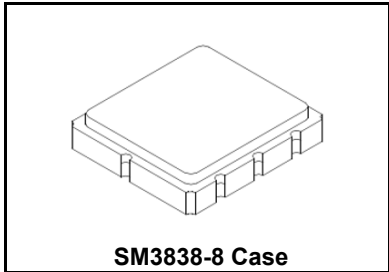


SF1174D

374.00 MHz  
SAW Filter



- *Designed for 802.11 Applications*
- *Hermetically sealed Surface Mount package*
- *Complies with Directive 2002/95/EC (RoHS)*
- *Moisture Sensitivity Level: 1*

**Absolute Maximum Ratings**

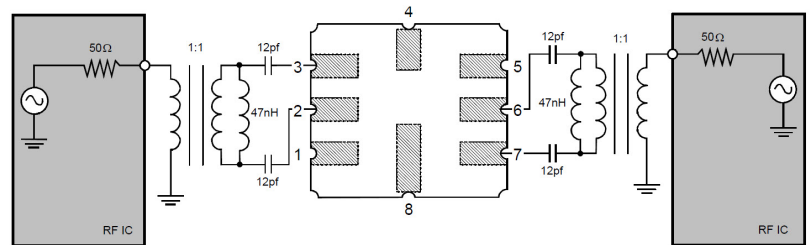
| Rating   | Value          | Units |
|--|----------------|-------|
| Maximum Input Power                                      | +10            | dBm   |
| DC Voltage Between Terminals                             | 30             | VDC   |
| Case Temperature   | -40 to +85     | °C    |
| Suitable for lead-free soldering - Max Soldering Profile | 260°C for 30 s |       |

**Electrical Characteristics**

| Characteristic                               |                           | Sym   | Notes | Minimum | Typical | Maximum | Units |
|--|---------------------------|-------|-------|---------|---------|---------|-------|
| Nominal Operating Frequency                  |                           | $f_c$ |       |         | 374     |         | MHz   |
| Passband                                     | Insertion Loss            | IL    |       |         | 8.6     | 10      | dB    |
|  | 3.0 dB Bandwidth          |       |       | 17      | 23.3    |         | MHz   |
| Amplitude Ripple                             | $F_c \pm 7$ MHz           |       |       |         | .6      | 1.0     | dB    |
| Group Delay Deviation                        | $F_c \pm 7$ MHz           |       |       |         | 45      | 100     | nsec  |
| Rejection                                    | $F_c - 100$ to $-33$ MHz  |       |       | 40      | 47      |         | dB    |
|  | $F_c - 33$ to $-22$ MHz   |       |       | 40      | 48      |         | dB    |
|  | $F_c - 22$ to $-16.5$ MHz |       |       | 27      | 40      |         | dB    |
|  | $F_c + 16.5$ to $+22$ MHz |       |       | 28      | 44      |         | dB    |
|  | $F_c + 22$ to $+43$ MHz   |       |       | 35      | 44      |         | dB    |
| Ambient Temperature                          | Operating Range           |       |       | -20     |         | 70      | °C    |
|  |                           |       |       |         |         |         |       |
| Footprint Size: 3.8 X 3.8                    | SM3838-8                  |       |       |         |         |         |       |
| Lid Symbolization (Y=Year, WW=week, S=shift) | 479, YWWS                 |       |       |         |         |         |       |

**Electrical Connections**

| Connection          | Terminals  |
|---------------------|------------|
| Differential Input  | 2, 3       |
| Differential Output | 6, 7       |
| Ground              | All Others |

