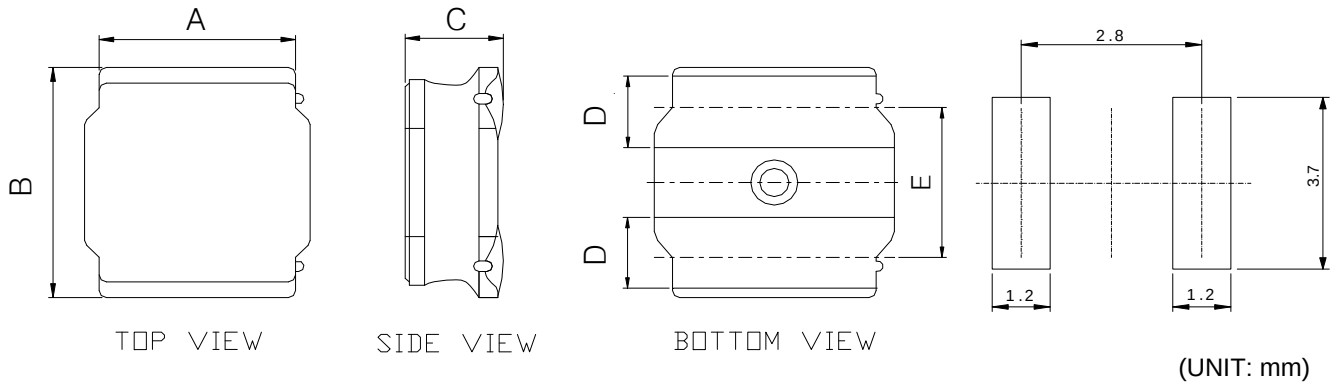
Recommended Land-Pattern



(UNIT: mm)

■ Dimensions: (mm)

Part No.	A	B	C	D	E
JNR 4018	4.0 ± 0.2	4.0 ± 0.2	1.8 Max.	1.1 ± 0.2	2.5 ± 0.2

■ Series List

No.	Part No.	L (μH)	SRF Min. (MHz)	RDC ±20% (Ω)	Isat Max. (mA)	Irms Max. (mA)
1	JNR 4018-470M-M	47.0	10	0.65	570	420
2	JNR 4018-680M-M	68.0	8.3	1.00	470	320
3	JNR 4018-101M-M	100.0	6.5	1.50	400	270
4	JNR 4018-151M-M	150.0	5.5	2.50	310	220
5	JNR 4018-221M-M	220.0	4.0	4.00	270	170

1.Test Frequency : 100KHz

2.Tolerance : M ± 20%

3.Isat : The value of current causes a 30% inductance reduction from initial value.

4.Irms : The value of current causes a 40℃ temperature rise.

5.Rated Current: Either Isat or Irms whichever is smaller.

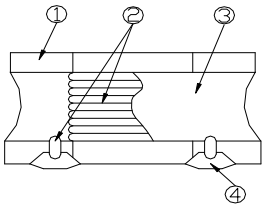
6.Operating Temperature Range : -25℃ to +120℃ (Including self-temperature rise)

