

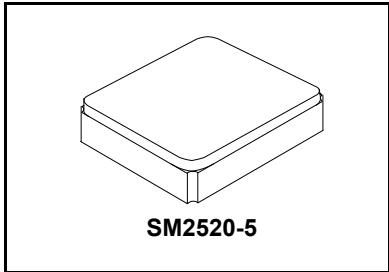


- RF SAW Filter, 2326.0 MHz
- 2.5 x 2.0 x 1.0 mm Surface-mount Case
- $Z_S = 50 \text{ ohm}$, $Z_L = 100 \text{ ohm}$
- Complies with Directive 2002/95/EC (RoHS)
- Tape and Reel Standard per ANSI/EIA-481
- Moisture Sensitivity Level: 1
- AEC-Q200 Qualified

RoHS
Compliant

SF1220G

2326.0 MHz
SAW Filter



Absolute Maximum Ratings

| Rating | Value | Units |
|--|----------------|-------|
| Maximum Input Power | +15 | dBm |
| Maximum DC Voltage Between any Two Terminals | 3 | V |
| Operating Temperature Range | -40 to +85 | °C |
| Storage Temperature Range in Tape and Reel | -40 to +85 | °C |
| Maximum Soldering Profile | 265°C for 10 s | |

Electrical Characteristics

| Characteristic | Sym | Notes | Min | Typ | Max | Units |
|--|------------|-------|-----|--------|-------|-------------------|
| Center Frequency | f_c | | | 2326 | | MHz |
| Maximum Insertion Loss, 2319 to 2333 MHz | IL_{MAX} | | | 2.7 | 3.2 | dB |
| Amplitude Ripple, 2319 to 2333 MHz | | | | 0.4 | 1.0 | dB _{P-P} |
| Group Delay Ripple, 2319 to 2333 MHz | | | | 7.3 | | ns _{P-P} |
| Group Delay, 2326 MHz | | | | 11 | | ns |
| VSWR, 2319 to 2333 MHz | | | | 1.85:1 | 2.1:1 | |
| Return Loss, 2319 to 2333 MHz | | | 6.5 | 9.6 | | dB |
| Source Impedance, Single Ended | | | | 50 | | Ω |
| Load Impedance, Balanced | | | | 100 | | Ω |
| Attenuation | | | | | | |
| 0.3 to 2175 MHz | | | 39 | 47 | | dB |
| 2175 to 2227 MHz | | | 25 | 40 | | |
| 2400 to 2426 MHz | | | 15 | 24 | | |
| 2426 to 2526 MHz | | | 35 | 41 | | |
| 2526 to 2700 MHz | | | 40 | 46 | | |

| | |
|---------------------------------------|---------------|
| Case Style | SM2520-4 |
| Lid Symbolization: Y = Year, W = Week | 3V, <u>YW</u> |

