

Description

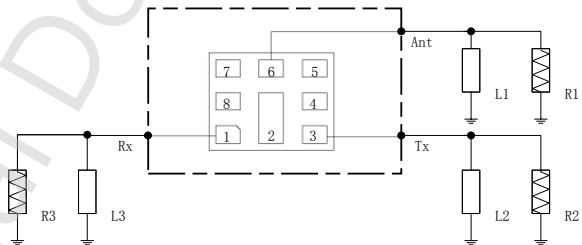
RSFD0893C is a high performance duplexer designed for applications in LTE Band8 (880~915 MHz TX, 925~960 MHz RX)

RSFD0893C uses chip scale packaging (CSP) technology to assembly the filters into a molded chip-on-board module with the footprint of 1.8mm x 1.4mm and height of 0.65mm.



8 Pin 1.8 x 1.4 x 0.65mm Package

Functional Block Diagram (Top Thru View)



Reference Des.	Value	Description
R1	50ohm	
R2	50ohm	
R3	50ohm	
L1	10nH	Ideal Inductor
L2	15nH	Ideal Inductor
L3	22nH	Ideal Inductor

Features

- Miniature Size
1.8 mm x 1.4 mm x 0.65mm
- Band8 Insertion Loss
 - Tx 2.4 dB Typ.
 - Rx 2.5 dB Typ.
- Tx-RX Isolation:
 - Tx Pass Band 56 dB Typ.
 - Rx Pass Band 56 dB Typ.
- Tx Input Power
 - +28.5dBm LTE modulation
- ESD protection ability : >100V
- Moisture Sensitivity: MSL3
- Operable Temperature : -20 to +85°C
- Storage Temperature : -40 to +85°C

Environmental

- Full implement with RoHS compliant
- Lead Free (Pb free)



Pin Connection

No.	Function
1	Rx
3	Tx
6	Ant
2,4,5,7,8	Ground

Electrical Specification

Transmit Port to Antenna Port				
Parameter(Operable Temperature: -20 to +85°C)	Min ⁽²⁾	Typ ⁽¹⁾	Max ⁽²⁾	Unit
Insertion Loss (882.5~912.5MHz)	/	2.4	3.0	dB
Ripple (882.5~912.5MHz)	/	1.2	2.0	dB
VSWR (880~915MHz, <i>ANT Port</i>)	/	1.6	2.1	/
VSWR (880~915MHz, <i>TX Port</i>)	/	1.6	2.1	/
Absolute Attenuation				
(10~716MHz)	20	30	/	dB
(716~862MHz)	20	30	/	dB
(925~960MHz)	40	52	/	dB
(1559~1605MHz)	25	35	/	dB
(1680~1830MHz)	33	37	/	dB
(1805~1990MHz)	30	39	/	dB
(2110~2170MHz)	35	43	/	dB
(2400~2500MHz)	35	47	/	dB
(2620~2690MHz)	35	51	/	dB
(3520~3660MHz)	30	45	/	dB
(4200~5000MHz)	10	18	/	dB

Antenna Port to Receive Port				
Parameter(Operable Temperature: -20 to +85°C)	Min ⁽²⁾	Typ ⁽¹⁾	Max ⁽²⁾	Unit
Insertion Loss (927.5~957.5MHz)	/	2.5	3.5	dB
Ripple (927.5~957.5MHz)	/	1.2	2.0	dB
VSWR (925~960MHz, <i>ANT Port</i>)	/	1.6	2.0	/
VSWR (925~960MHz, <i>RX Port</i>)	/	1.6	2.1	/
Absolute Attenuation				
(10~880MHz)	38	45	/	dB
(880~915MHz)	40	52	/	dB
(1430~1450MHz)	40	50	/	dB
(1710~1980MHz)	42	54	/	dB
(2300~2700MHz)	45	60	/	dB
(4900~6000MHz)	30	40	/	dB

