

# RSFP2312E

## LTE Band 40(2300~2400MHz) Band Pass Filter



### Description

RSFP2312E is a miniature filter designed for LTE Band40 application. RSFP2312E is designed with Film Bulk Acoustic Resonator (FBAR) technology. Typical insertion loss in the pass band is less than 2.4dB. Typical rejection at the WiFi and LTE41 band are more than 35dB.

### Features

- ✧ For LTE-Band 40 Full band application
- ✧ Plastic Chip Scale Package(CSP)
- ✧ Miniature Size
  - 1.1 mm x 0.9 mm x 0.6 mm
- ✧ Low Insertion Loss
- ✧ High Rejection at WiFi and LTE41 bands
- ✧ High Power Handling
- ✧ Low Temperature Coefficient of Frequency
- ✧ Excellent ESD protection ability
- ✧ RoHS Compliant, Pb-Free Module Package
- ✧ Moisture Sensitivity: MSL3
- ✧ Storage Temperature: -40 to +85°C
- ✧ Operable Temperature: -30 to +85°C



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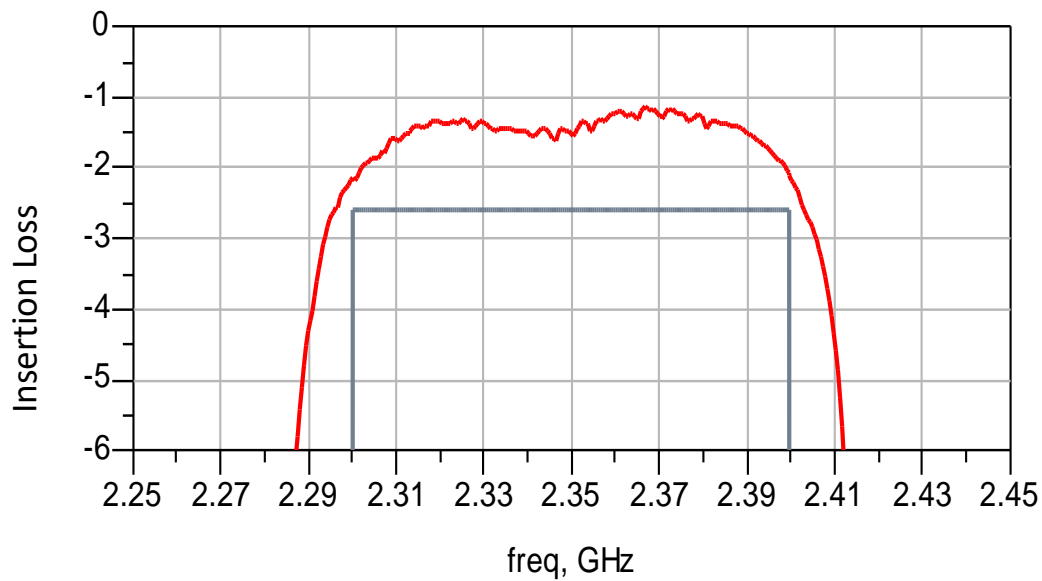
### Electrical Specification

