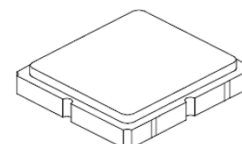


- Filter, 2535 MHz, 70 MHz BW, 2.2 dB Insertion Loss
- 3.0 x 3.0 x 1.4 mm Surface-Mount Case
- Complies with Directive 2002/95/EC (RoHS)
- Moisture Sensitivity Level: 1

**SF2158E**

**2535.00 MHz  
SAW Filter**



**SM3030-6**

#### Absolute Maximum Ratings

| Rating                                                 | Value      | Units |
|--------------------------------------------------------|------------|-------|
| Input Power Level                                      | 10         | dBm   |
| DC Voltage on any Non-ground Terminal                  | 3          | V     |
| Operating Temperature Range                            | -40 to +85 | °C    |
| Storage Temperature Range in Tape and Reel             | -40 to +85 | °C    |
| Maximum Soldering Profile, 5 Cycles/10 seconds Maximum | 265        | °C    |

#### Electrical Characteristics

| Characteristic                              | Sym                                           | Notes | Min | Typ  | Max   | Units |
|---------------------------------------------|-----------------------------------------------|-------|-----|------|-------|-------|
| Center Frequency                            | f <sub>C</sub>                                |       |     | 2535 |       | MHz   |
| Insertion Loss, 2500 to 2570 MHz            | IL                                            |       |     | 2.2  | 3.6   | dB    |
| Amplitude Ripple, 2500 to 2570 MHz          |                                               |       |     | 0.8  | 2.2   | dB    |
| VSWR, 2500 to 2570 MHz                      |                                               |       |     | 2:1  | 2.2:1 |       |
| Attenuation Referenced to 0 dB:             |                                               |       |     |      |       | dB    |
| DC to 2100 MHz                              |                                               |       | 25  | 31   |       |       |
| 2100 to 2400 MHz                            |                                               |       | 27  | 34.5 |       |       |
| 2650 to 4000 MHz                            |                                               |       | 30  | 38   |       |       |
| 4000 to 5000 MHz                            |                                               |       | 20  | 23   |       |       |
| Case Style                                  | SM3030-6 3.0 x 3.0 x 1.4 mm Nominal Footprint |       |     |      |       |       |
| Lid Symbolization, Y=year, WW=week, S=shift | 822 <u>YWWS</u>                               |       |     |      |       |       |

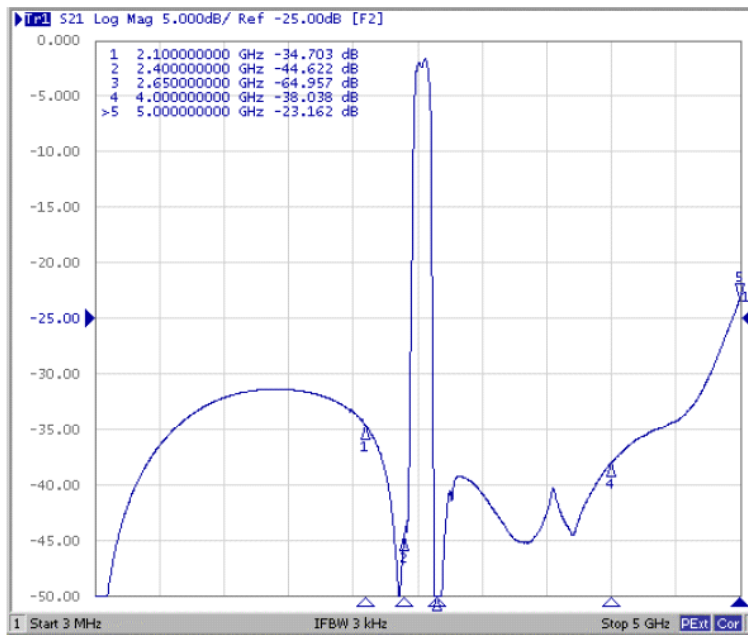
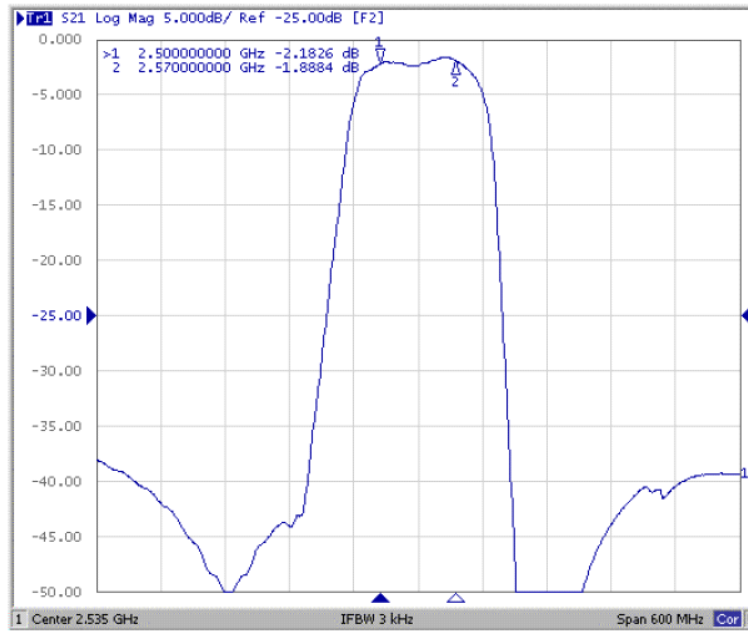
#### Electrical Connections