Transmit Port to Receive Port

Parameter(Operable Temperature: -20 to +85°C)	Min ⁽²⁾	Typ ⁽¹⁾	Max ⁽²⁾	Unit
Isolation				
882.5~912.5MHz	52	56	/	dB
927.5~957.5MHz	52	56	/	dB

(1) Reference value within band at +25°C

(2) Max/Min value within band at -20 ~ +85°C

ROFS Confidential Documents

Typical Performance at Tc=25°C

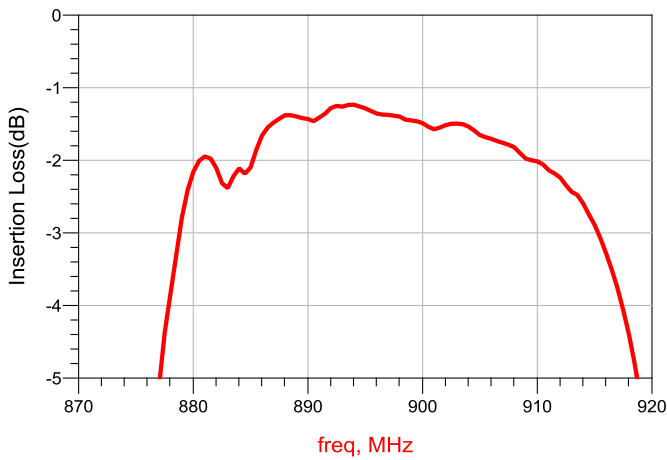