Parameter (Operable Temperature)	T (+25°C)			T (-30°C)			T (+85°C)			Unit
	Min	Typ	Max	Min	Typ	Max	Min	Typ	Max	
<b>Insertion Loss</b> (2300 ~ 2310 MHz)	\	-1.8	-2.6	\	-1.8	-2.9	\	-1.8	-2.5	dB
<b>Insertion Loss</b> (2310 ~ 2395 MHz)	\	-1.5	-2.4	\	-1.5	-2.4	\	-1.6	-2.6	dB
<b>Insertion Loss</b> (2395 ~ 2400 MHz)	\	-2.1	-3.0	\	-1.8	-2.7	\	-2.6	-3.2	dB
<b>Ripple</b> (2300 ~ 2310 MHz)	\	0.5	0.7	\	0.7	0.7	\	0.4	0.7	dB
<b>Ripple</b> (2310 ~ 2395 MHz)	\	0.8	1.0	\	0.9	1.0	\	0.9	1.0	dB
<b>Ripple</b> (2395 ~ 2400 MHz)	\	0.4	0.8	\	0.3	0.8	\	0.5	0.8	dB
<b>Return Loss</b> (2300 ~ 2400 MHz)	-12.0	-15.0	\	-12.0	-15.0	\	-12.0	-15.0	\	dB
<b>Absolute Attenuation</b>	\			\			\			
750 ~ 1577 MHz	-25.0	-38.0	\	-25.0	-38.0	\	-25.0	-38.0	\	dB
1577 ~ 1680 MHz	-25.0	-30.0	\	-25.0	-30.0	\	-25.0	-30.0	\	dB
1845 ~ 1880 MHz	-24.0	-28.0	\	-24.0	-28.0	\	-24.0	-28.0	\	dB
2110 ~ 2170 MHz	-25.0	-28.0	\	-25.0	-28.0	\	-25.0	-28.0	\	dB
2420 ~ 2427 MHz	-15.0	-53.0	\	-15.0	-30.0	\	-35.0	-60.0	\	dB
2427 ~ 2460 MHz	-45.0	-60.0	\	-45.0	-60.0	\	-45.0	-60.0	\	dB
2460 ~ 2500 MHz	-35.0	-45.0	\	-35.0	-45.0	\	-35.0	-45.0	\	dB
4600 ~ 4800 MHz	-35.0	-45.0	\	-35.0	-45.0	\	-35.0	-45.0	\	dB
6900 ~ 7200 MHz	-15.0	-34.0	\	-15.0	-34.0	\	-15.0	-34.0	\	dB

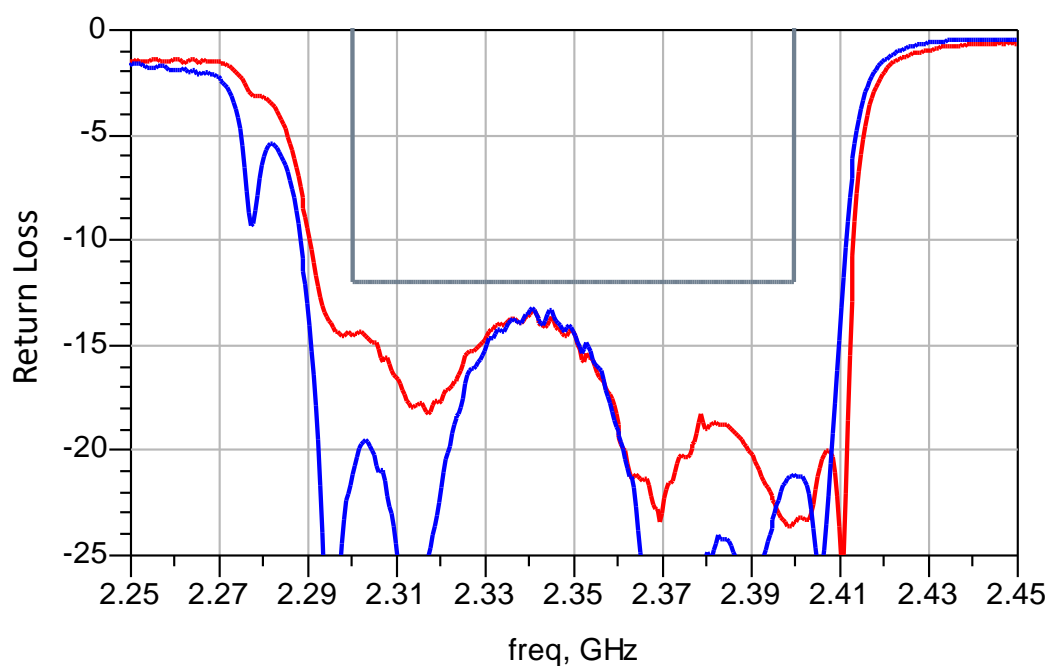
\* **Typ Data** is the integrated value of the linear S-parameter over indicated band.