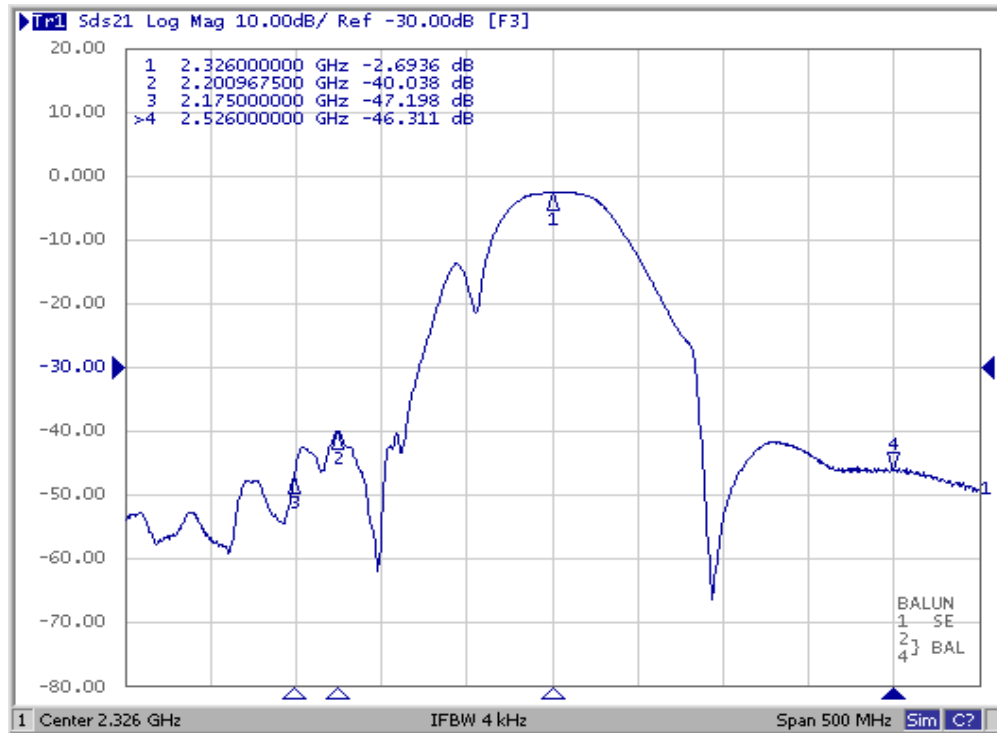


CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.

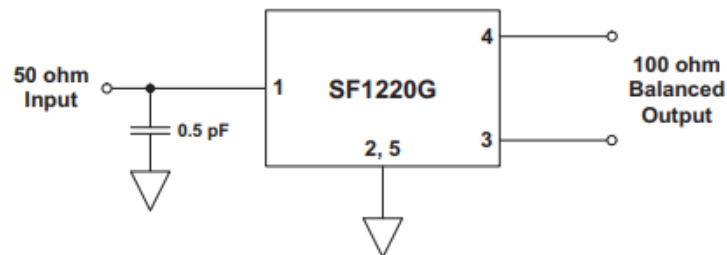
NOTES:

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.

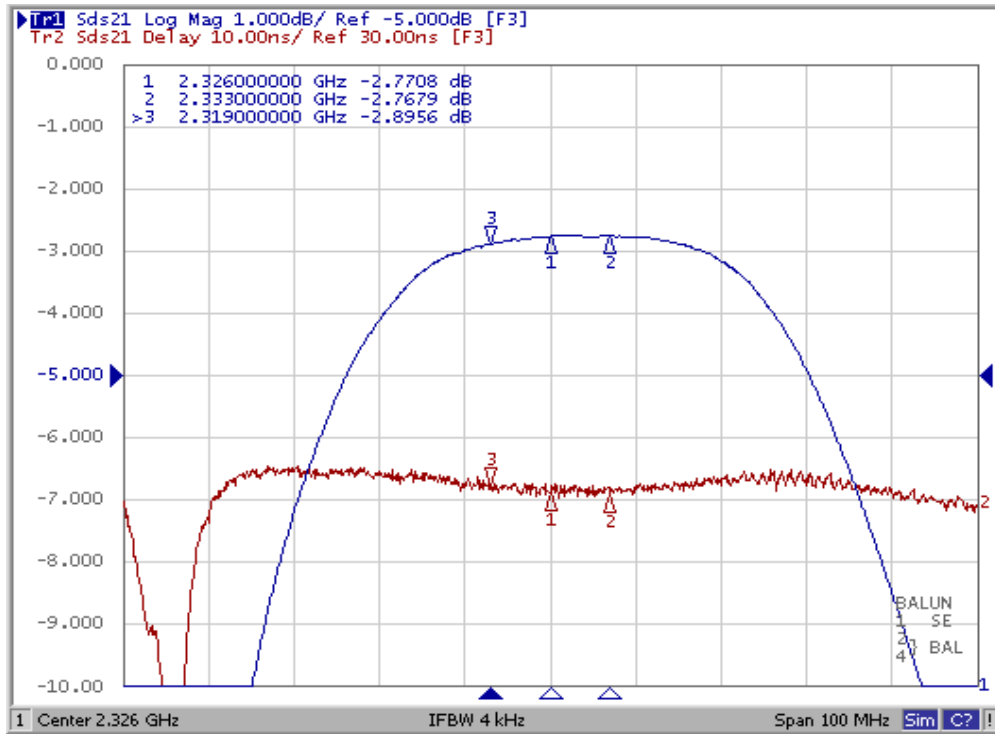
Filter Amplitude Response, 500 MHz Span:



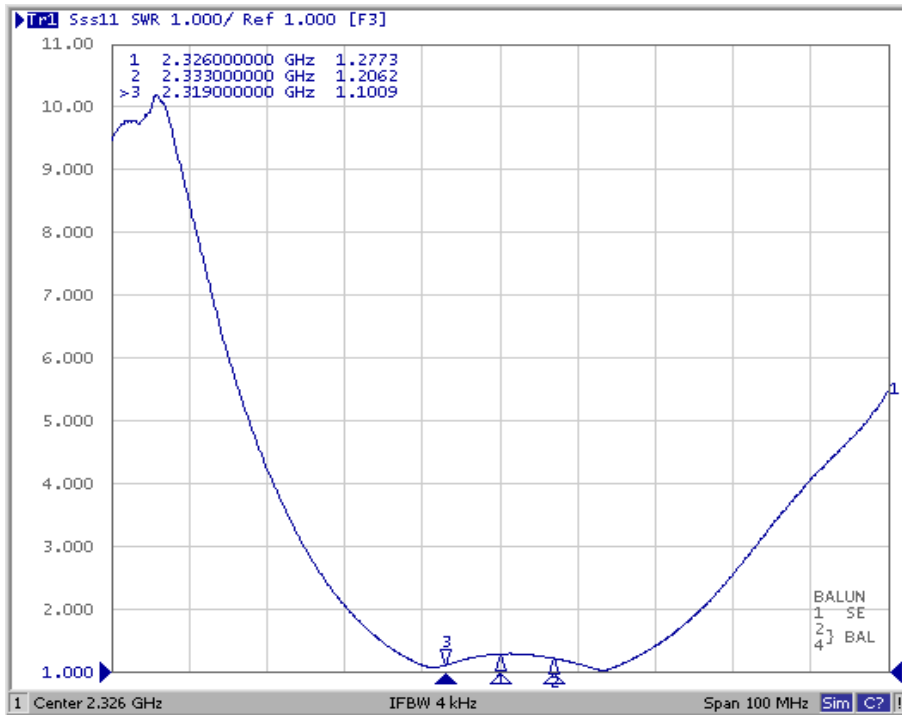
Test Circuit



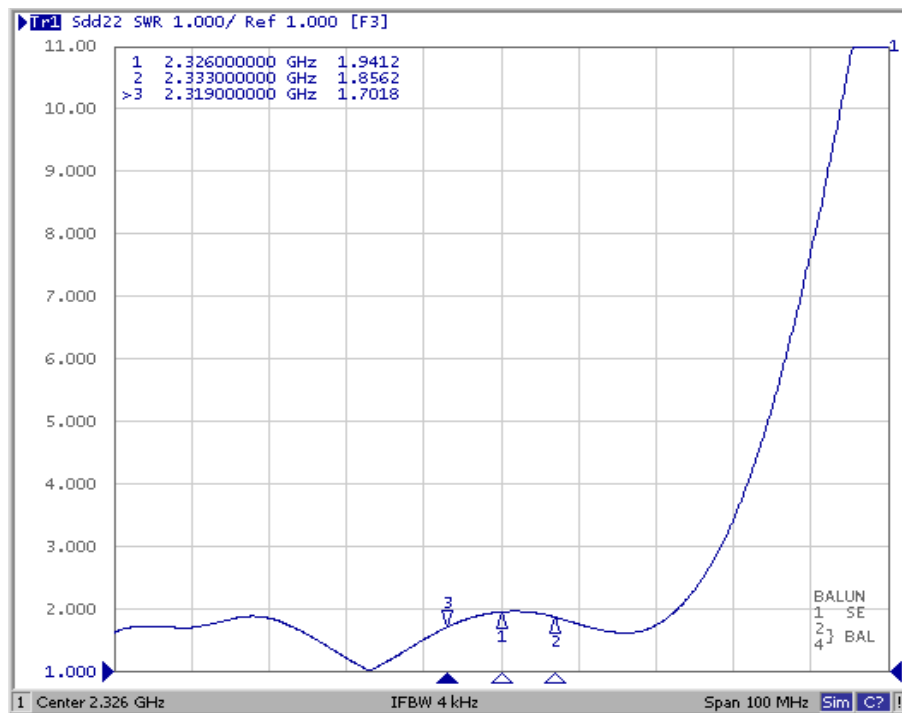
Filter Amplitude and Group Delay Response, 100 MHz Span:



Input VSWR Plot:

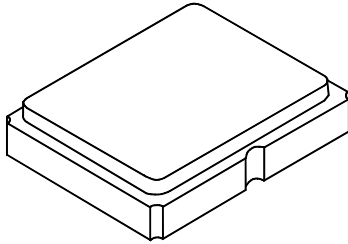


Output VSWR Plot:

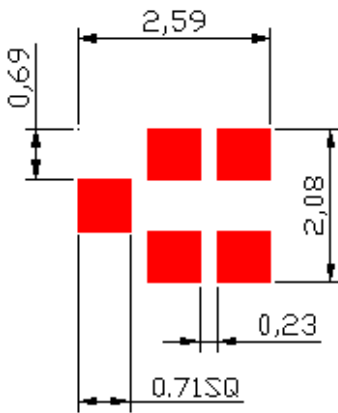


SM2520-5 Case

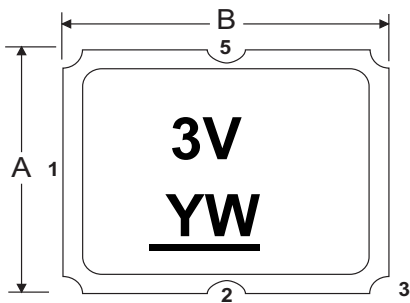
5-Terminal Ceramic Surface-mount Case 2.5 X 2.0 mm Nominal Footprint



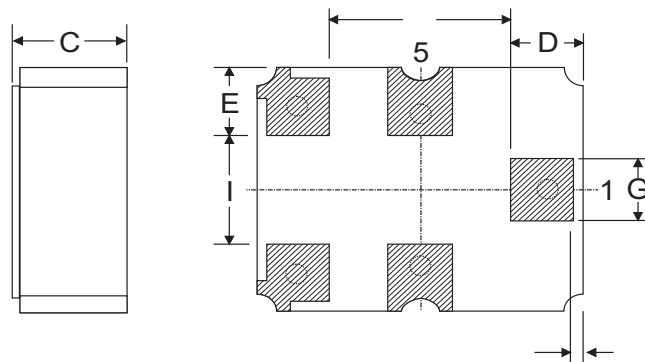
PCB Footprint



TOP VIEW



BOTTOM VIEW



Case Dimensions

| Dimension | mm | | | Inches | | |
|-----------|------|------|------|--------|-------|-------|
| | Nom | | | Nom | | |
| A | 1.88 | 2.00 | 2.12 | 0.074 | 0.079 | 0.083 |
| B | 2.38 | 2.50 | 2.62 | 0.094 | 0.098 | 0.103 |
| C | 0.92 | 1.00 | 1.08 | 0.036 | 0.039 | 0.043 |
| D | 0.42 | 0.55 | 0.68 | 0.017 | 0.022 | 0.027 |
| E | 0.42 | 0.55 | 0.68 | 0.017 | 0.022 | 0.027 |
| F | 1.27 | 1.40 | 1.53 | 0.050 | 0.055 | 0.060 |
| G | 0.37 | 0.50 | 0.63 | 0.015 | 0.020 | 0.025 |
| H | 0.06 | 0.08 | 0.10 | 0.002 | 0.003 | 0.004 |
| I | 0.77 | 0.90 | 1.03 | 0.030 | 0.035 | 0.041 |