Figure1. TX-ANT Passband

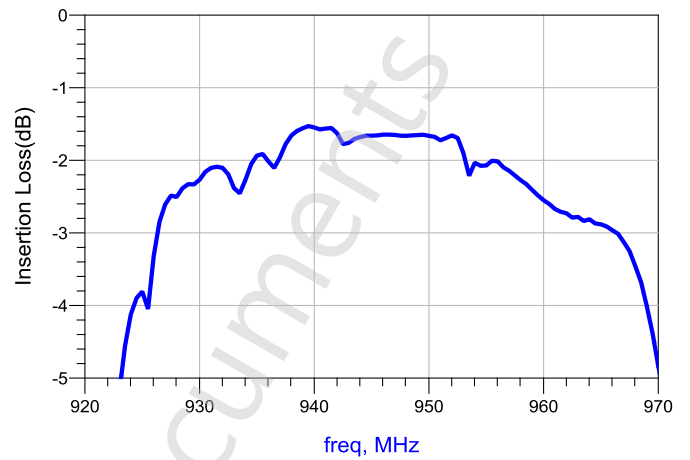


Figure2. ANT-RX Passband

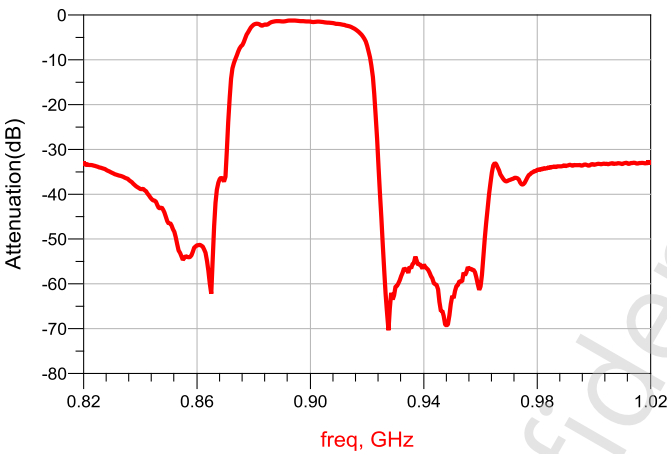


Figure3. TX-ANT

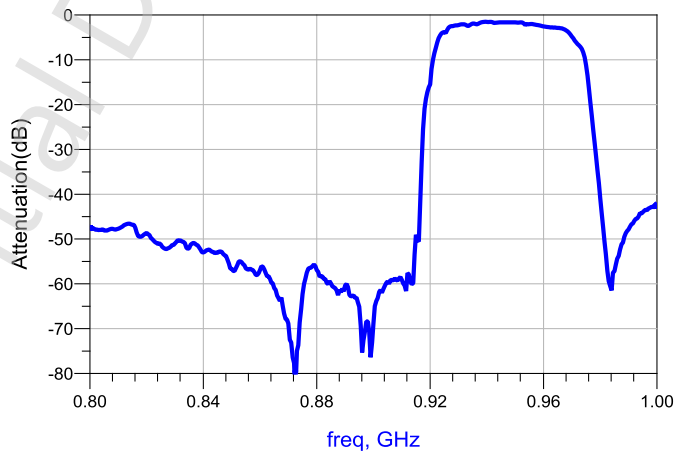


Figure4. ANT-RX

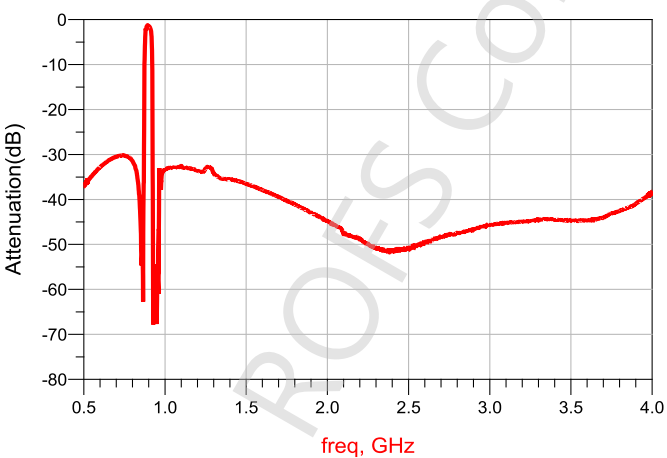


Figure5. TX-ANT Wideband

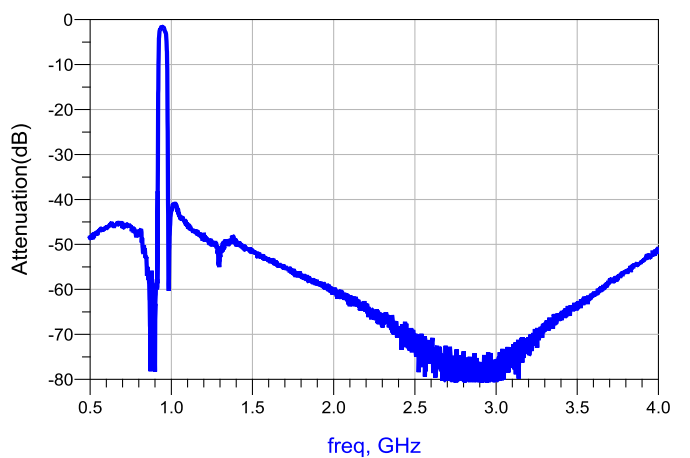


Figure6. ANT-RX Wideband

