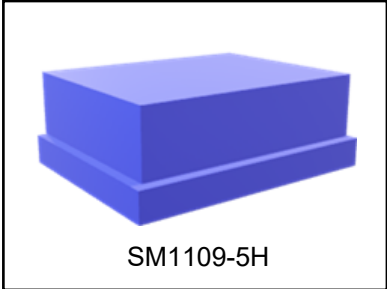


**2442 MHz
SAW Filter**

SF2513LA



- Complies with Directive 2002/95/EC (RoHS)
- AEC-Q200 Qualified

Absolute Maximum Ratings

| Rating | Value | Units |
|---|-------------|-------|
| Input Power Level:25dBm (2402.5~2481.5MHz) (Ta=+50deg C,5000h) | | |
| Maximum DC Voltage Between any Two Terminals | 5 | V |
| Operating Temperature Range | -40 to +85 | °C |
| Storage Temperature Range in Tape and Reel | -55 to +125 | °C |
| ESD: 50 V (MM), 100 V (HBM) | | |
| Moisture sensitivity level: 1 | | |

ELECTRICAL CHARACTERISTICS:

Terminating source impedance : $Z_s = 50 \parallel 8.2nH \ \Omega$ (Single-ended)

Terminating load impedance : $Z_L = 50 \parallel 6.2nH \ \Omega$ (Single-ended)

| Item | Unit | Min. | Typ. | Max. | Note |
|--|---------------|------|------|------|------------|
| Center Frequency Fc | MHz | - | 2442 | | - |
| Insertion Loss (2402.5~2421.5MHz) | IL dB(*1)(*2) | - | 1.1 | 2.2 | CH1 |
| Insertion Loss (2407.5~2471.5MHz) | IL dB(*1)(*2) | | 1.0 | 1.9 | CH2 to 11 |
| Insertion Loss (2457.5~2476.5MHz) | IL dB(*1)(*2) | | 1.1 | 1.8 | CH12 |
| Insertion Loss (2462.5~2481.5MHz) | IL dB(*1)(*2) | | 1.2 | 2.0 | CH13 |
| Insertion Loss (2402.5~2481.5MHz) | IL dB(*1)(*2) | - | 1.2 | 1.7 | +25 °C |
| Amplitude Ripple (2402.5~2481.5MHz) | dB | - | 0.8 | 2.6 | Any 19 MHz |
| Input VSWR (2402.5~2481.5MHz) | | | 1.3 | 2.1 | |
| Output VSWR (2402.5~2481.5MHz) | | | 1.2 | 2.1 | |
| Attenuation (reference level from 0 dB) | | | | | |

| | |
|-------------------|-----------|
| Case Style | SM1109-5H |
| Lid Symbolization | R |



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.

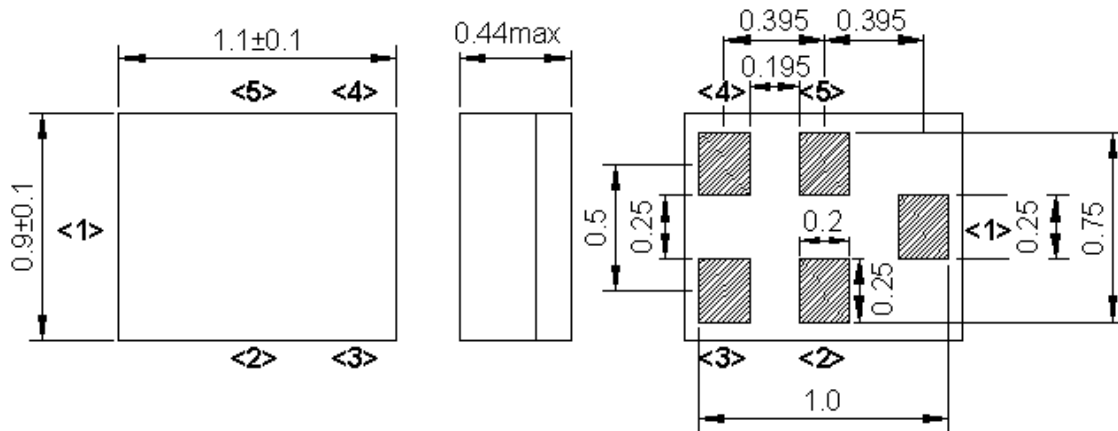
| | | | | | |
|-----------------|--------|----|----|---|--------------|
| 699 ~ 960 MHz | dB | 33 | 37 | - | - |
| 1425 ~ 2170 MHz | dB | 25 | 28 | - | - |
| 2300 ~ 2370 MHz | dB(*3) | 28 | 37 | - | |
| 2370 ~ 2375 MHz | dB(*3) | 10 | 35 | - | |
| 2375 ~ 2380 MHz | dB(*3) | 4 | 22 | - | |
| 2500 ~ 2505 MHz | dB(*3) | 3 | 22 | - | -30 to+85°C- |
| | dB(*3) | 12 | 22 | - | +25°C |
| 2505 ~ 2510 MHz | dB(*3) | 9 | 35 | - | - |
| 2510 ~ 2570 MHz | dB(*3) | 21 | 34 | - | |
| 2570 ~ 2690 MHz | dB | 30 | 33 | - | |
| 2690 ~ 7500 MHz | dB | 27 | 32 | - | |
| 4900 ~ 5805 MHz | dB | 35 | 41 | - | |
| 7200 ~ 7500 MHz | dB | 30 | 39 | - | |