| Connection          | Terminals |
|---------------------|-----------|
| Port 1              | Input     |
| Port 2              | Output    |
|                     | Ground    |
| All others          |           |
| Dot indicates Pin 1 |           |

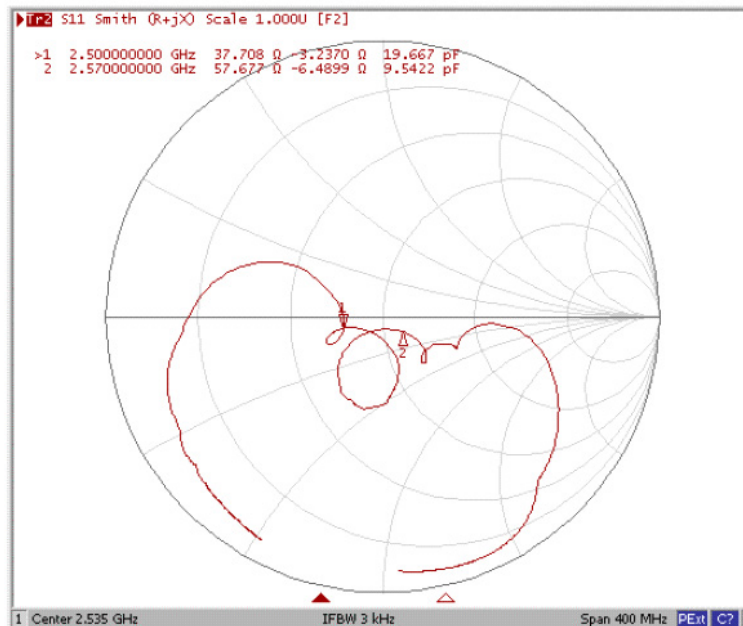
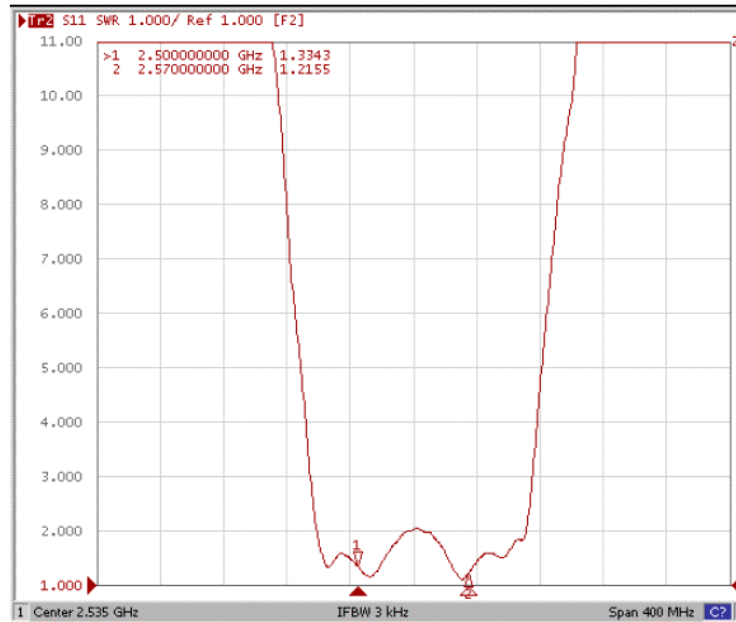
 **CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

