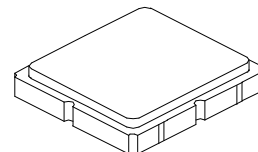


- **RF Filter for Mobile Communication Applications**
- **Low Insertion Loss**
- **3.0 x 3.0 x 1.3 mm Surface-Mount Case**
- **No Matching Circuit Required**
- **Complies with Directive 2002/95/EC (RoHS)**
- **Moisture Sensitivity Level: 1**

**SF2368E**

**831.5 MHz**  
**SAW Filter**



**SM3030-6**

#### Absolute Maximum Ratings

| Rating                                     | Value               | Units |
|--------------------------------------------|---------------------|-------|
| Input Power                                | +15, 100000 h, 85°C | dBm   |
|                                            | +20, 1000 h, 85°C   |       |
| Maximum DC Voltage Between any 2 Terminals | 5                   | VDC   |
| Operable Temperature Range                 | -45 to +125         | °C    |
| Operating Temperature Range                | -30 to +85          | °C    |
| Storage Temperature Range                  | -40 to +85          | °C    |
| Maximum Soldering Profile                  | 265 °C for 10 s     |       |

| Characteristic                               | Sym                                                   | Notes | Min | Typ   | Max | Units |
|----------------------------------------------|-------------------------------------------------------|-------|-----|-------|-----|-------|
| Center Frequency                             | $f_c$                                                 |       |     | 831.5 |     | MHz   |
| Insertion Loss, 814-849 MHz                  | IL                                                    |       |     | 3.0   | 4.2 | dB    |
| Amplitude Ripple, p-p, 814-849 MHz           |                                                       |       |     | 1.1   | 2.6 |       |
| Attenuation Referenced to 0 dB:              |                                                       |       |     |       |     | dB    |
| DC to 794 MHz                                |                                                       |       | 30  | 46    |     |       |
| 859 to 860 MHz                               |                                                       |       | 6   | 16    |     |       |
| 869 to 900 MHz                               |                                                       |       | 20  | 31    |     |       |
| 900 to 2300 MHz                              |                                                       |       | 25  | 33    |     |       |
| 2300 to 2600 MHz                             |                                                       |       | 25  | 30    |     |       |
| 2600 to 2800 MHz                             |                                                       |       | 20  | 29    |     |       |
| 2800 to 3200 MHz                             |                                                       |       | 5   | 26    |     |       |
| 3200 to 6000 MHz                             |                                                       |       | 2   | 4     |     |       |
| VSWR, 814-849 MHz                            |                                                       |       |     | 1.5   | 2.6 |       |
| Single Ended Input / Output, Impedance match | No matching network required for operation at 50 ohms |       |     |       |     |       |
| Case Style                                   | SM3030-6 3 x 3 mm Nominal Footprint                   |       |     |       |     |       |
| Lid Symbolization (Y=year, WW=week, S=shift) | 5R <u>Y</u> WWS                                       |       |     |       |     |       |

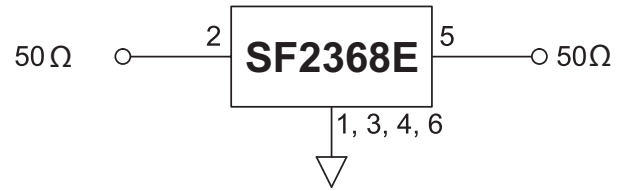
 **CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

