RFM Integrated Device, Inc.

PRODUCT SPECIFICATION

Part Number: CDR5002

Description:
DR FILTER,DSRC,
5492.5 MHz, BW 685,
IL 3.2

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1. Features

1-1. High Rejection and Low Insertion loss

1-2. Dimensions 9.36x4.48x2.4 mm

1-3. Maximum input power 1.0W max.

1-4. MSL2a

2. Applications

2-1. 5150 ~ 5835 MHz working frequency.

3. Electrical Characteristics

3-1. Specification table

ITEM	Frequency	Specification		
		Min.	Typ.	Max.
Center Frequency (MHz)	5492.5			
Bandwidth (MHz)	685 (5150~5835)			
Passband Insertion Loss (dB)	5150~5785MHz		1.5	2.5
	5785~5835MHz		2.5	3.2
	5785~5835MHz(105℃)		3.2	3.7
Passband Ripple (dB)	5150~5785MHz		1.5	1.8
	5825~5835MHz		1.5	2.0
Passband Return Loss (dB)	5150~5835	10	13	
Attenuation (dB)	5945~6105	45	50	
	6105~7125	50	55	
Normal Impedence (Ω)	50			
Operation Temperature (℃)	-40 ~ +105			
Input Power (W)	1.0 max.			

Note：The electrical characteristics is the specifications after soldering.

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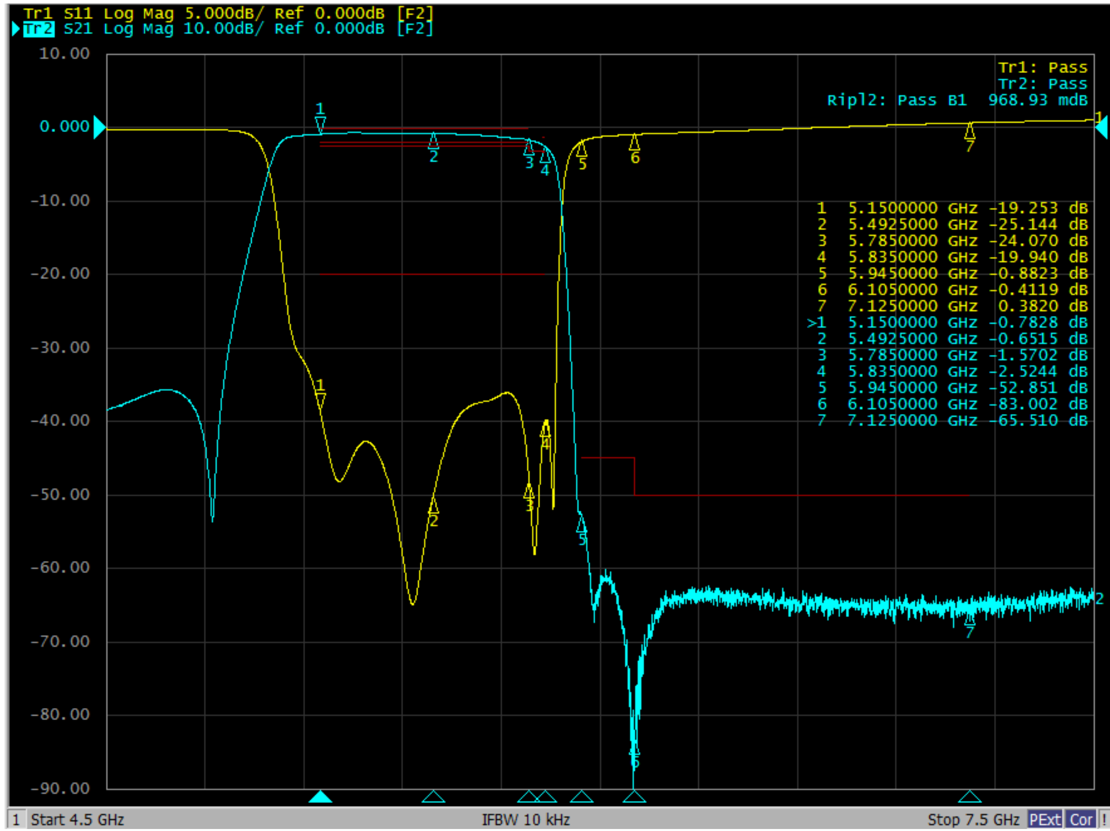
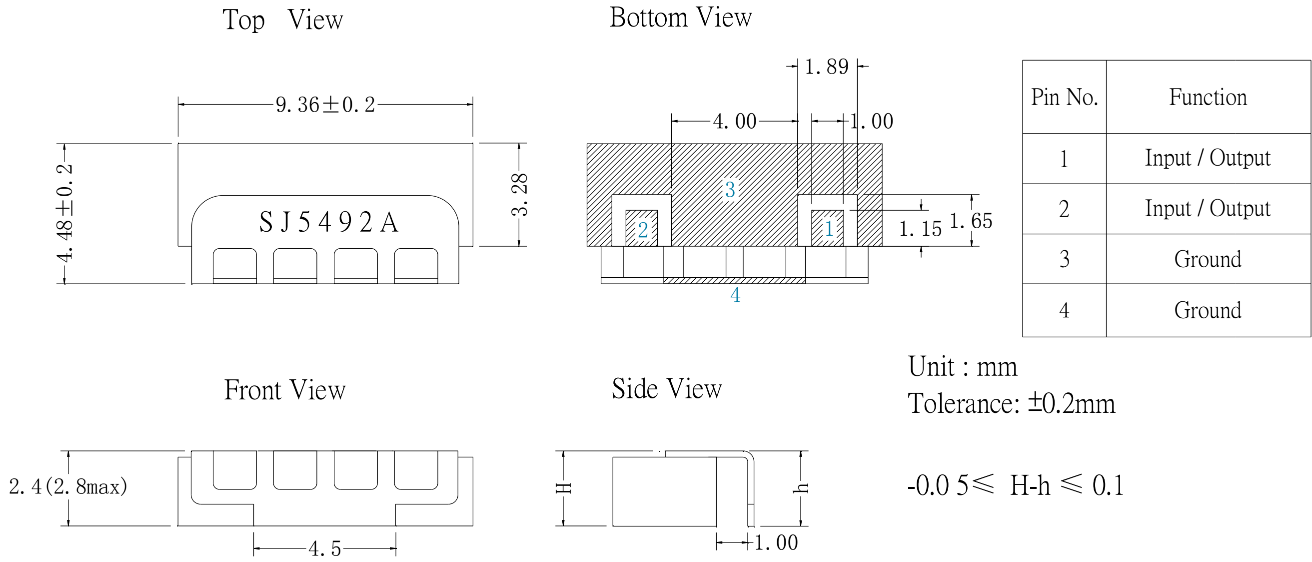
3-2. Characteristic curve