Typical Performance at Tc=25°C

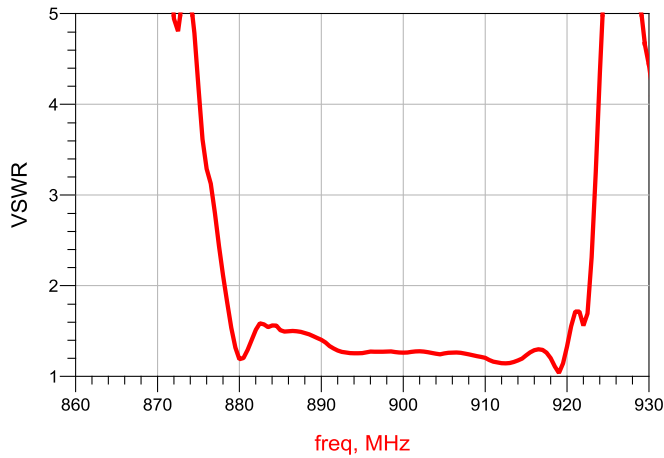


Figure7. TX Port VSWR

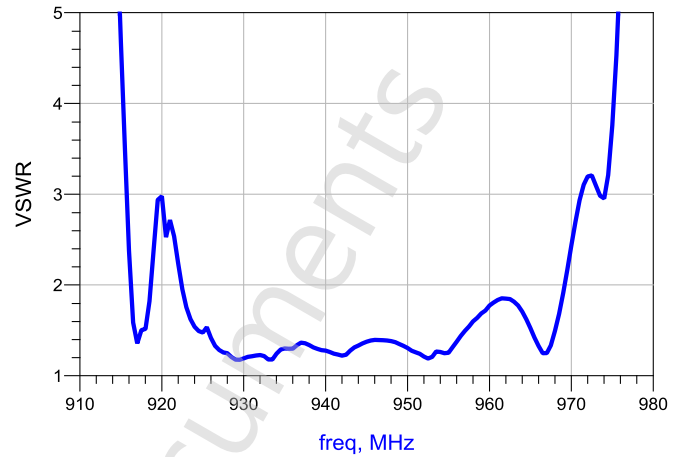


Figure8. RX Port VSWR

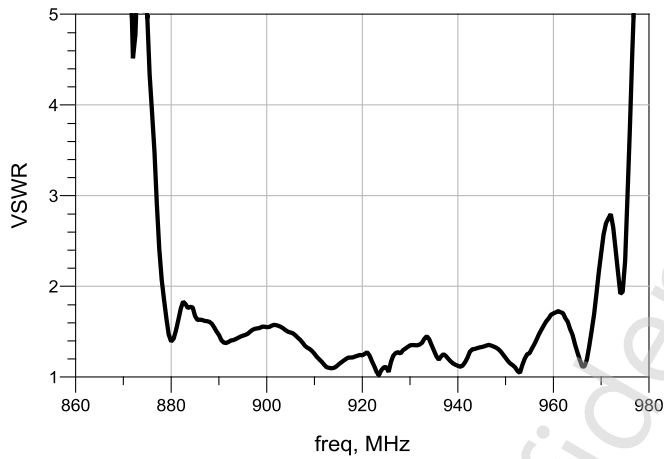


Figure9. Ant Port VSWR

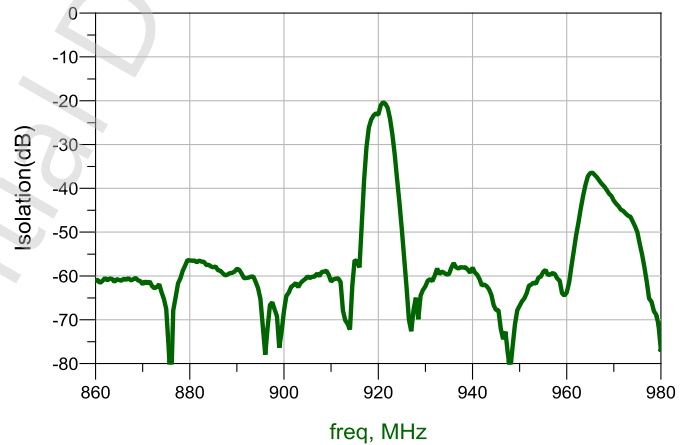


Figure10. TX - RX Isolation

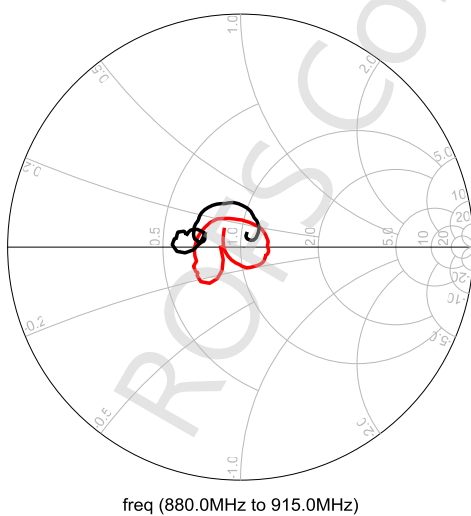