(*1) Specification of insertion loss excludes loss that comes from the test board.

(*2) Integrated Insertion Loss over 19MHz CH BW.

(*3) Integrated attenuation over 5MHz CH BW.

Outline



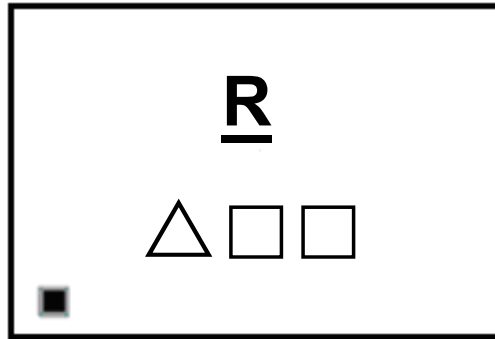
Drawing

Pin Configuration

| Pin assignment | | |
|----------------|----------|-------------|
| Pin No. | Pin name | Description |
| 1 | In | Input |
| 2 | GND | Ground |
| 3 | GND | Ground |
| 4 | Out | Output |
| 5 | GND | Ground |

Figure 1. Dimensions and Pin Assignment

Top View (Mass Production)



Marking name : R

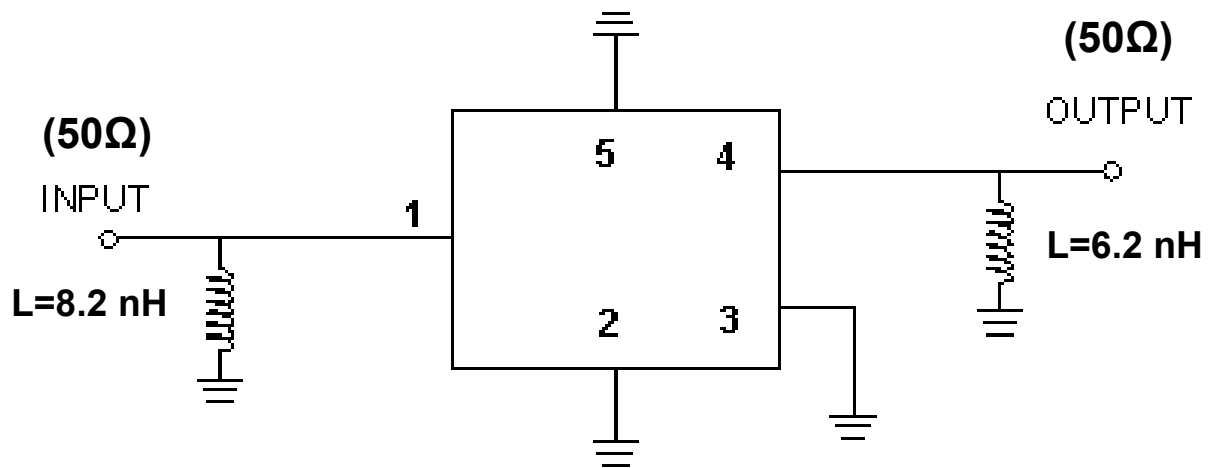
△ : Date Code

□ □ : Lot No. (Indicated by 0~9 or A to Z and a to z, except I, O, i, o and l)