4. Dimension and Recommended PCB Land pattern

4-1. Dimension



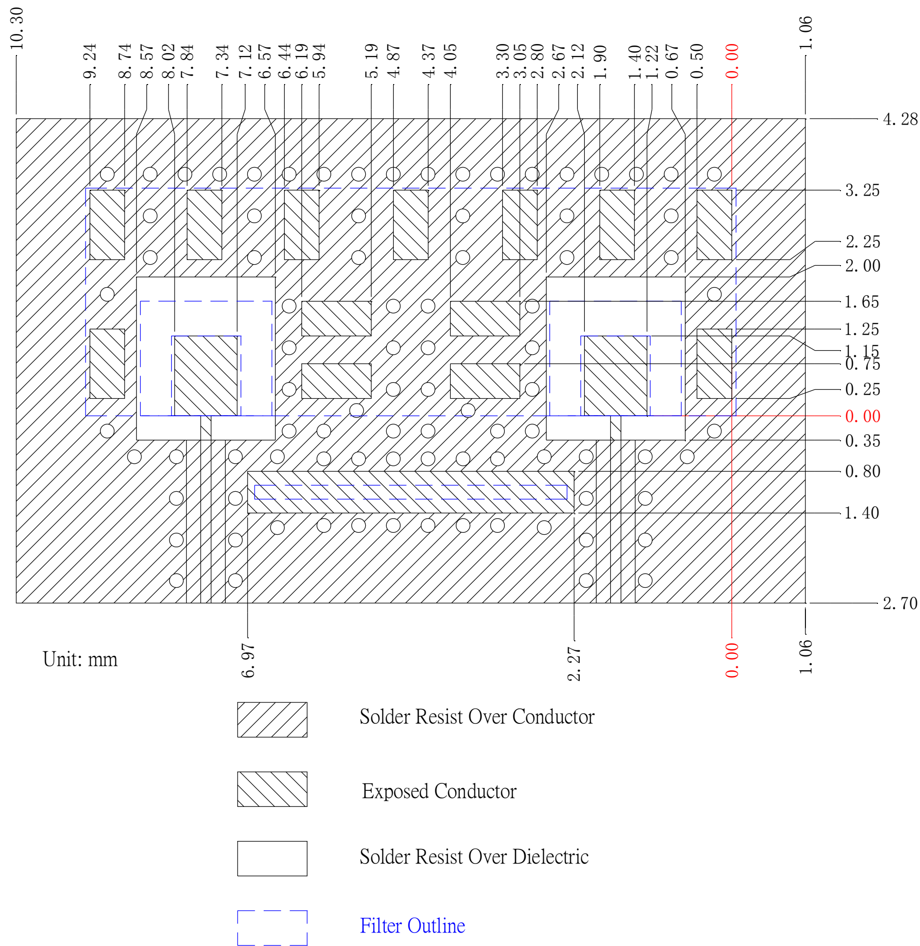
Pin No.	Function
1	Input / Output
2	Input / Output
3	Ground
4	Ground