7.Storage Temp. Range：-40℃ to +85℃

■ PACKAGE

Type	JNR 4018
Q'TY/Reel	3500

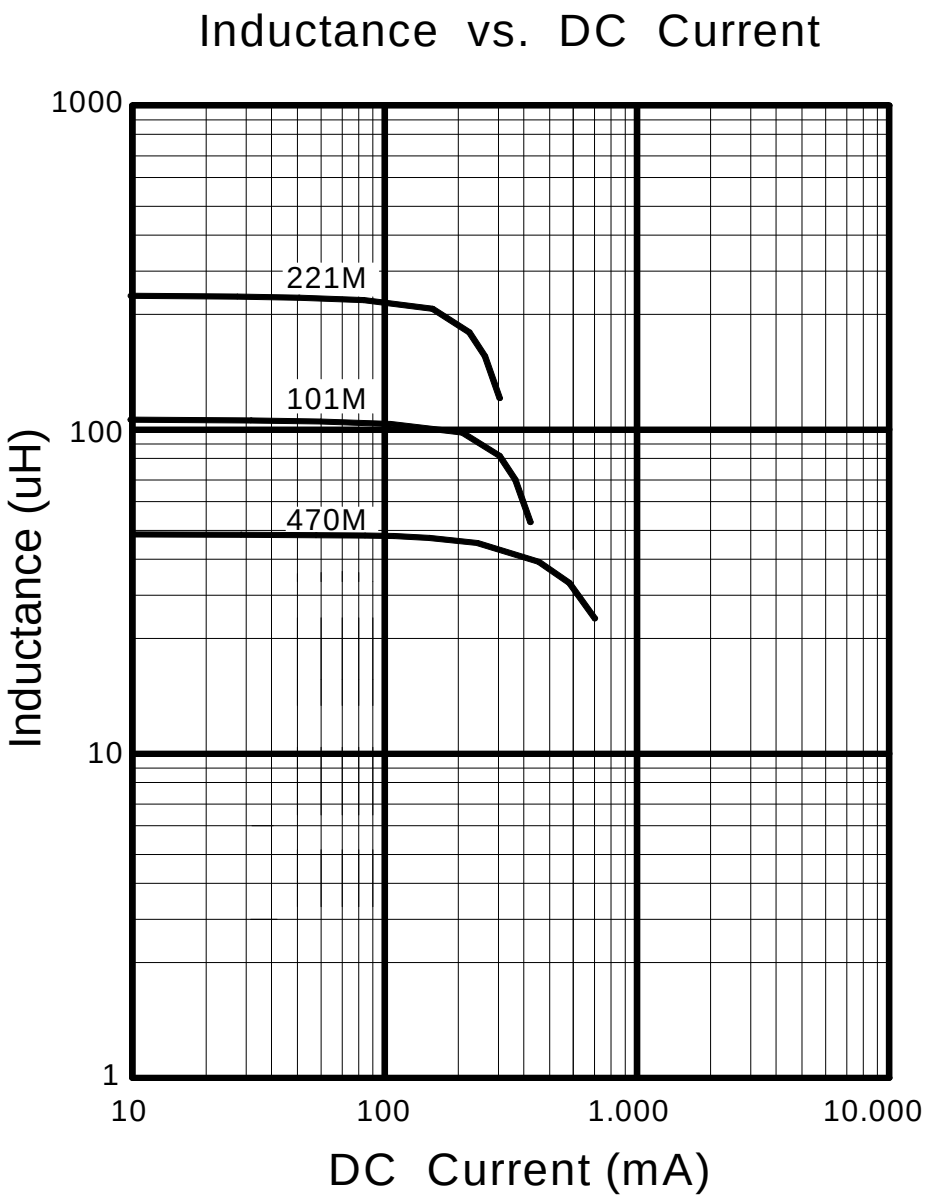
■ Structural Drawing



(Magnetic Shielded Type)

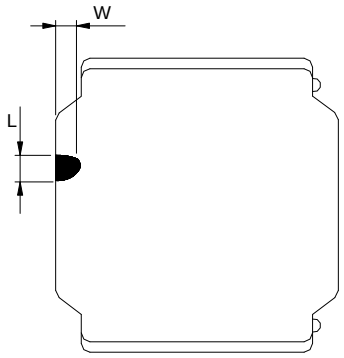
① Ferrite core.	Ni-Zn ferrite	
② Winding wire	Polyurethane-copper wire	
③ Over-coating resin.	Epoxy resin, containing ferrite powder	
④ Electrode	External electrode (substrate)	Ag
	External electrode (base plating)	Ni-Sn
	External electrode (top surface solder coating)	Sn-Ag-Cu

■ Electrical Curve



■ Core Chipping

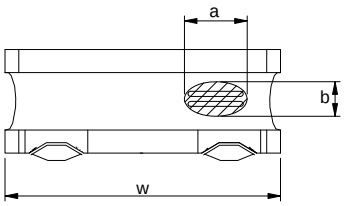
The appearance standard of the chipping size in top side, of bottom side ferrite Core is following dimension



L	W
1.0mmMax.	1.0mmMax.