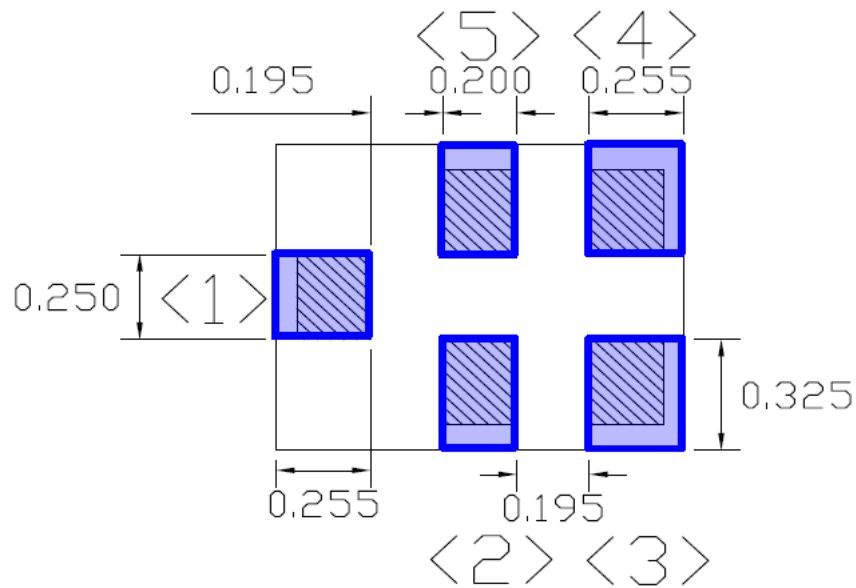
Product date Code (EIAJ)

| Year | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 2017 / 2021 | A | B | C | D | E | F | G | H | J | K | L | M |
| 2018 / 2022 | N | P | Q | R | S | T | U | V | W | X | Y | Z |
| 2019 / 2023 | a | b | c | d | e | f | g | h | j | k | l | m |
| 2020 / 2024 | n | p | q | r | s | t | u | v | w | x | y | z |