Figure11. TX/ANT Smith Chart

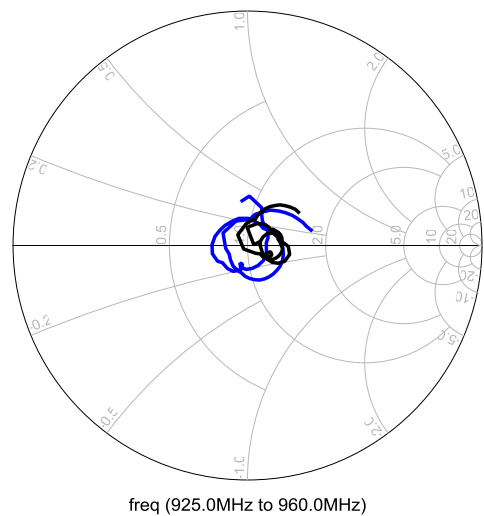
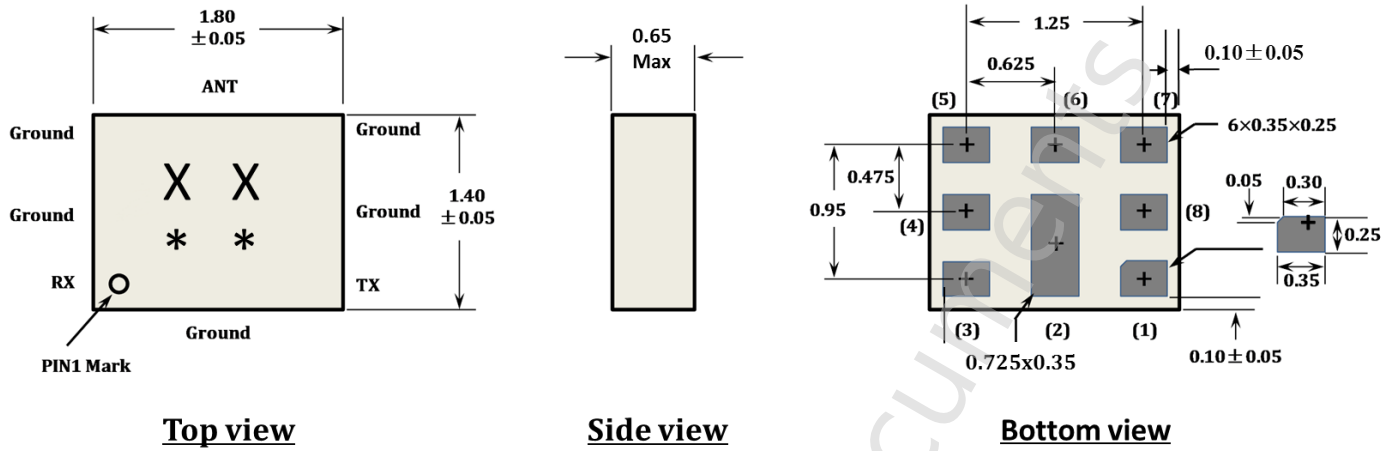


Figure12. RX/ANT Smith Chart

Package Outline



Note:

1. Dimension: mm
2. Dimensions nominal unless otherwise noted
3. Contact area are gold plated
4. Pad(1)(2) is single size, others are same size
5. XX is Band code, ** is Month/date code