Unit : mm

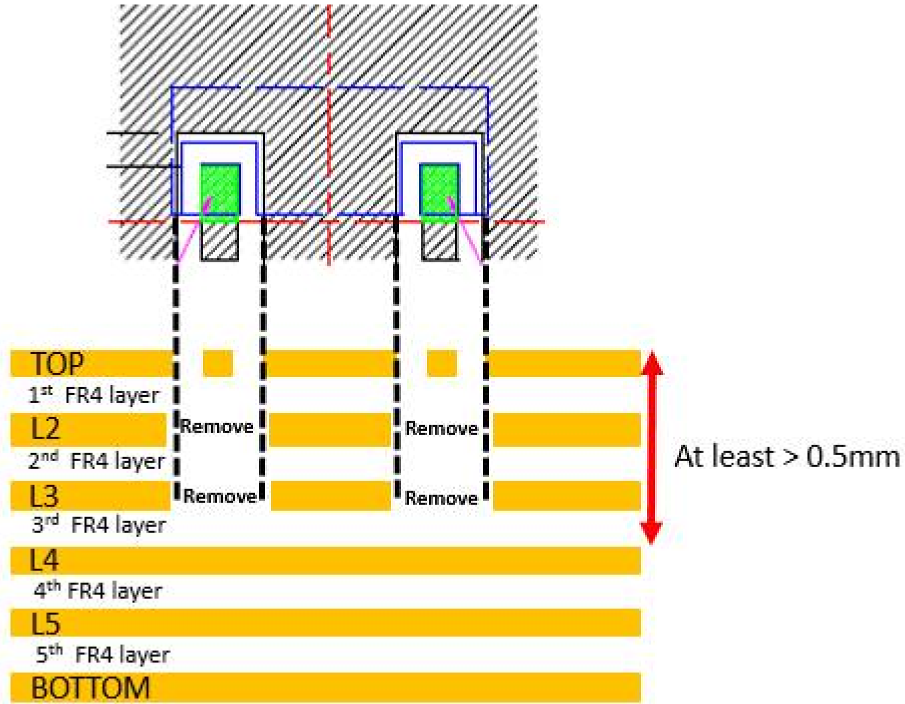
Tolerance: ±0.2mm

$-0.05 \leqslant H\text{-}h \leqslant 0.1$

4-2. Recommended PCB Land Pattern

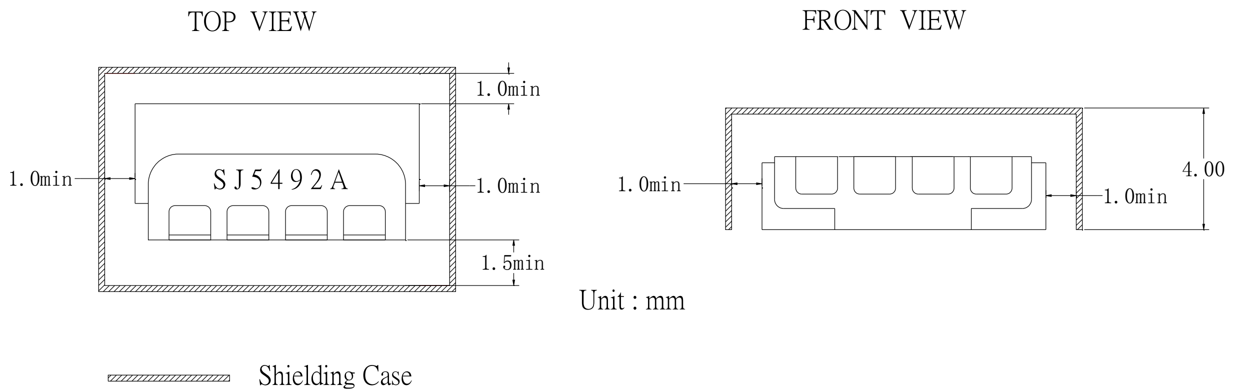


5. Recommended PCB stacking



Note: Suggest that distance of I/O pad reference GND at least > 0.5mm, so need remove L2 to L3 conductor layer.

6. Recommended shielding case layout guide

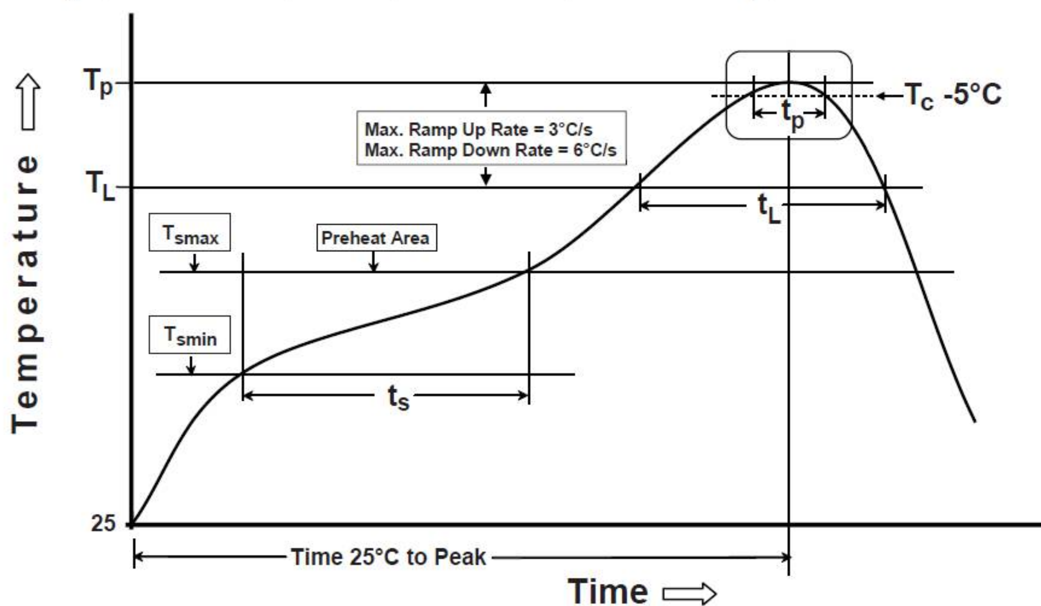


7. Reflow Soldering Standard Condition

The products can be assembled following Pb-free assembly. According to the Standard **IPC/JEDEC J-STD-020C**, the temperature profile suggested is as follow:

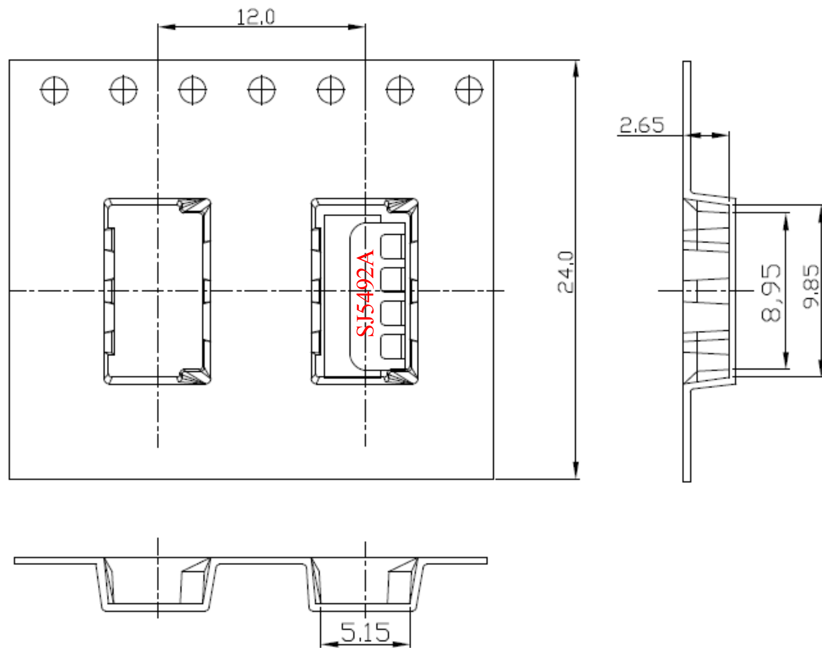
Phase	Profile features	Pb-Free Assembly (SnAgCu)
PREHEAT	-Temperature Min(Tsmin) -Temperature Max(Tsmax) -Time(ts) form (Tsmin to Tsmax)	150℃ 200℃ 60-180 seconds
RAMP-UP	Avg. Ramp-up Rate (Tsmax to TP)	3℃/second max
REFLOW	-Temperature(TL) -Total Time above TL (t L)	217℃ 60-150 seconds
PEAK	-Temperature(TP) -Time(tp)	260℃ 20-40 second
RAMP-DOWN	Rate	6℃/ second max
Time from 25℃ to Peak Temperature		8 minutes max
Composition of solder paste		96.5Sn/3Ag/0.5Cu
Solder Paste Model		SHENMAO PF606-P26

Note：All the temperature measure point is on top surface of the component, if temperature over recommend, it will make component surface peeling or damage.