### Typical Performance at Tc=25° C

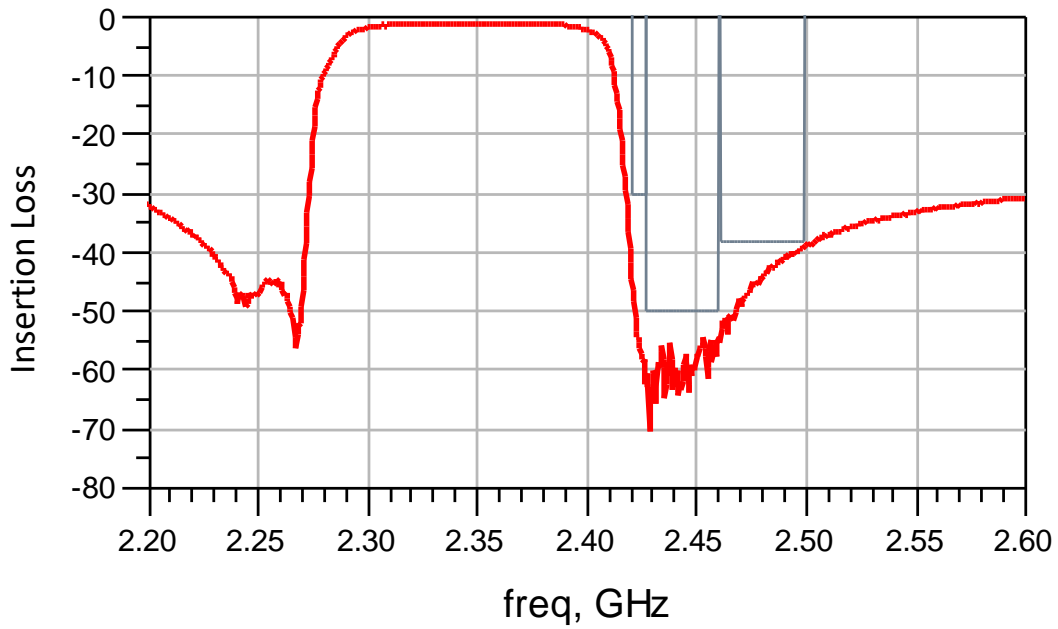
#### Passband Insertion Loss



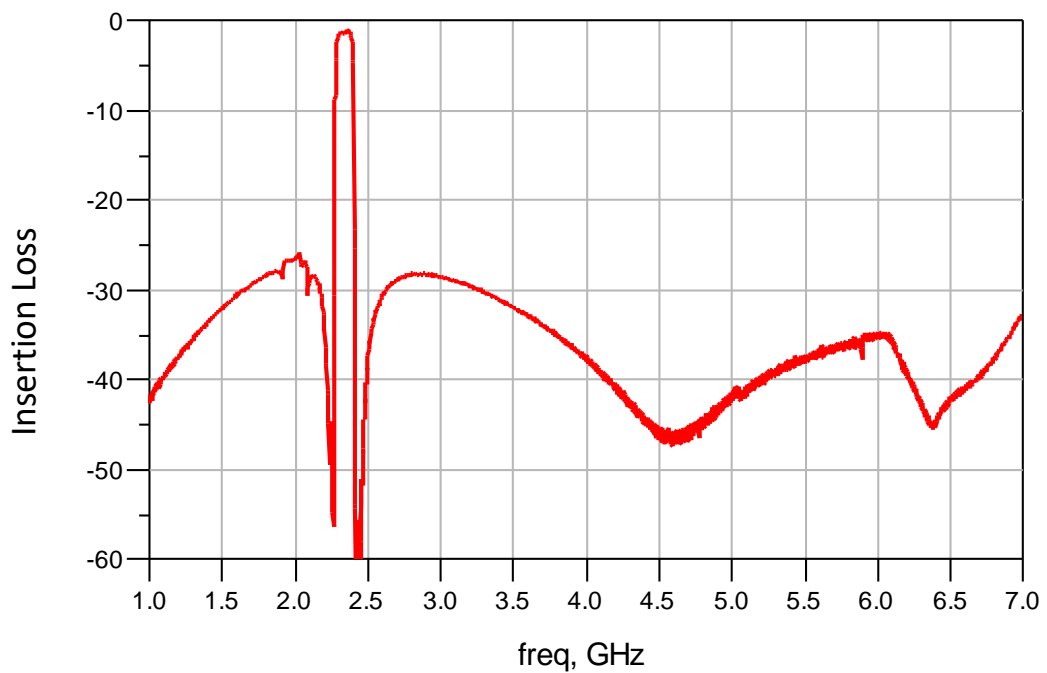
#### Passband Return Loss



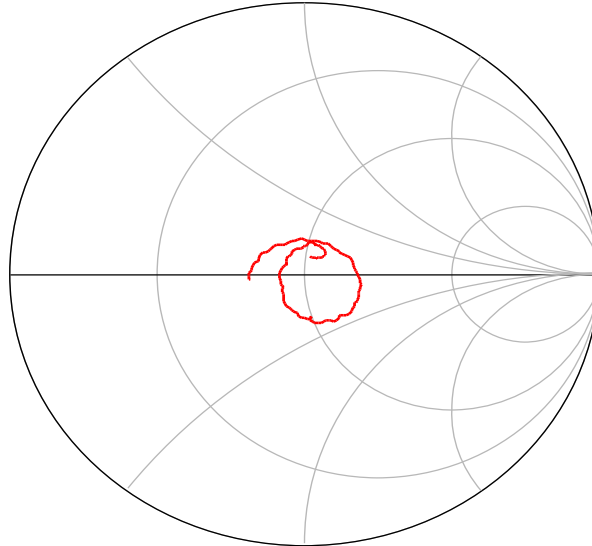