#### NOTES:

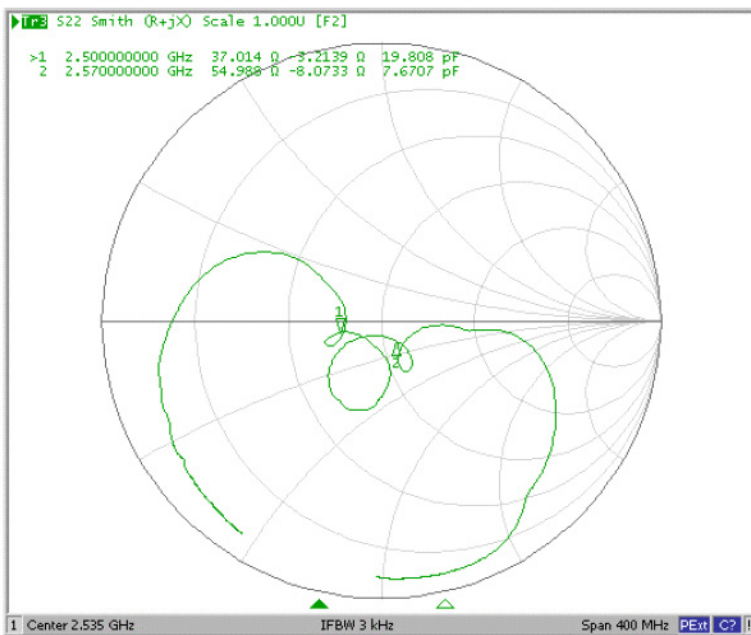
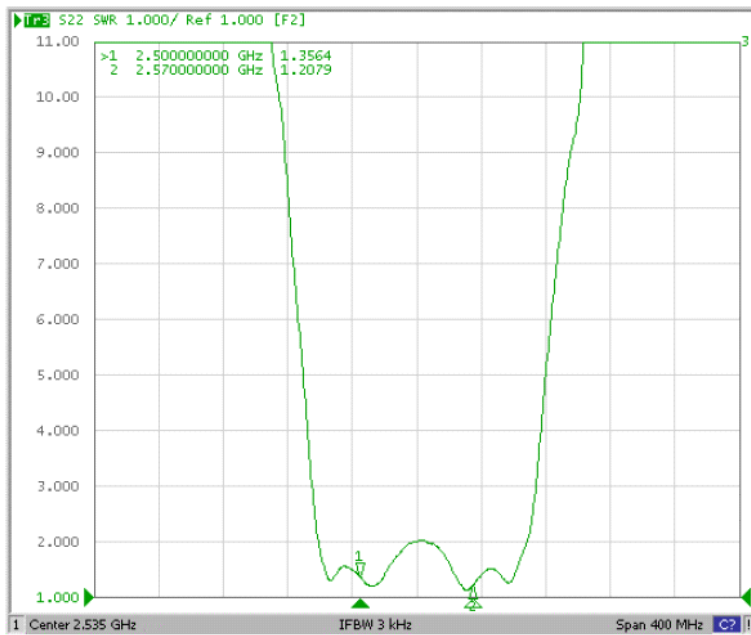
1. The design, manufacturing process, and specifications of this device are subject to change.
2. US or International patents may apply.
3. RoHS compliant from the first date of manufacture.



# S11

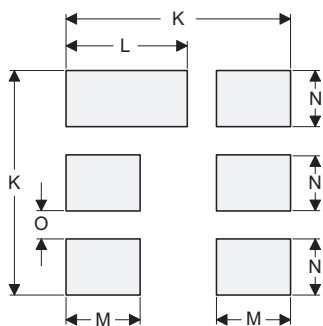
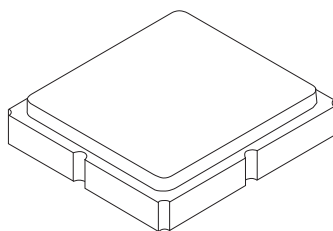