#### NOTES:

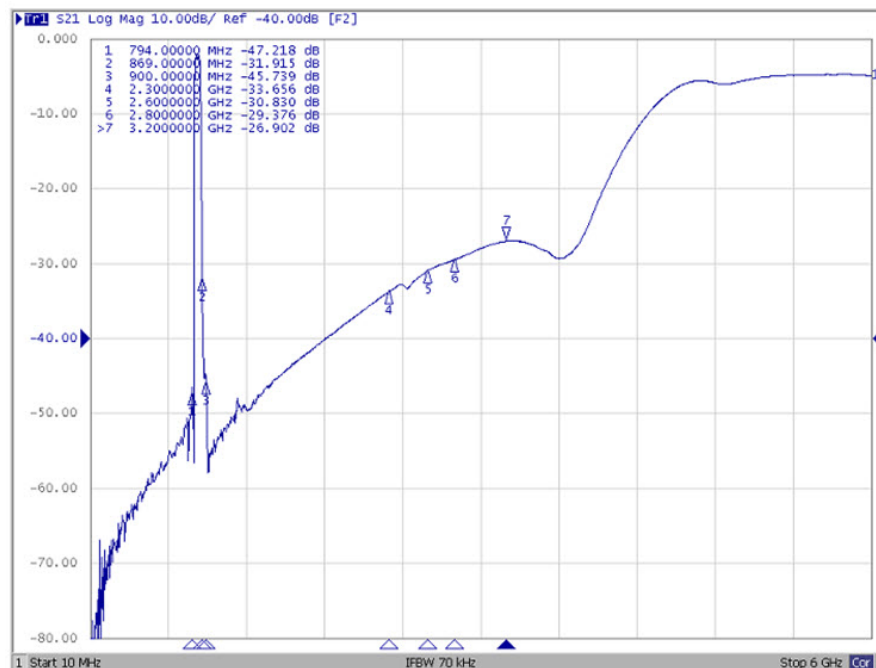
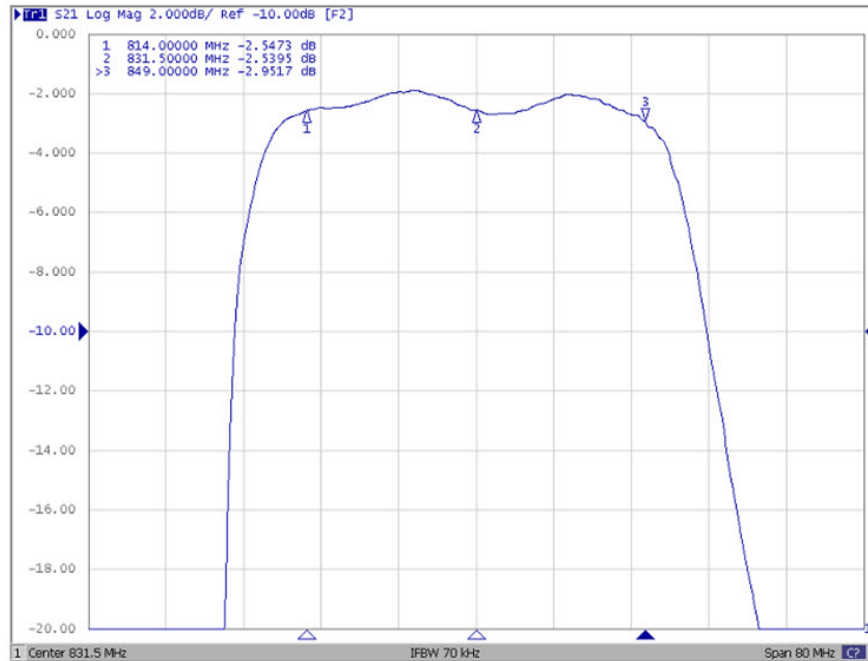
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.