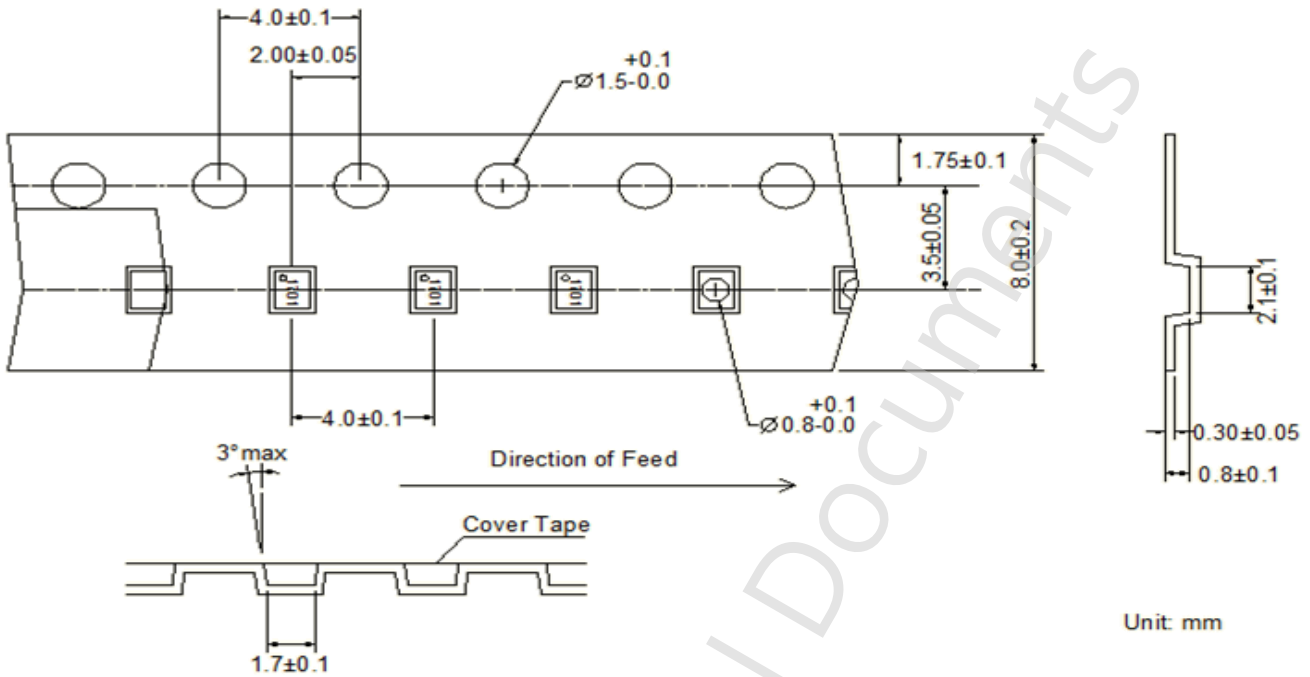
No.	Function
1	Rx
3	Tx
6	Ant
2,4,5,7,8	Ground