Measurement Circuit

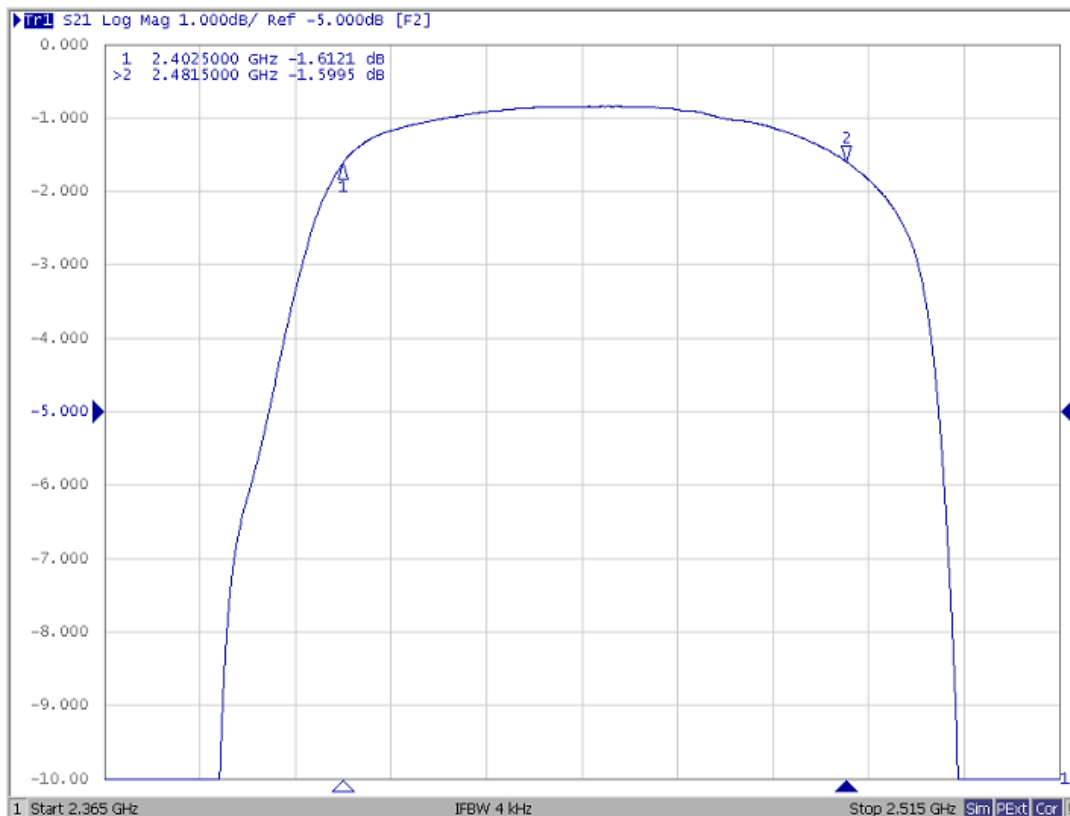
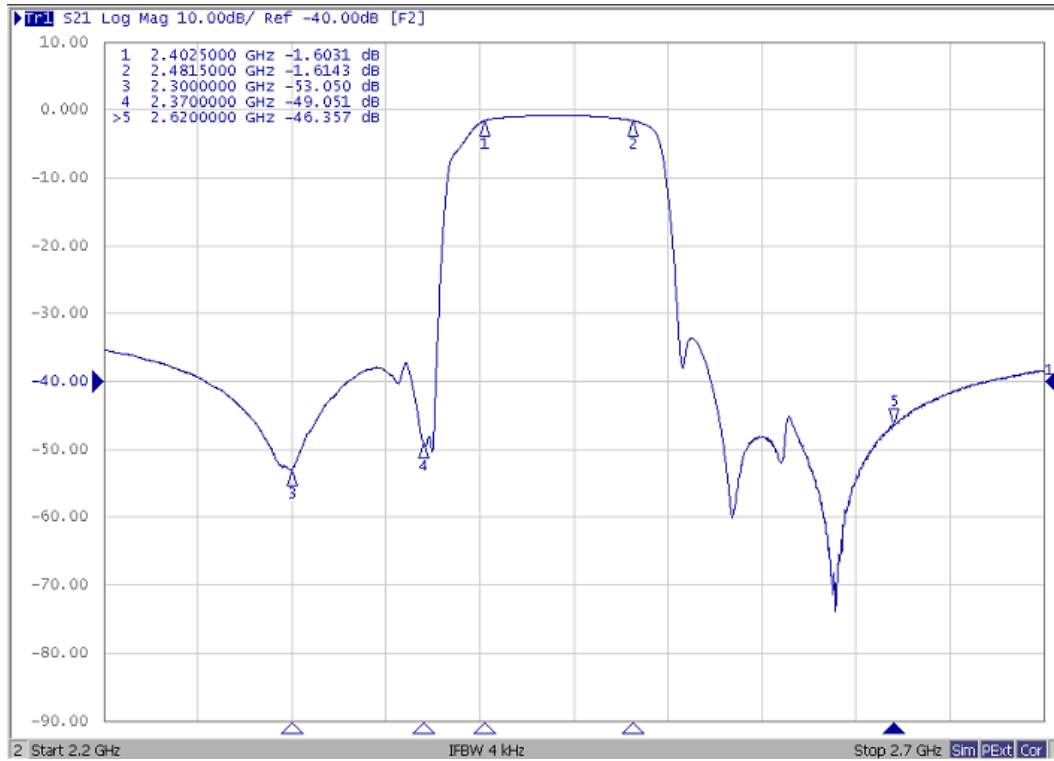