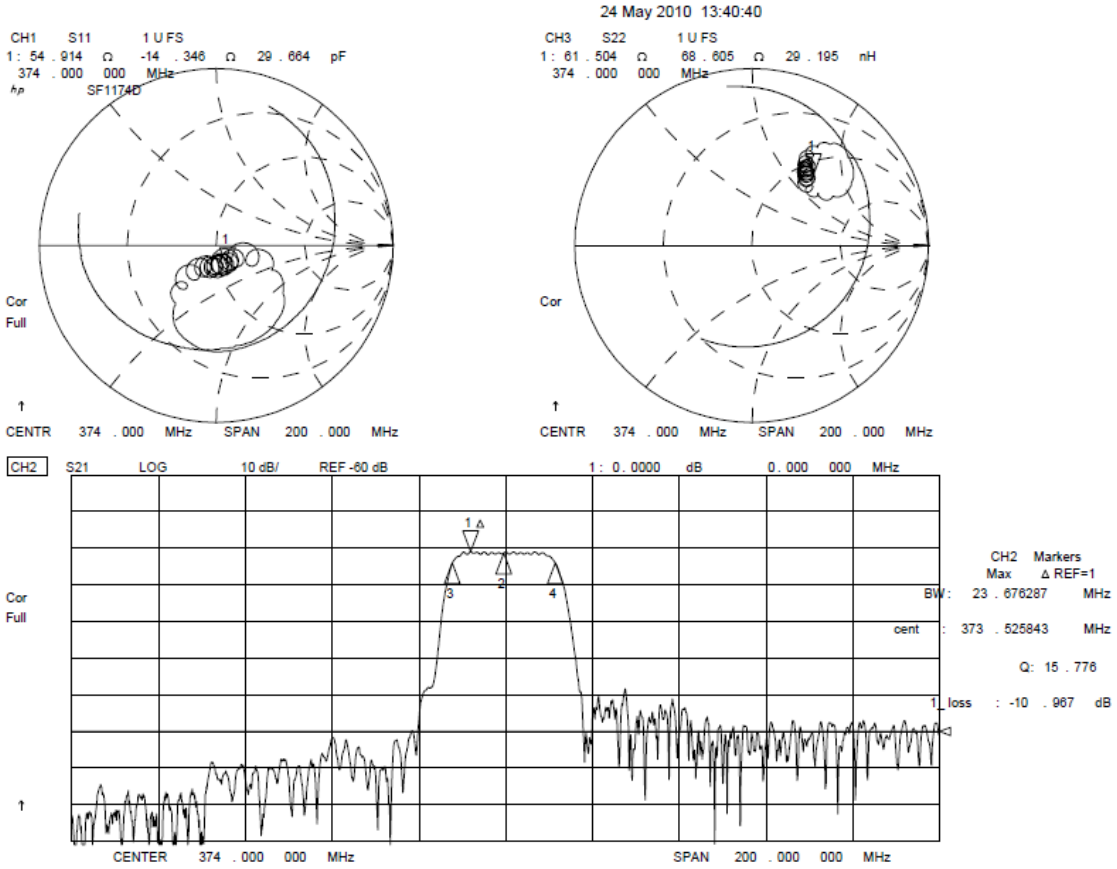


**CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

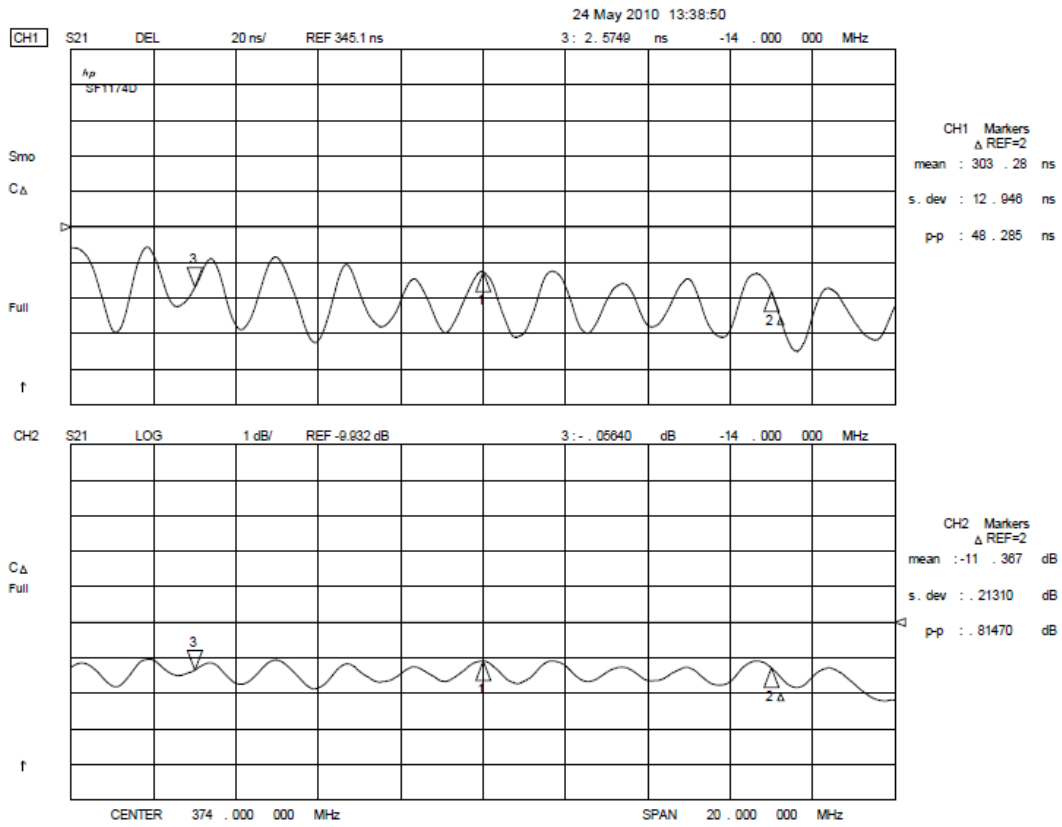
**NOTES:**

1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

# SF1174D DEMO



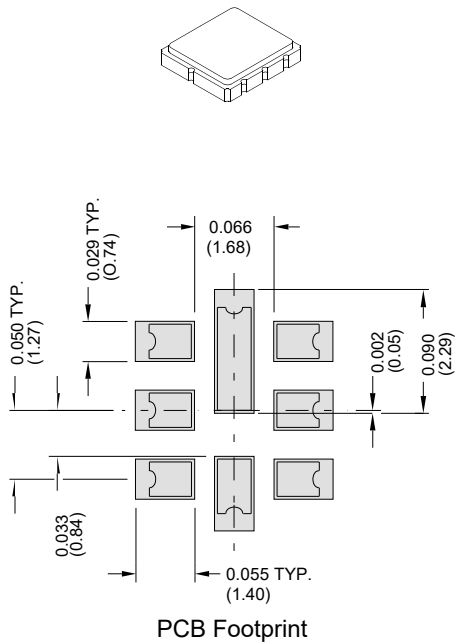
# SF1174D DEMO



# SM3838-8 Case

## 8-Terminal Ceramic Surface-Mount Case

### 3.8 X 3.8 mm Nominal Footprint



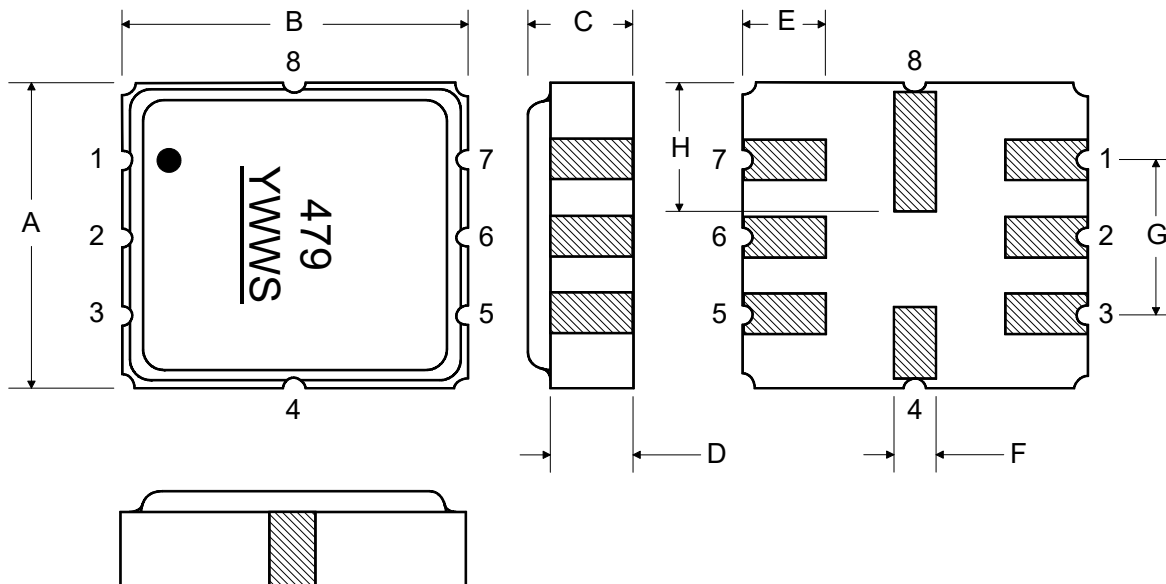
| Case Dimensions |      |      |      |        |       |     |
|-----------------|------|------|------|--------|-------|-----|
| Dimension       | mm   |      |      | Inches |       |     |
|                 | Min  | Nom  | Max  | Min    | Nom   | Max |
| A               | 3.6  | 3.8  | 4.0  |        | 0.15  |     |
| B               | 3.6  | 3.8  | 4.0  |        | 0.15  |     |
| C               |      |      | 1.25 |        | 0.06  |     |
| D               |      | 1.0  |      |        | 0.04  |     |
| E               |      | 1.0  |      |        | 0.04  |     |
| F               |      | 0.6  |      |        | 0.02  |     |
| G               | 2.39 | 2.54 | 2.69 |        | 0.100 |     |
| H               |      | 1.5  |      |        | 0.06  |     |

| Electrical Connections        |                     |                         |