### Narrowband Insertion Loss



### Wideband Insertion Loss

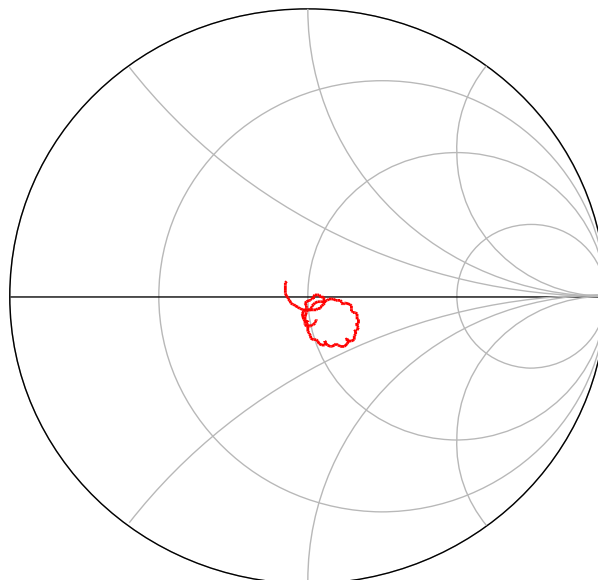


### Input Smith Chart S11



freq (2.300GHz to 2.400GHz)

### Output Smith Chart S22

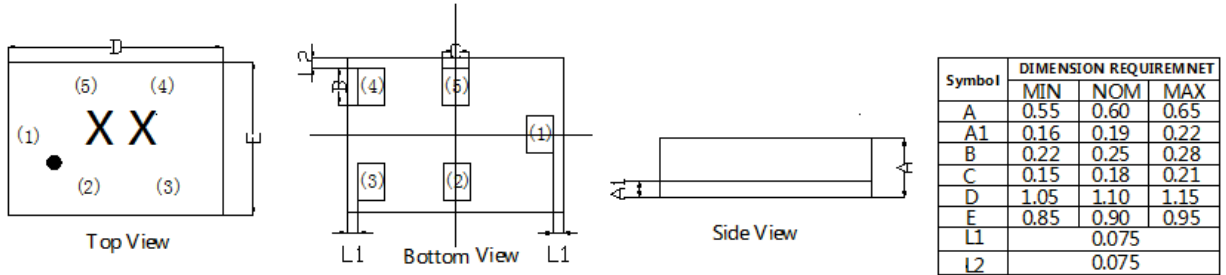


freq (2.300GHz to 2.400GHz)

