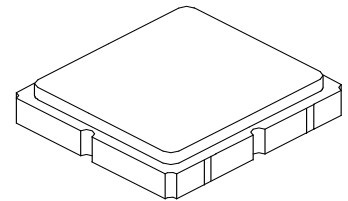


SF2240E

**2595 MHz
SAW Filter**



SM3030-6

- **Low-loss RF SAW Filter**
- **Surface Mount 3.0 x 3.0 x 1.3 mm Package**
- **Complies with Directive 2002/95/EC (RoHS)**
- **Moisture Sensitivity Level: 1**

Absolute Maximum Ratings

| Rating | Value | Units |
|---|------------|-------|
| Input Power Level | 10 | dBm |
| DC Voltage on any Non-ground Terminal | 3 | V |
| Operating Temperature Range | -30 to +85 | °C |
| Storage Temperature Range in Tape and Reel | -40 to +95 | °C |
| Solder Reflow Temperature, 10 seconds, 5 cycles maximum | 260 | °C |

Electrical Characteristics

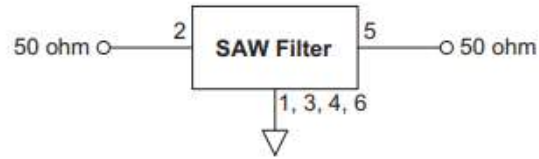
| Characteristic | Sym | Notes | Min | Typ | Max | Units |
|--|---|-------|-----|-------|-------|-------------------|
| Center Frequency | F_C | | | 2595 | | MHz |
| Maximum Insertion Loss, 2575 to 2615 MHz | IL | | | 3.2 | 4.0 | dB |
| Amplitude Ripple, 2575 to 2615 MHz | | | | 1.6 | 2.2 | dB _{P-P} |
| VSWR, 2575 to 2615 MHz | | | | 1.4:1 | 2.3:1 | |
| Attenuation Referenced to 0 dB: | | | | | | |
| DC to 1100 MHz | | | 37 | 42 | | dB |
| 1100 to 2100 MHz | | | 31 | 42 | | |
| 2100 to 2465 MHz | | | 40 | 43 | | |
| 2465 to 2530 MHz | | | 10 | 20 | | |
| 2665 to 2675 MHz | | | 10 | 30 | | |
| 2675 to 2695 MHz | | | 35 | 48 | | |
| 2695 to 4000 MHz | | | 30 | 36 | | |
| Frequency Temperature Coefficient | | | | -36 | | ppm/K |
| Source Impedance | Z_S | | | 50 | | Ω |
| Load Impedance | Z_L | | | 50 | | |
| Case Style | SM3030-6 3.0 x 3.0 mm Nominal Footprint | | | | | |
| Lid Symbolization (Y=year, WW=week, S=shift) dot=pin 1 indicator | 974, <u>YWWWS</u> | | | | | |
| Standard Reel Quantity | Reel Size 7 Inch | | | | | 500 Pieces/Reel |
| | Reel Size 13 Inch | | | | | 3000 Pieces/Reel |