PCB Footprint

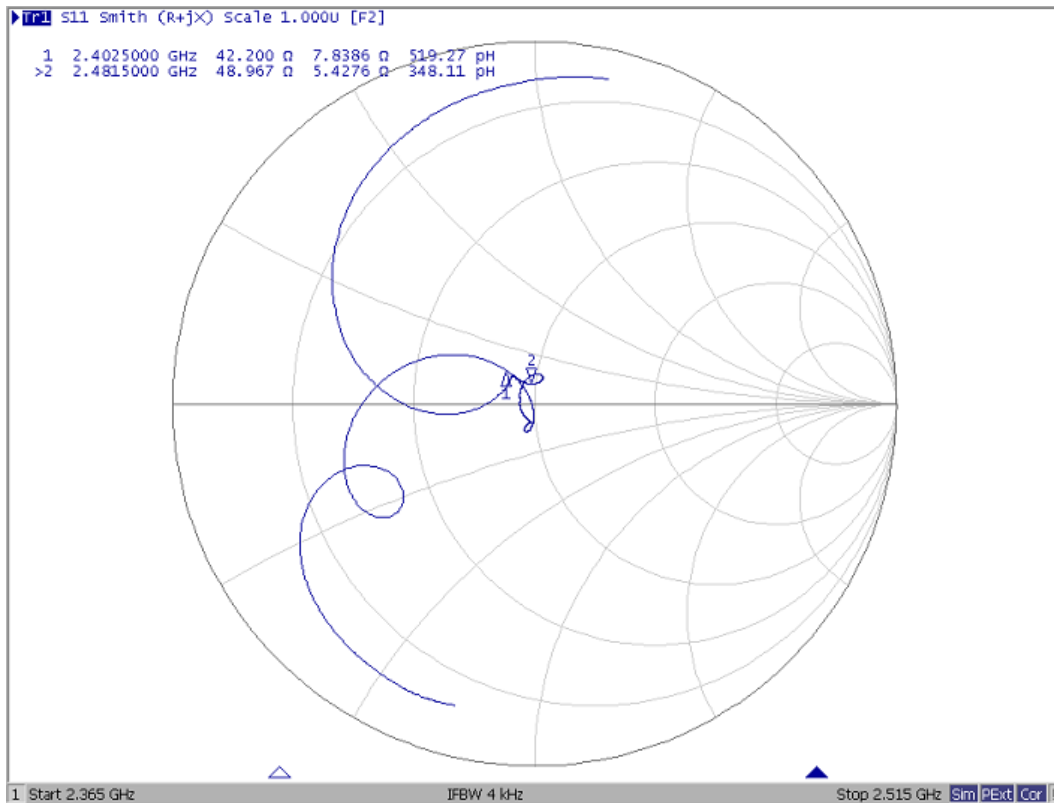
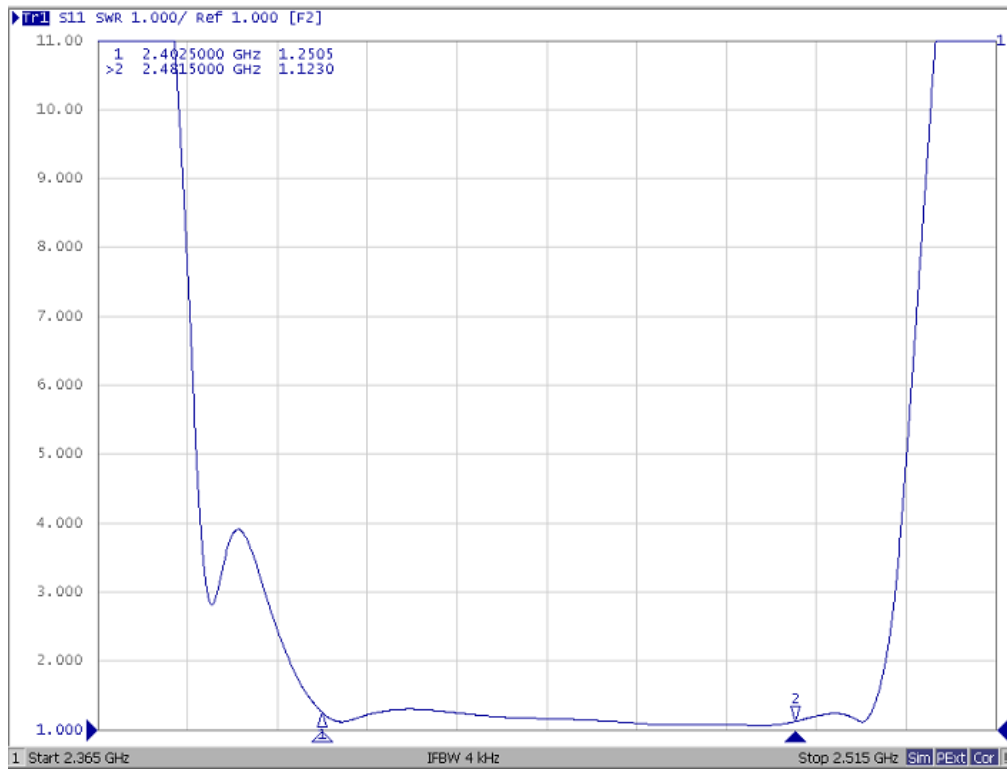