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### Package Outline



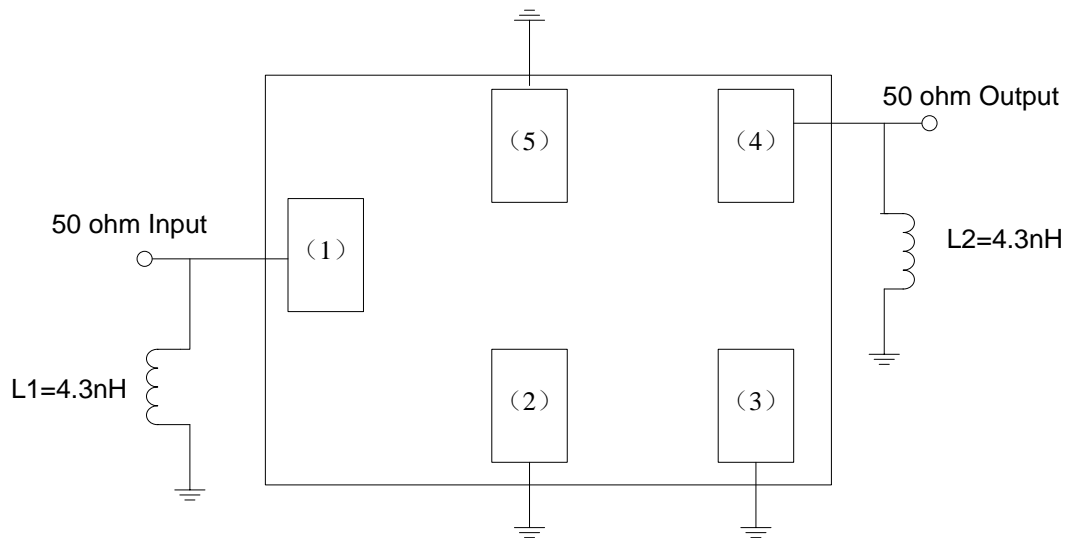
#### Notes:

- 1: Dimension: mm
- 2: Dimensions nominal unless otherwise noted
- 3: Contact area are gold plated
- 4: Pad (1) to (5) are same size
- 5: X X is ROFS inside code

#### Pin connection:

- 1 Input
- 4 Output
- 2,3,5 Ground

### Test Circuit

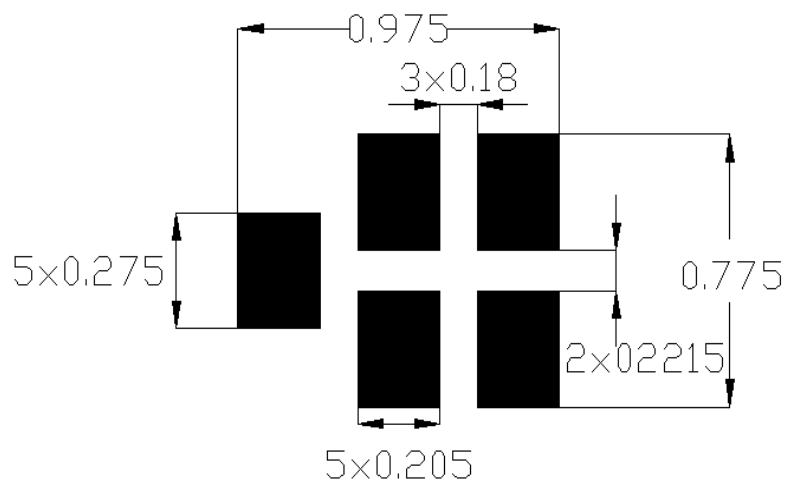


Notes: Matching component values shown are ROFS evaluation board result, please adjust component values by the actual use environment.