 **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.

Filter Test Circuit

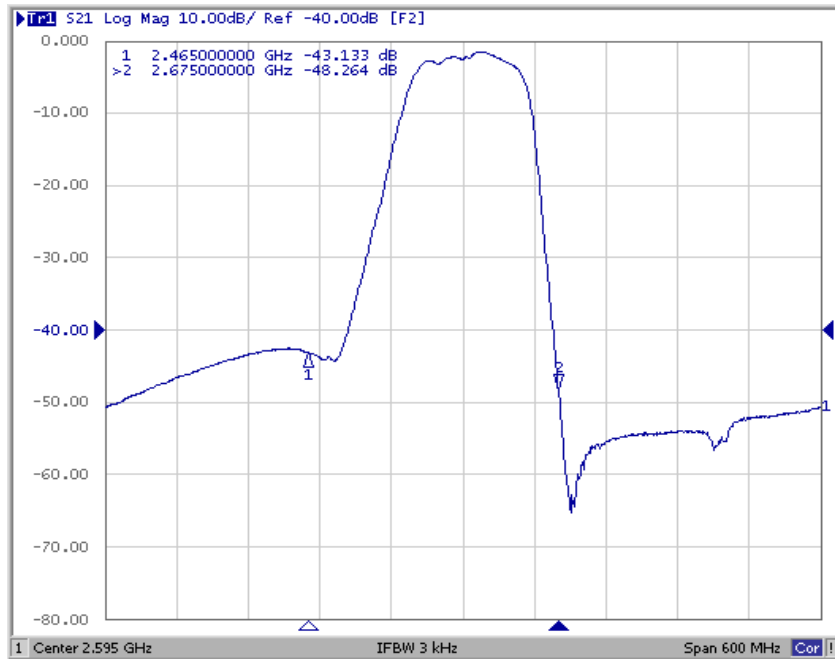


| Connection | Terminals |
|------------|------------|
| Input | 2 |
| Output | 5 |
| Ground | All Others |

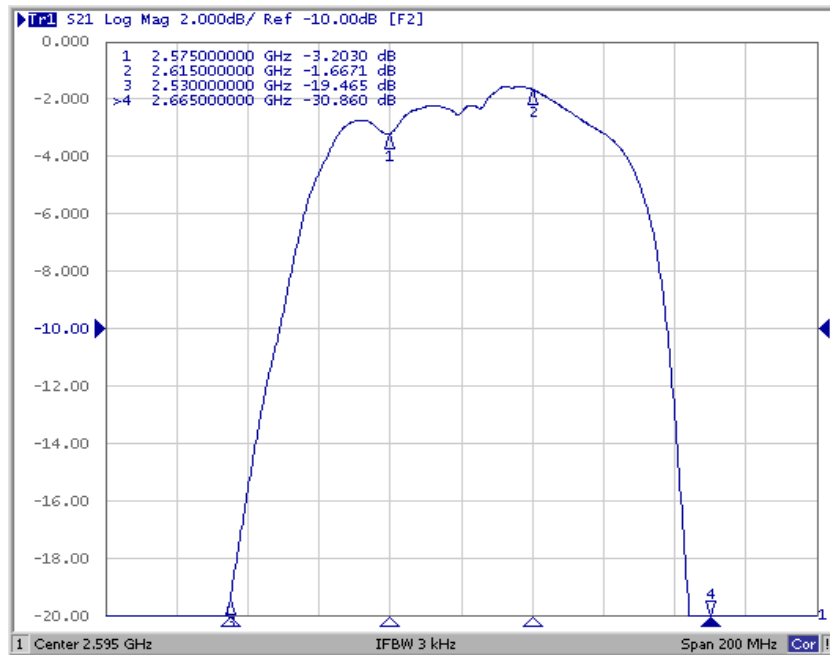
Filter Broadband Response, 10 to 4000 MHz