Frequency Characteristics

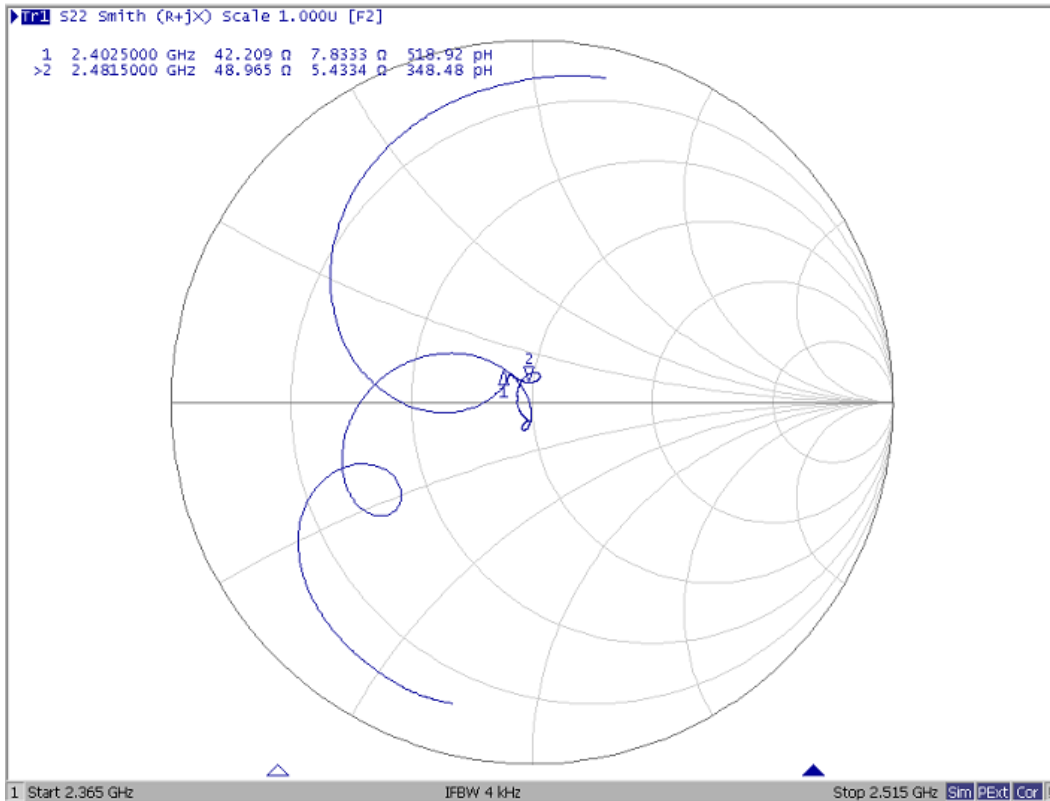
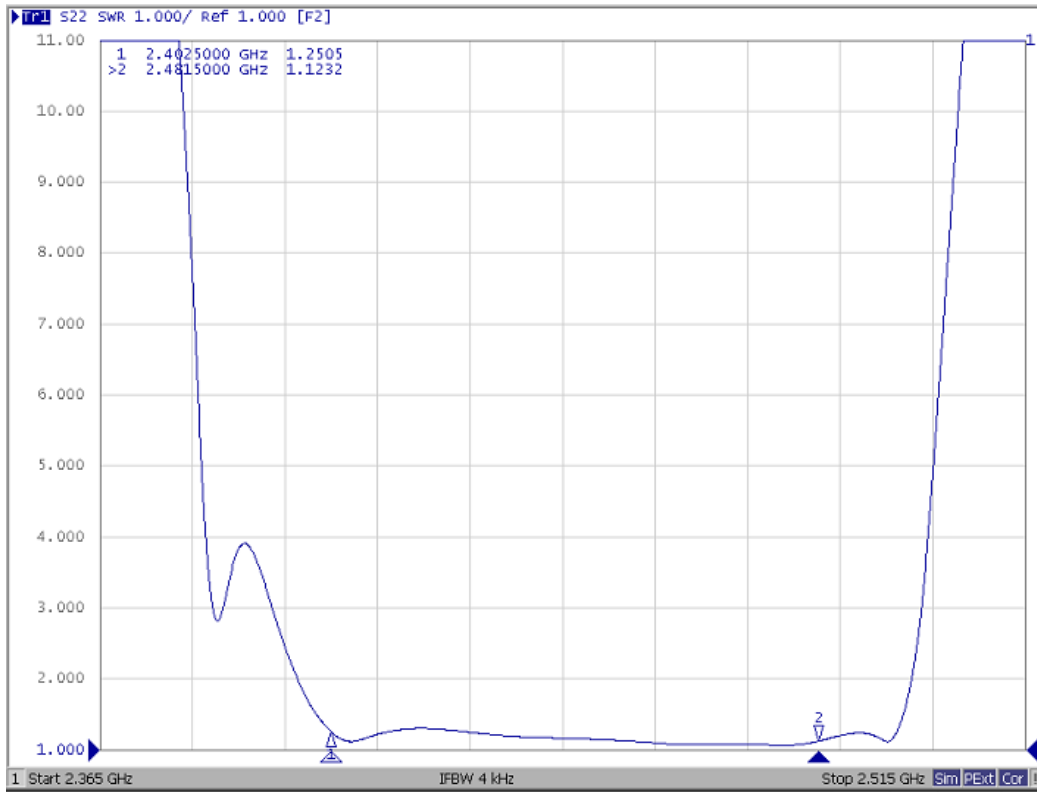
Passband



