\text{mm}$  except overall length and width  $\pm 0.25\text{mm}$ .  
Overall width, length, and thickness are the only critical dimensions. All other dimensions are for reference only.

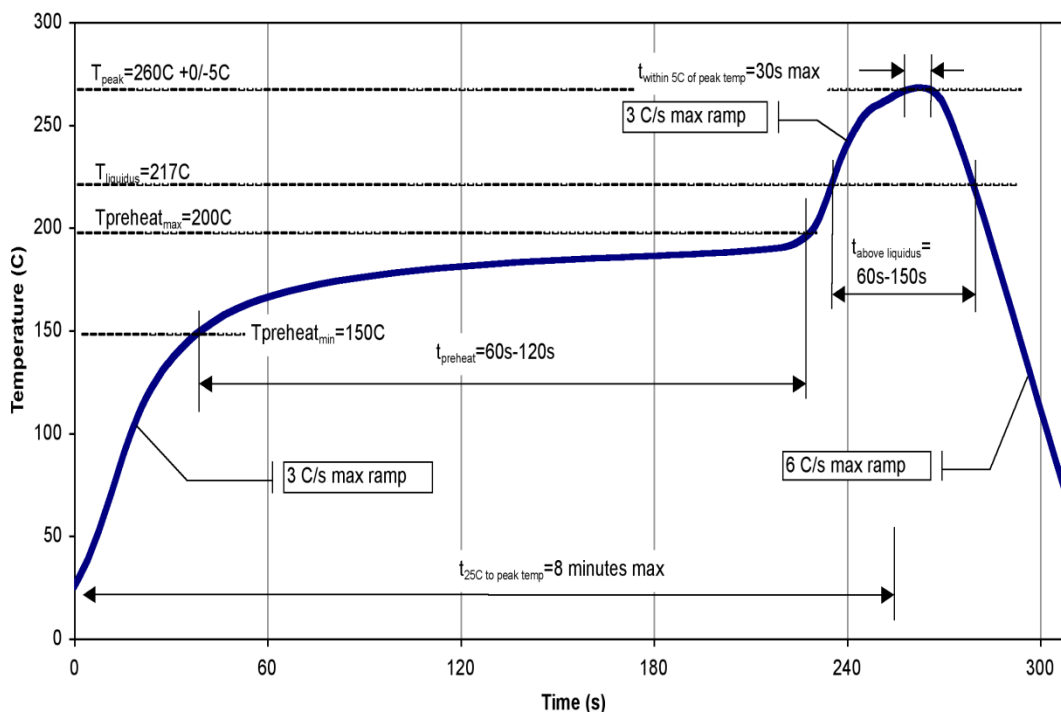
Marking includes corporate logo, date code, and product part number.  
The date code consists of, YY = last 2 digits of the year, WW = 2 digits of calendar work week and LL = Lot ID, unique lot identifier.  
Marking Diagram is for Reference Only.

### Packaging Information

- Tape and Reel per EIA-481 available. Additional information available upon request.
- Solder tinning available per IPC J-STD-001.

1. Compatible with both Lead-free solder (260°C peak reflow temperature) and tin/lead (245°C peak reflow temp.) soldering processes.
2. Contact plating: Au plating over Ni.


## Recommended Soldering Profile





## Handling Precautions

Parameter	Rating	Standard
ESD – Human Body Model (HBM)	Class 3B	ANSI/ESD/JEDEC JS-001
ESD – Charged Device Model (CDM)	Class C3	JESD22-C101
MSL – Moisture Sensitivity Level	N/A, Hermetic Package	

 Caution!  
ESD-Sensitive Device

## RoHS Compliance

This product is compliant with the 2011/65/EU RoHS directive (Restrictions on the Use of Certain Hazardous Substances in Electrical and Electronic Equipment), as amended by Directive 2015/863/EU. This product also has the following attributes:

- Lead Free
- Halogen Free (Chlorine, Bromine)
- Antimony Free
- TBBP-A (C<sub>15</sub>H<sub>12</sub>Br<sub>4</sub>O<sub>2</sub>) Free
- PFOS Free
- SVHC Free

## Contact Information

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

Web: [www.qorvo.com](http://www.qorvo.com)  
Tel: 1-844-890-8163  
Email: [customer.support@qorvo.com](mailto:customer.support@qorvo.com)

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