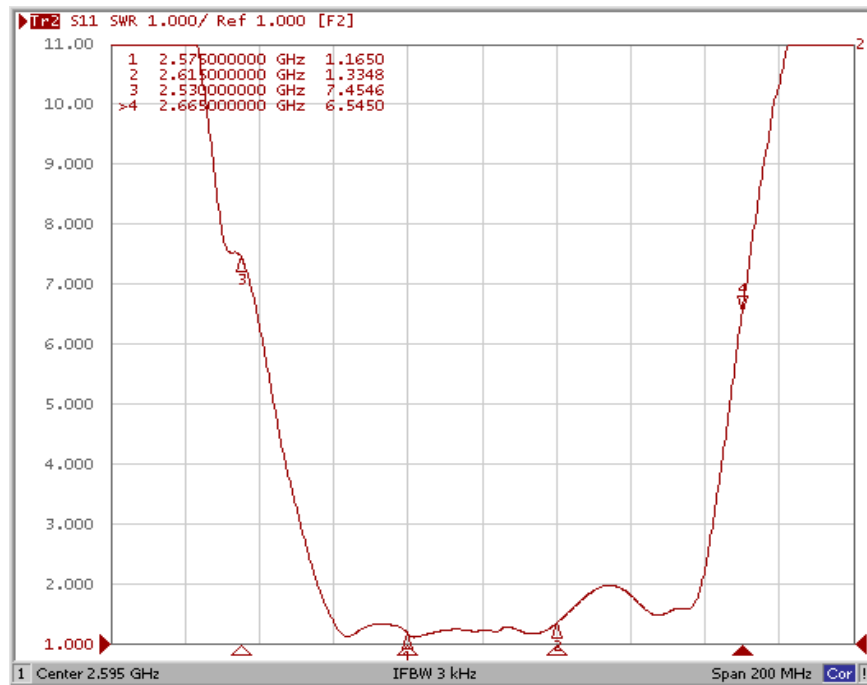
Filter Plot, 2295 to 2895 MHz



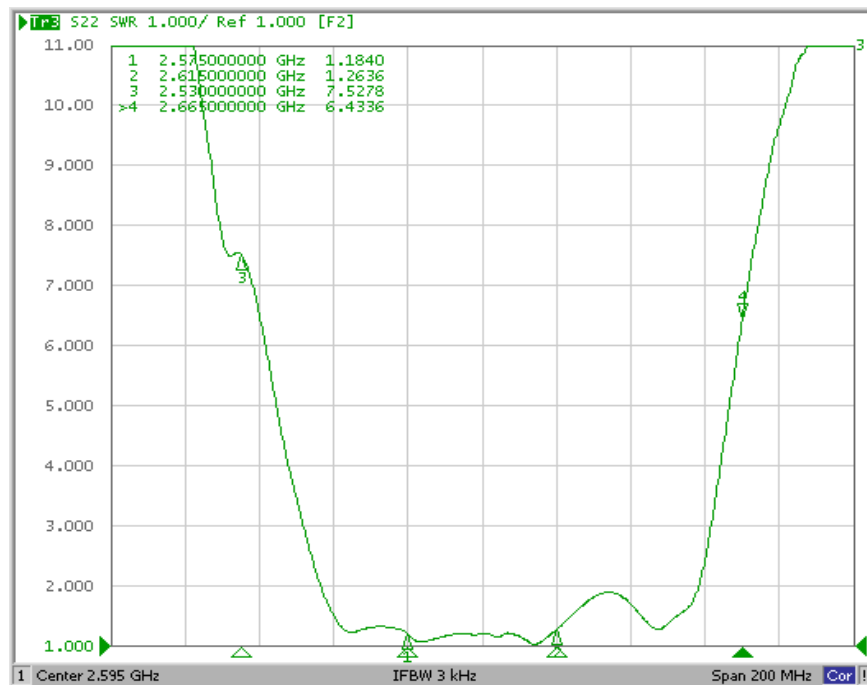
Filter Passband Plot, 2495 to 2695 MHz



Filter Input VSWR Plot, 2495 to 2695 MHz

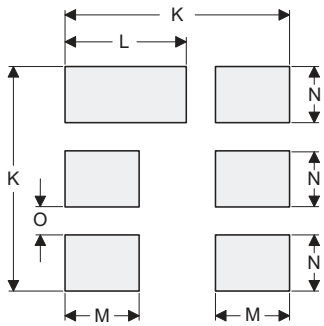
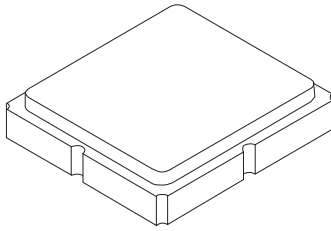