|-------------------------------|---------------------|-------------------------|
|                               | Connection          | Terminals               |
| Port 1                        | Differential Input  | 2, 3                    |
| Port 2                        | Differential Output | 6, 7                    |
|                               | Ground              | All Others              |
| <b>Single Ended Operation</b> |                     | <b>Return is Ground</b> |
| <b>Differential Operation</b> |                     | <b>Return is Hot</b>    |
| Dot Indicates Pin 1           |                     |                         |

| Materials              |  |
|------------------------|--|
| Solder Pad Termination | Au plating 30 - 60 ulnches (76.2-152 uM) over 80-200 ulnches (203-508 uM) Ni.    |
| Lid                    | Fe-Ni-Co Alloy Electroless Nickel Plate (8-11% Phosphorus) 100-200 ulnches Thick |
| Body                   | Al <sub>2</sub> O <sub>3</sub> Ceramic   |

TOP VIEW

BOTTOM VIEW





# Recommended Reflow Profile

- 1. Preheating shall be fixed at 150~180°C for 60~90 seconds.
- 2. Ascending time to preheating temperature 150°C shall be 30 seconds min.
- 3. Heating shall be fixed at 220°C for 50~80 seconds and at 260°C +0/-5°C peak (10 seconds).
- 4. Time: 5 times maximum.