## Electrical Connections

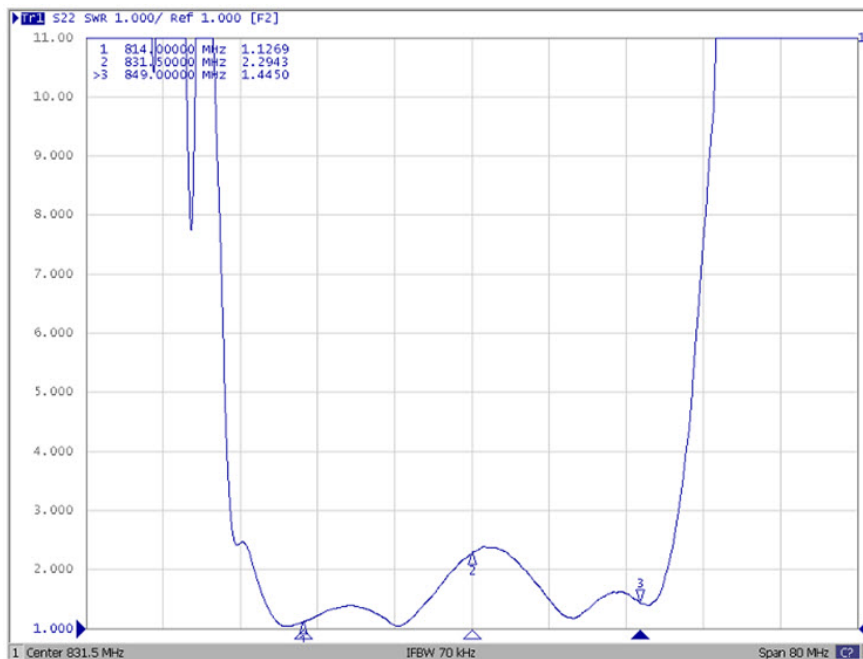
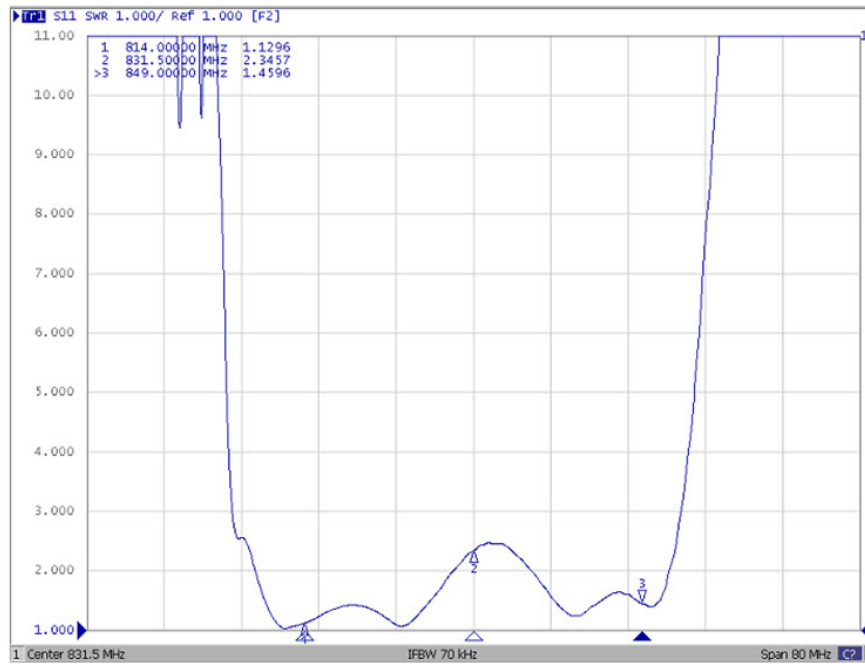
| Connection | Terminals  |
|------------|------------|
| Input      | 2          |
| Output     | 5          |
| Ground     | All others |



## Frequency Characteristics

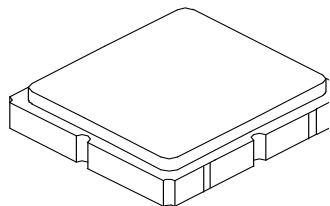


## Frequency Characteristics

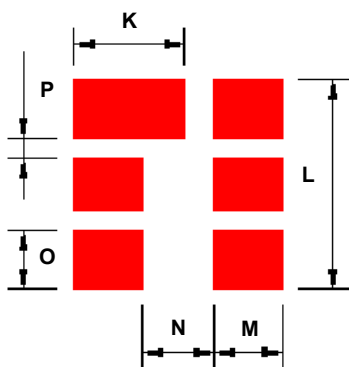


# SM3030-6 Case

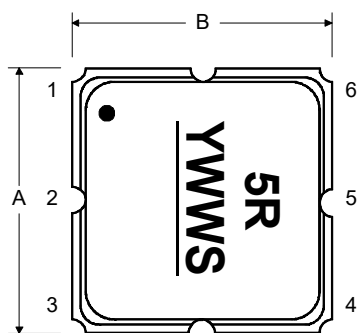
## 6-Terminal Ceramic Surface-Mount Case 3.0 X 3.0 mm Nominal Footprint