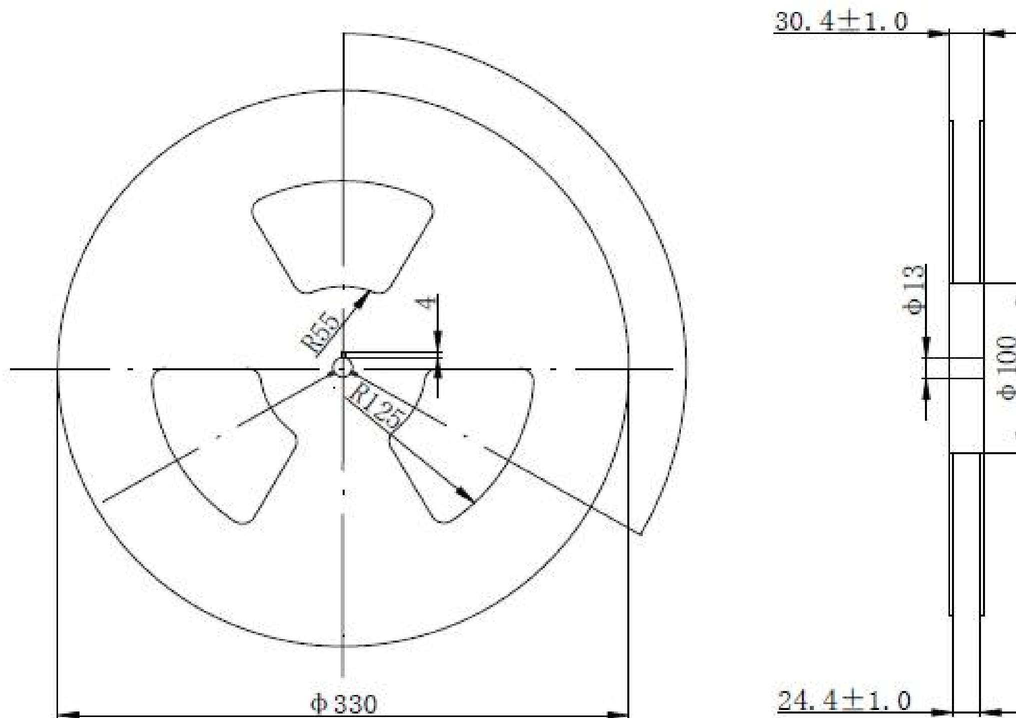
8. Packaging and Dimensions

8-1 Dimensions of Carrier Tape



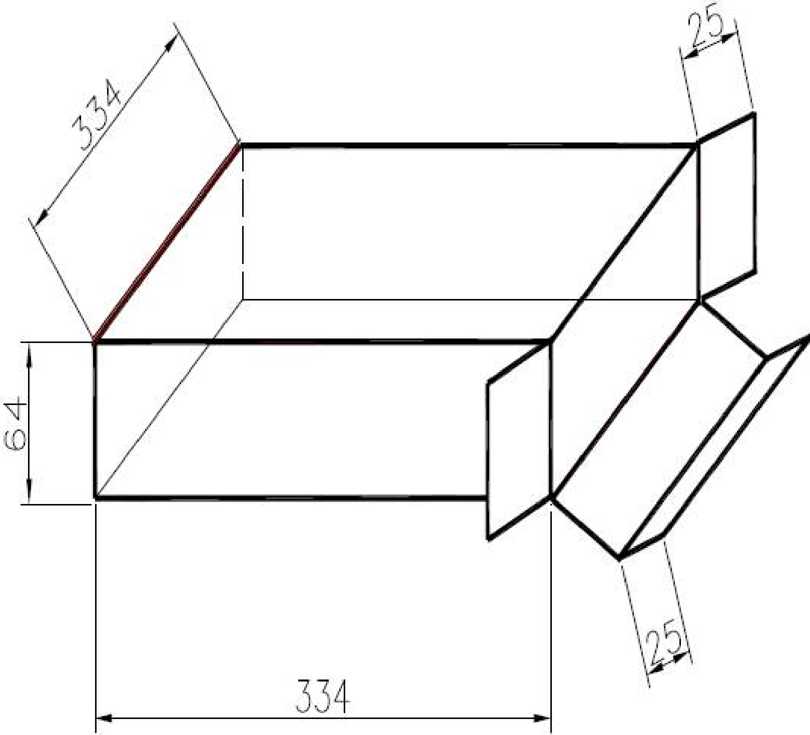
unit: mm

8-2. Dimensions of Reel (2000pcs/ Reel)



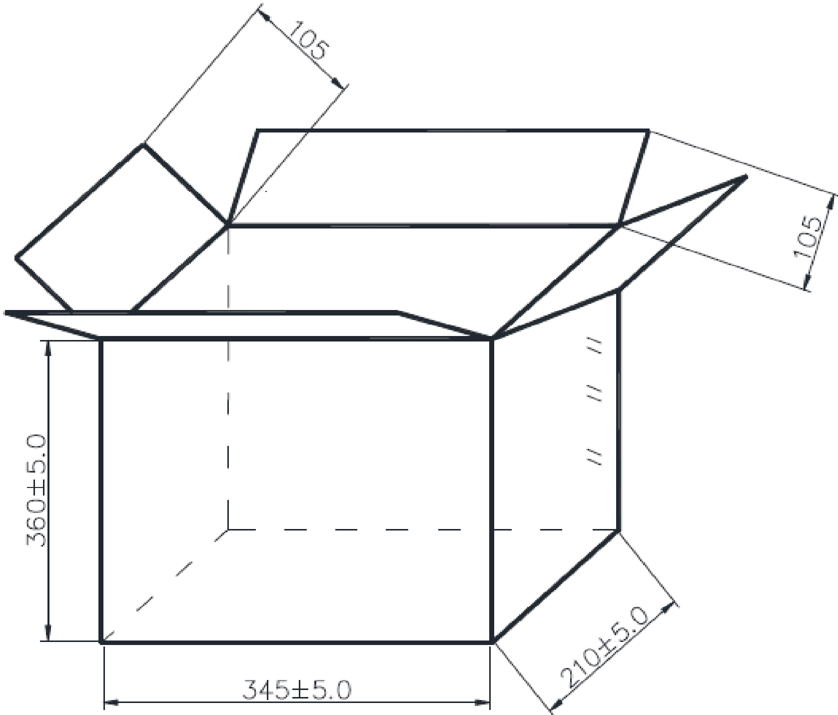
unit: mm

8-3. Dimensions of Inner Carton (2Reel/ Inner Carton)



unit: mm

8-4.Dimensions of Outer Carton (3 Inner Carton / Outer Carton)



unit: mm