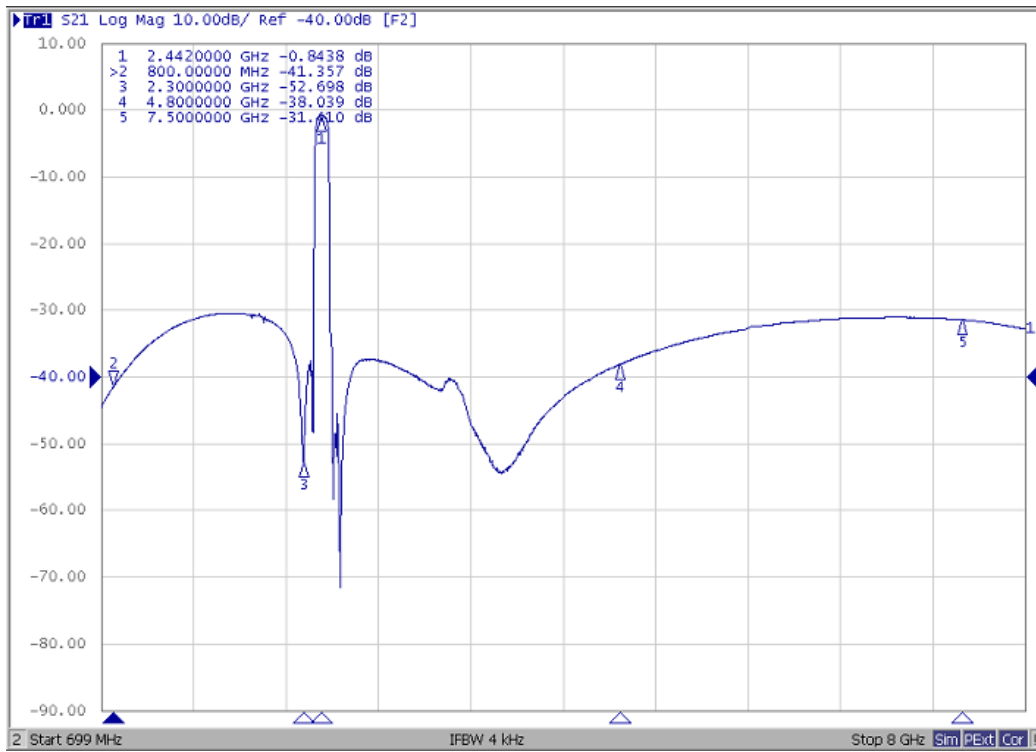
Input Port



Output Port



Wide



Packing

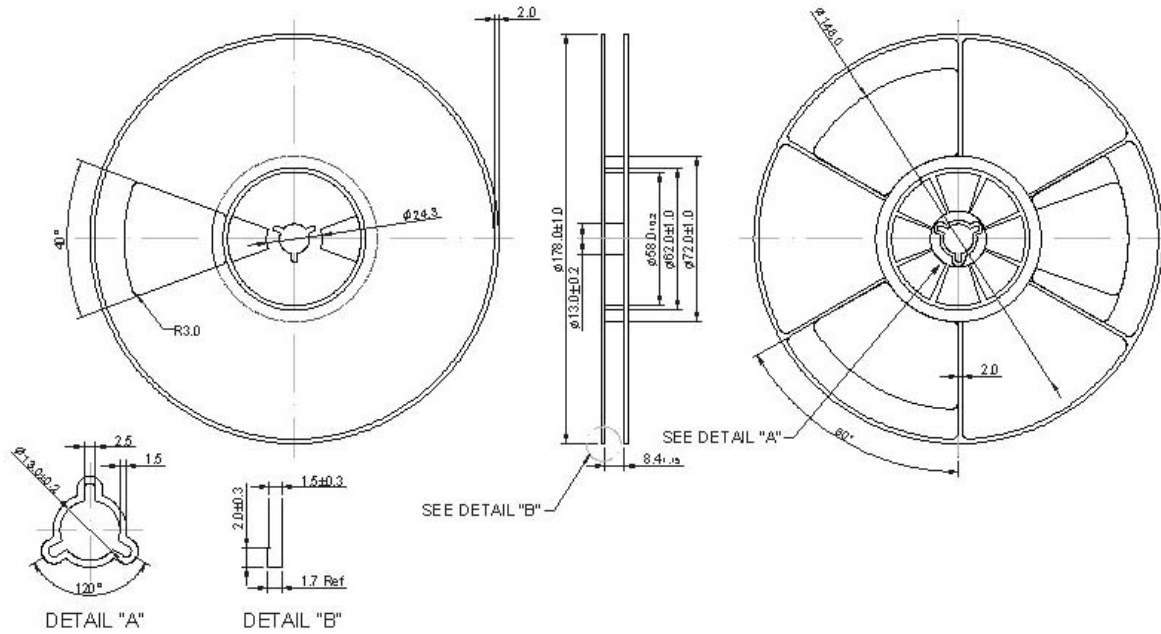
Reel Dimension

Tape and Reel Standard per ANSI/EIA-481