### PCB FootPrint

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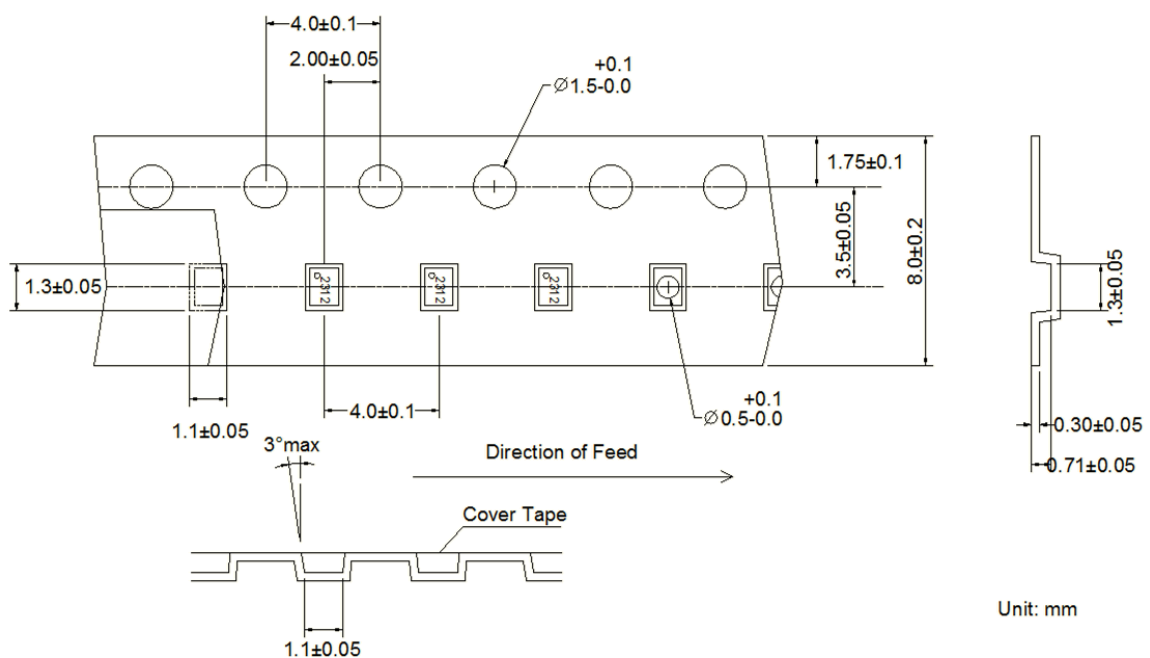


### NOTE:

1. Black indicates metalized area.
2. This footprint represents a recommendation only, some modification may be necessary to suit end user assembly materials and processes.
3. For solder pad recommendation see mechanical information.
4. Dimensions shown are nominal in millimeters.

## Packing

### 1. Tape Dimension



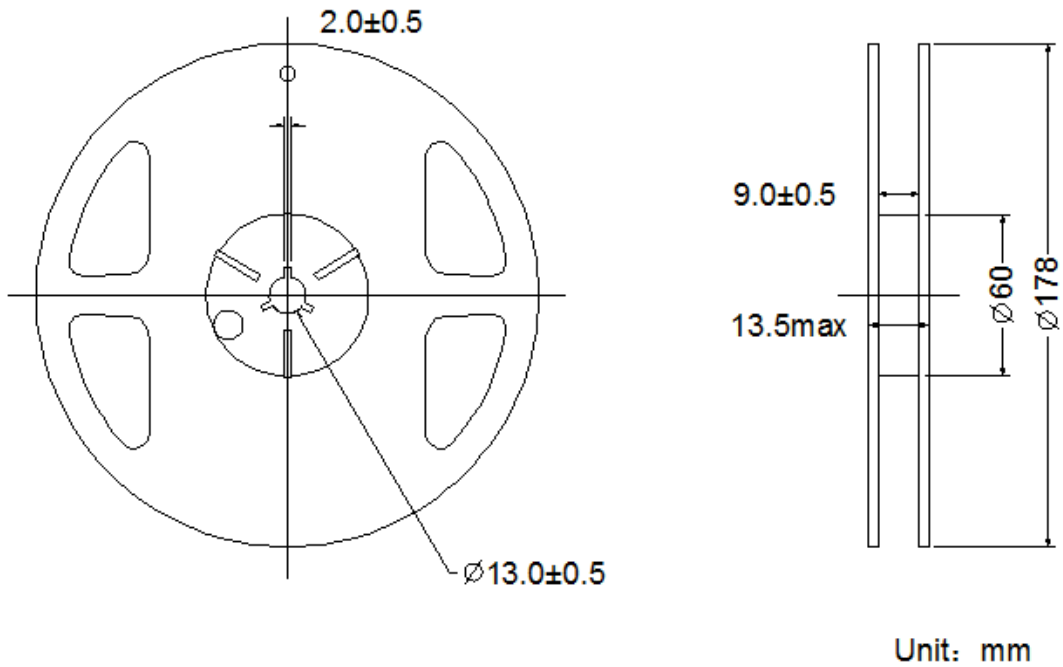
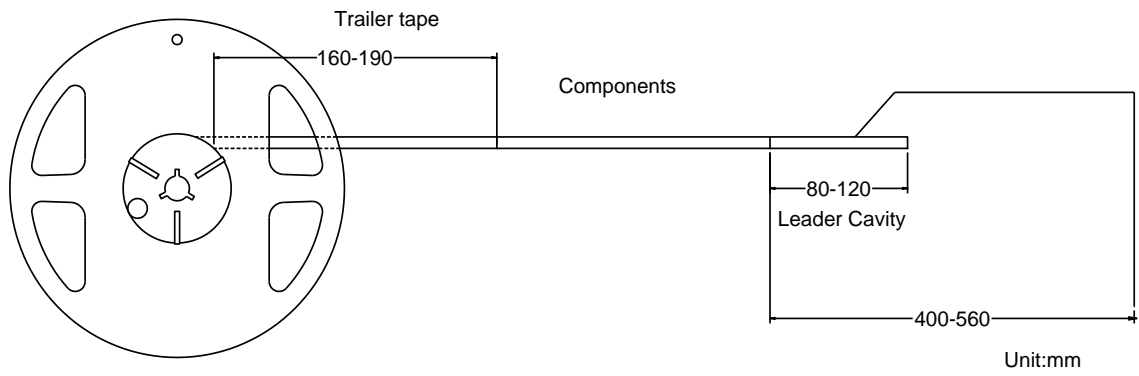
### 2. Reel Dimension