## S22



# SM3030-6 Case

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



PCB Footprint Top View

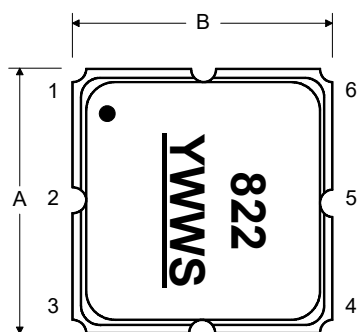
Case and PCB Footprint Dimensions

| Dimension | mm   |      |      | Inches |       |       |
|-----------|------|------|------|--------|-------|-------|
|           | Min  | Nom  | Max  | Min    | Nom   | Max   |
| A         | 2.87 | 3.00 | 3.13 | 0.113  | 0.118 | 0.123 |
| B         | 2.87 | 3.00 | 3.13 | 0.113  | 0.118 | 0.123 |
| C         | 1.12 | 1.25 | 1.38 | 0.044  | 0.049 | 0.054 |
| D         | 0.77 | 0.90 | 1.03 | 0.030  | 0.035 | 0.040 |
| E         | 2.67 | 2.80 | 2.93 | 0.105  | 0.110 | 0.115 |
| F         | 1.47 | 1.60 | 1.73 | 0.058  | 0.063 | 0.068 |
| G         | 0.72 | 0.85 | 0.98 | 0.028  | 0.033 | 0.038 |
| H         | 1.37 | 1.50 | 1.63 | 0.054  | 0.059 | 0.064 |
| I         | 0.47 | 0.60 | 0.73 | 0.019  | 0.024 | 0.029 |
| J         | 1.17 | 1.30 | 1.43 | 0.046  | 0.051 | 0.056 |
| K         |      | 3.20 |      |        | 0.126 |       |
| L         |      | 1.70 |      |        | 0.067 |       |
| M         |      | 1.05 |      |        | 0.041 |       |
| N         |      | 0.81 |      |        | 0.032 |       |
| O         |      | 0.38 |      |        | 0.015 |       |

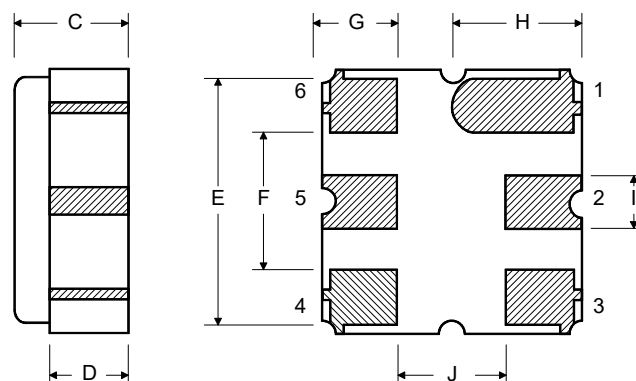
Case Materials

| Materials          |                                                          |
|--------------------|----------------------------------------------------------|
| Solder Pad Plating | 0.3 to 1.0 $\mu$ m Gold over 1.27 to 8.89 $\mu$ m Nickel |
| Lid Plating        | 2.0 to 3.0 $\mu$ m Nickel                                |
| Body               | Al <sub>2</sub> O <sub>3</sub> Ceramic                   |