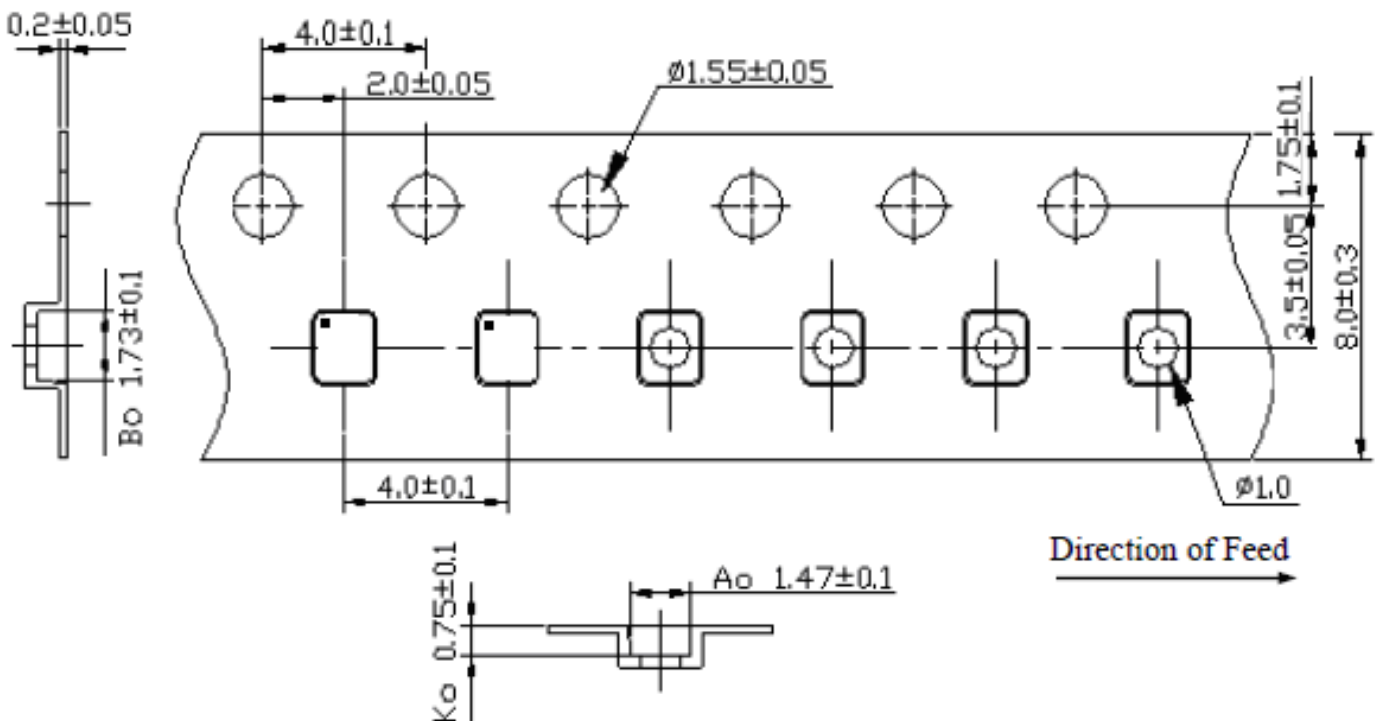
Reel Count

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 245~260°C peak (min. 10sec).
4. Time : 2 times.