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5000Pcs/Reel

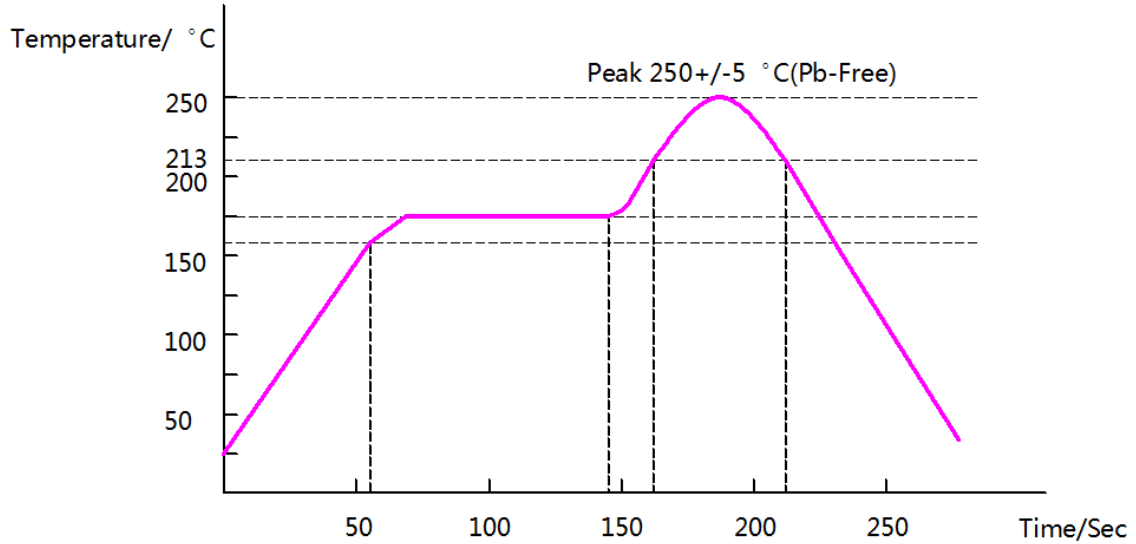


Recommended IR Reflow Profile



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### Order Information

Part Number	Qty Per Reel	Container
RSFP2312E	5000	7 inch Reel

For more information, please contact: [sales@rofsmicro.com](mailto:sales@rofsmicro.com)

### Notes:

The specification may be changed or the product had been discontinued, please check with our sales or product engineer before order.