Order Information

P/N	Qty/Reel	Container
RSFD0893C	4000	7 inch Reel

Packing

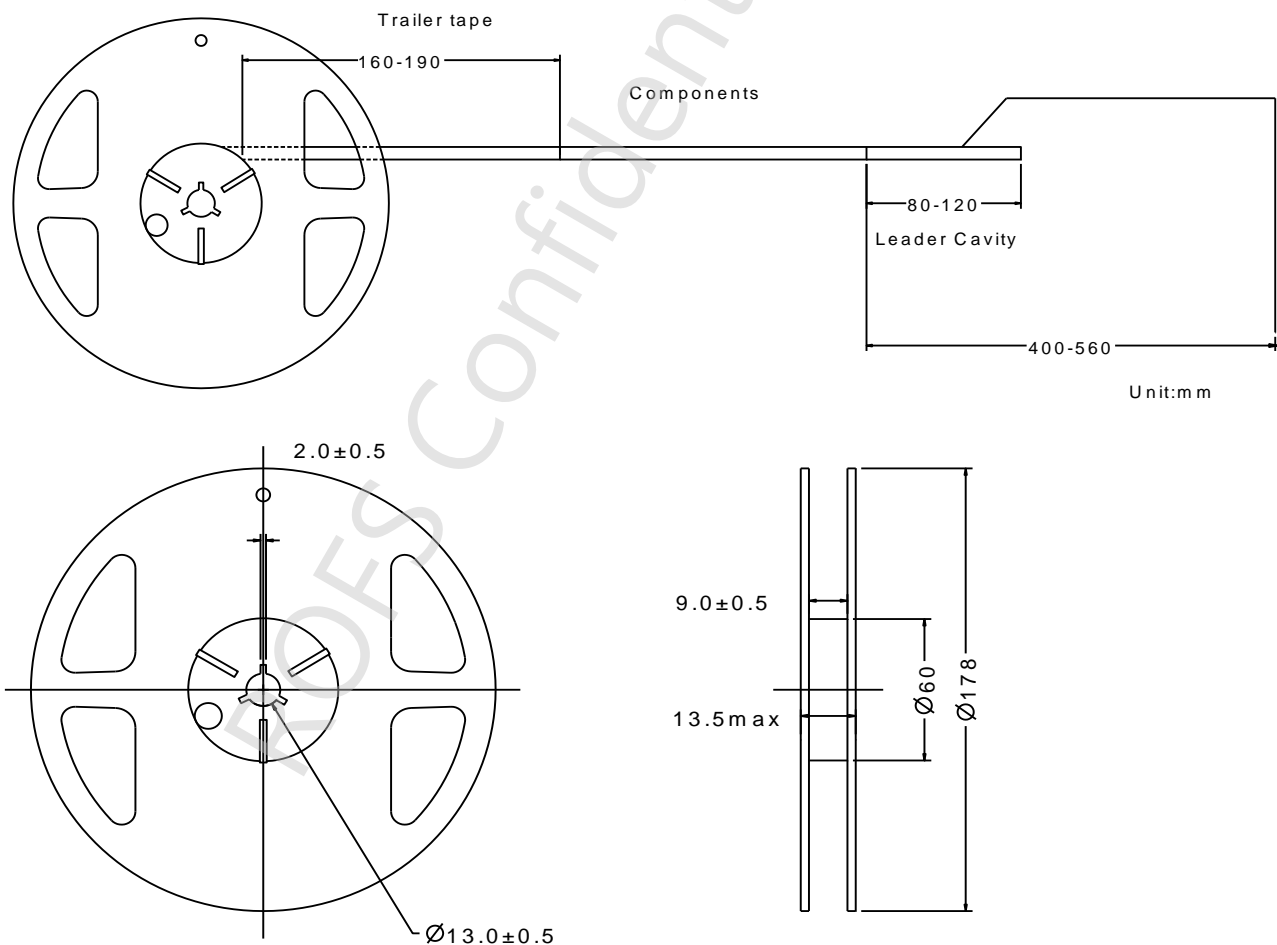
1. Tape Dimension



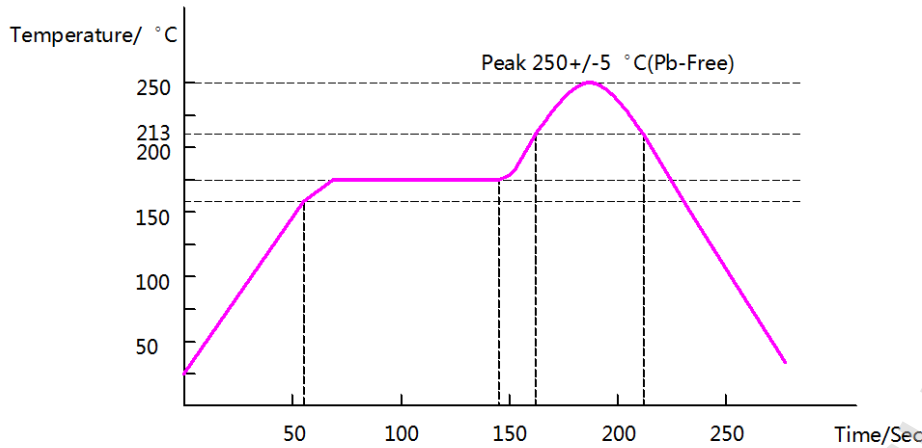
Unit: mm

2. Reel Dimension

4000Pcs/Reel



Unit: mm

Recommended Reflow Profile

For more information, please contact: rofs_sales1@rofsmicro.com

Notes:

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