PCB Footprint, Top View



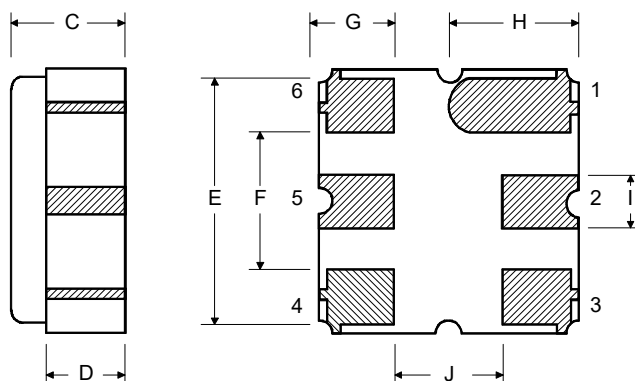
TOP VIEW



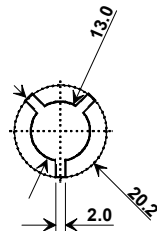
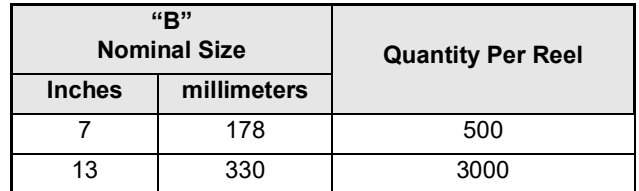
Case Dimensions

| Dimension | mm  |      |     | Inches |       |       |
|-----------|-----|------|-----|--------|-------|-------|
|           | Min | Nom  | Max | Min    | Nom   | Max   |
| A         |     | 3.0  |     |        | 0.118 |       |
| B         |     | 3.0  |     |        | 0.118 |       |
| C         |     |      | 1.4 |        |       | 0.055 |
| D         |     |      | 1.0 |        |       | 0.039 |
| E         |     | 2.80 |     |        | 0.110 |       |
| F         |     | 1.6  |     |        | 0.063 |       |
| G         |     | 0.85 |     |        | 0.033 |       |
| H         |     | 1.5  |     |        | 0.059 |       |
| I         |     | 0.6  |     |        | 0.024 |       |
| J         |     | 1.3  |     |        | 0.051 |       |
| K         |     | 1.70 |     |        | 0.066 |       |
| L         |     | 3.20 |     |        | 0.125 |       |
| M         |     | 1.05 |     |        | 0.041 |       |
| N         |     | 1.10 |     |        | 0.043 |       |
| O         |     | 0.90 |     |        | 0.035 |       |
| P         |     | 0.30 |     |        | 0.011 |       |

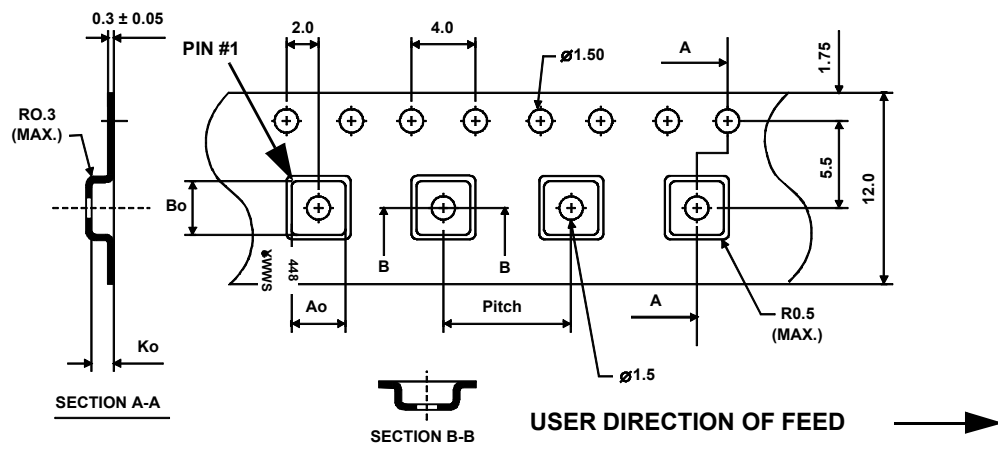
BOTTOM VIEW



## Tape and Reel Standard per ANSI/EIA-481



| Carrier Tape Dimensions |         |
|-------------------------|---------|
| <b>Ao</b>               | 3.35 mm |
| <b>Bo</b>               | 3.35 mm |
| <b>Ko</b>               | 1.4 mm  |
| <b>Pitch</b>            | 8.0 mm  |
| <b>W</b>                | 12.0 mm |



## 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.