Top View

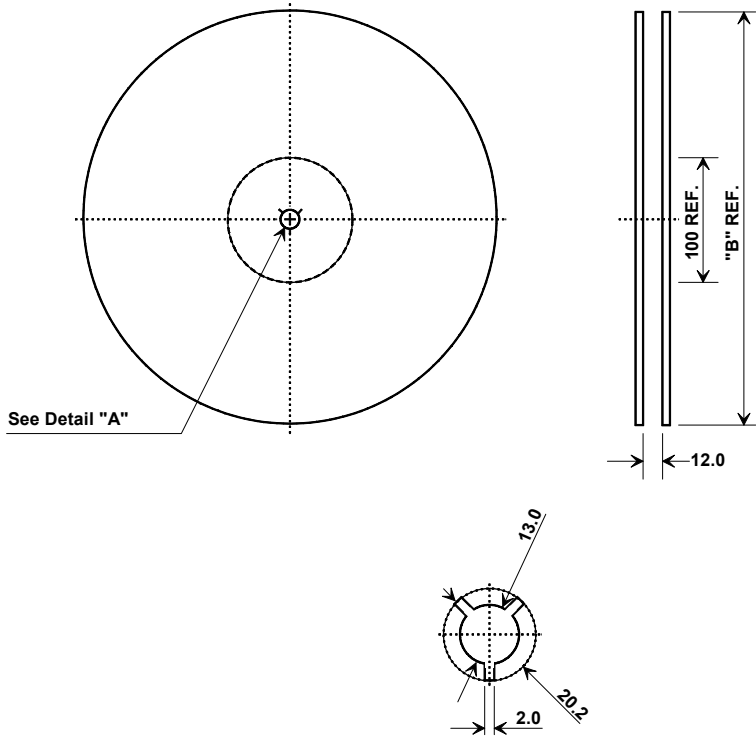


Bottom View



## Tape and Reel Specifications

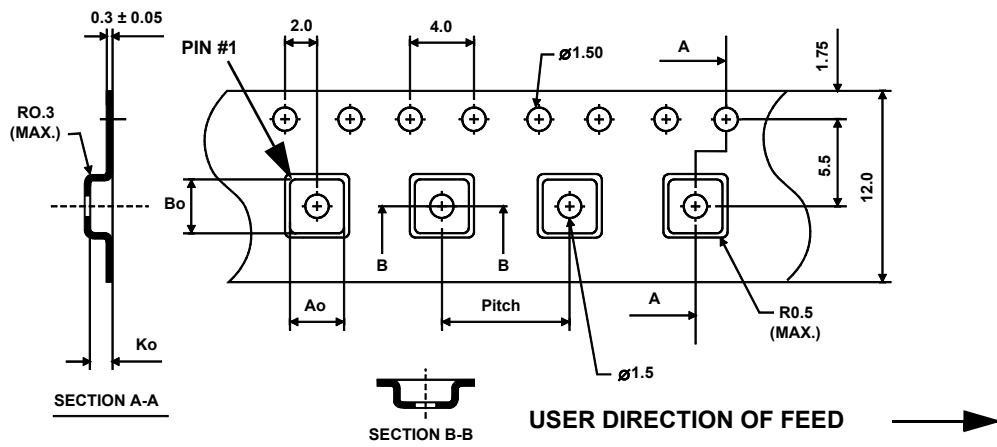
## Tape and Reel Standard per ANSI/EIA-481



| “B”    |             | Quantity Per Reel |
|--------|-------------|-------------------|
| Inches | millimeters |                   |
| 7      | 178         | 500               |
| 13     | 330         | 3000              |

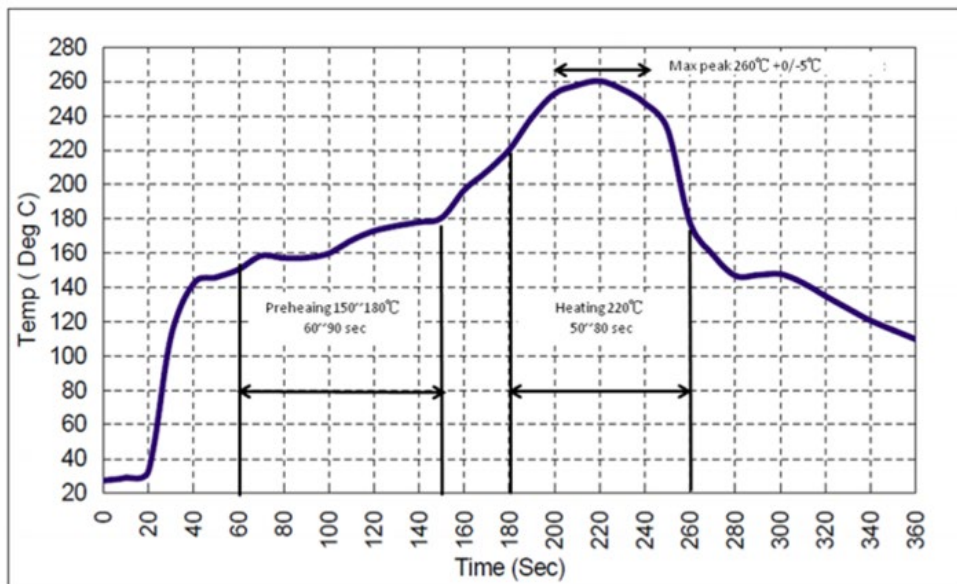
## COMPONENT ORIENTATION and DIMENSIONS

| Carrier Tape Dimensions |         |
|-------------------------|---------|
| Ao                      | 3.35 mm |
| Bo                      | 3.35 mm |
| Ko                      | 1.40 mm |
| Pitch                   | 8.0 mm  |
| W                       | 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.



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