Filter Output VSWR Plot, 2495 to 2695 MHz



SM3030-6 Case

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



PCB Footprint Top View

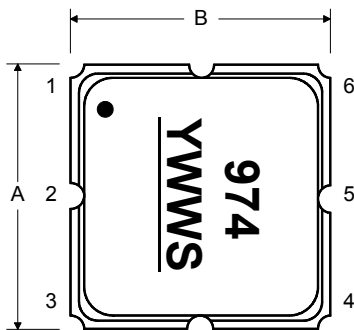
Case and PCB Footprint Dimensions

| 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 | |

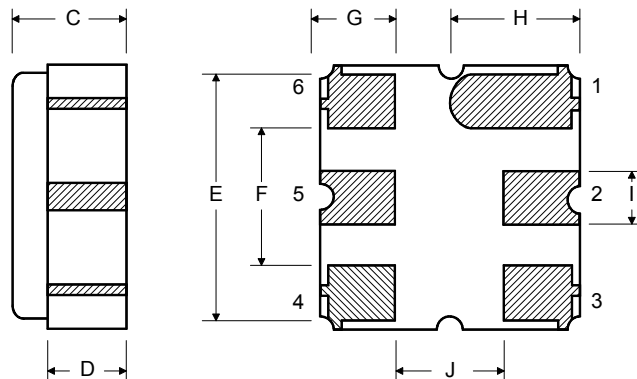
Case Materials

| Materials | |
|--------------------|--|
| Solder Pad Plating | 0.3 to 1.0 μm Gold over 1.27 to 8.89 μm Nickel |
| Lid Plating | 2.0 to 3.0 μm Nickel |
| Body | Al_2O_3 Ceramic |

TOP VIEW

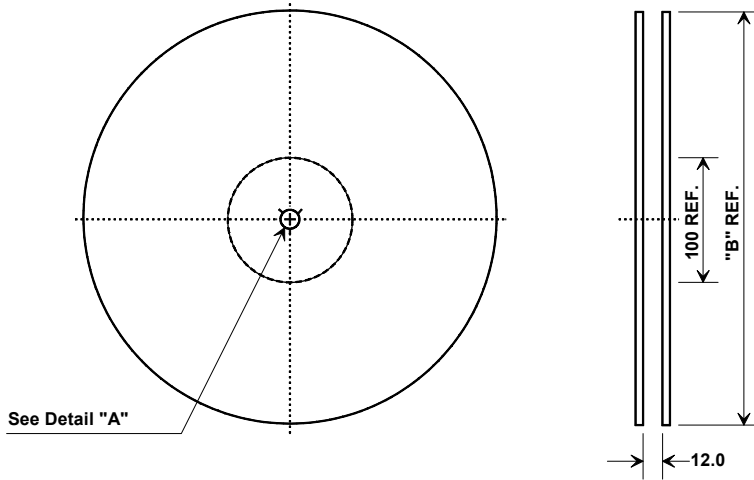


BOTTOM VIEW

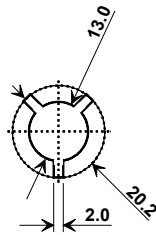


Tape and Reel Specifications

Tape and Reel Standard per ANSI/EIA-481

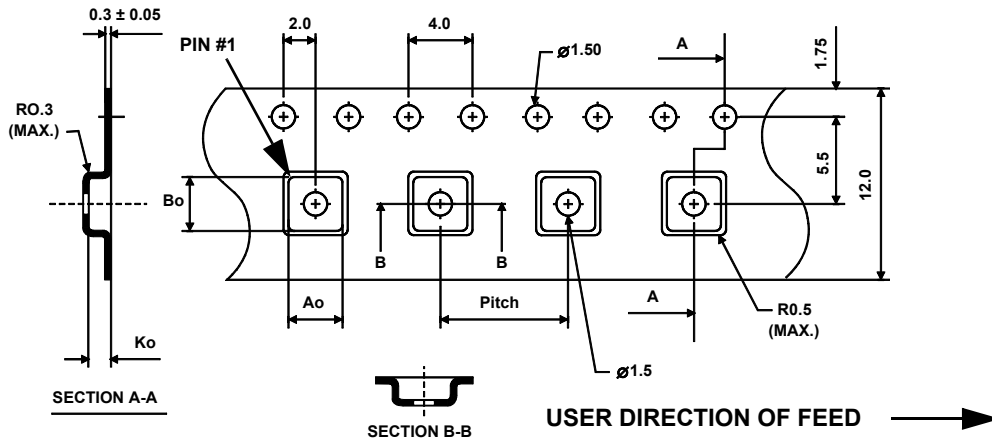


| "B" | | Quantity Per Reel |
|--------|-------------|-------------------|
| Inches | millimeters | |
| 7 | 178 | 500 |
| 13 | 330 | 3000 |



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.