Case Material

| 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 |

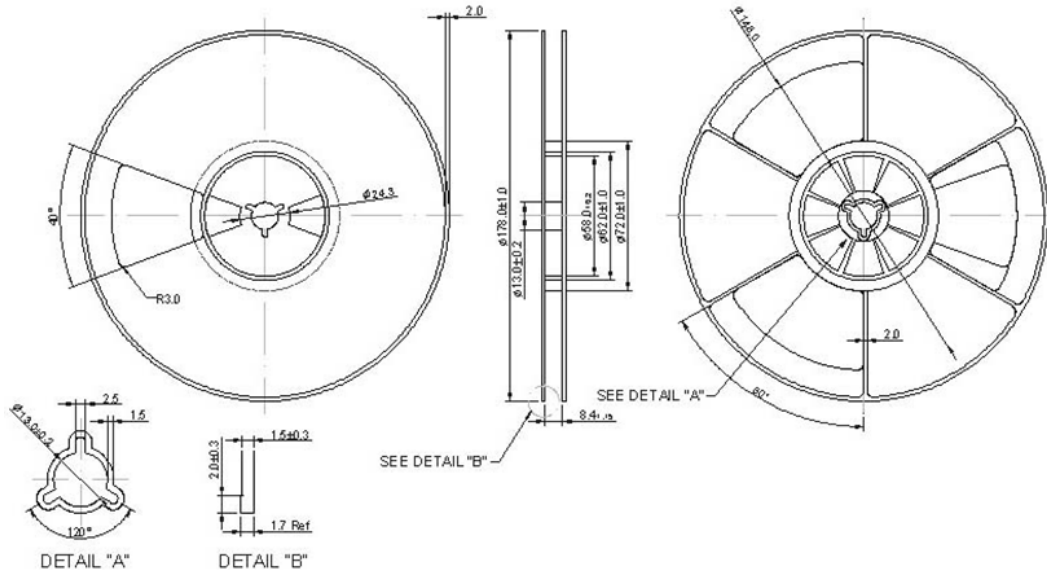
Electrical Connections

| Connection | Terminals |
|------------|-----------|
| Input | 1 |
| Output | 3, 4 |
| Ground | 2, 5 |

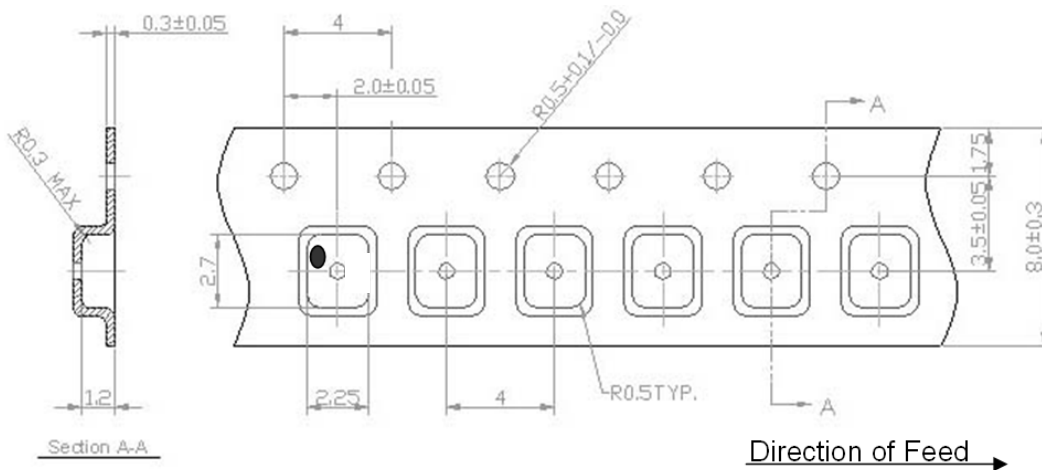
Reel Dimension

Tape and Reel Standard per ANSI/EIA-481

Reel Count:
7" = 2000
13" = 10,000



Tape Dimension



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.