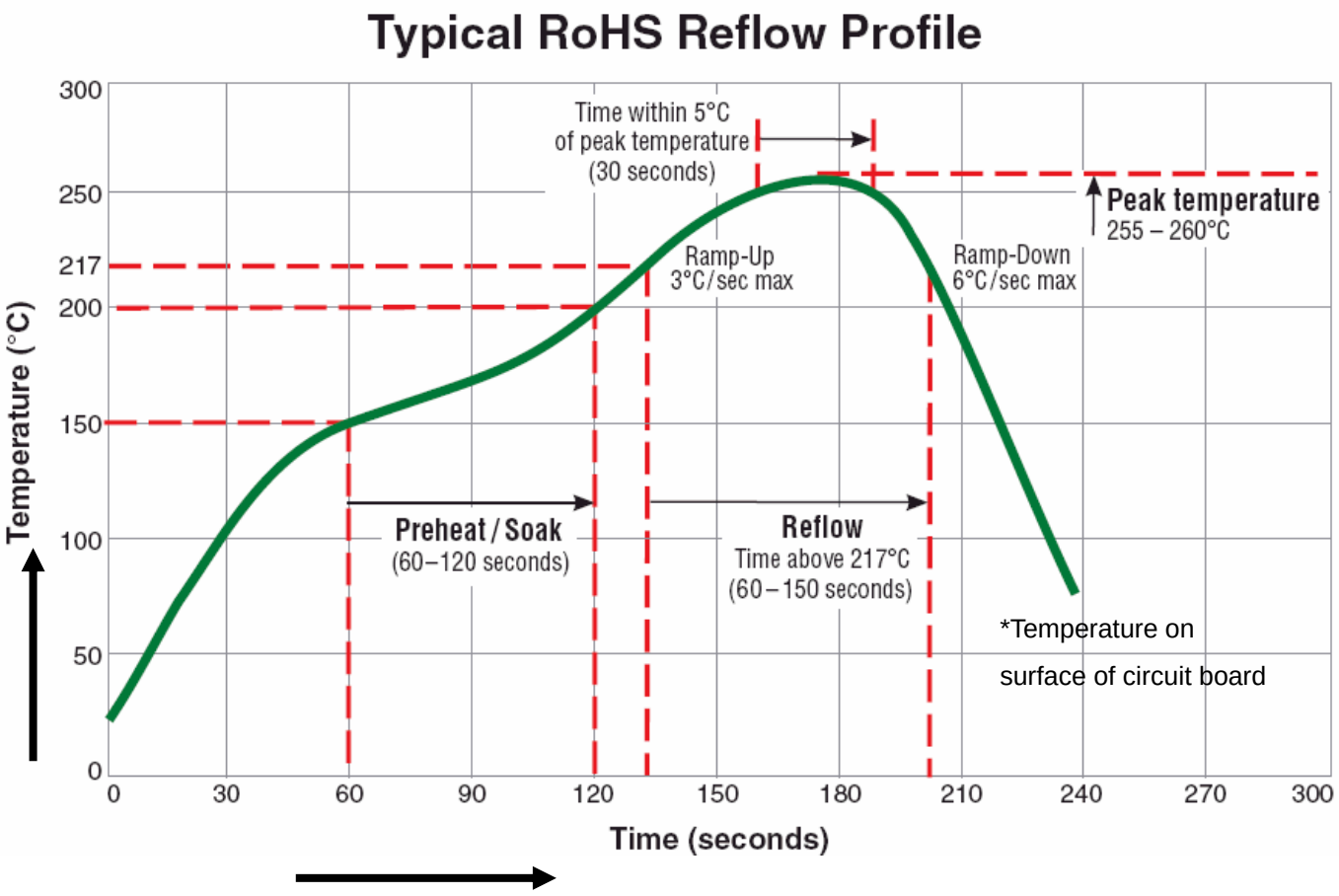
■ Exposed wire tolerance limit of coating resin part on product side

Size of exposed wire occurring to coating resin is specified below.



① Width direction (dimension a): Acceptable when a<=w/2
Nonconforming when a>w/2
② Length direction (dimension b): Dimension b is not specified.
③ When total area of exposed wire occurring to each sides is not greater than 50% of coating resin area, that is acceptable.

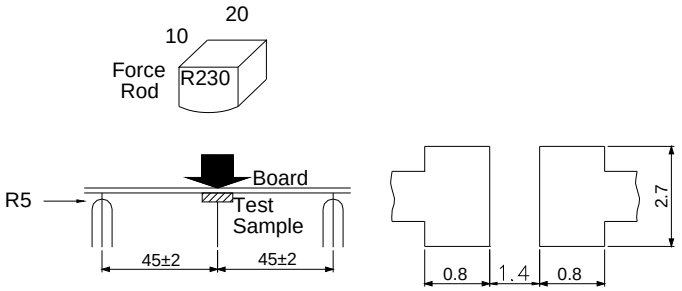
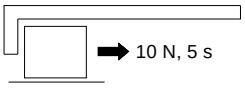
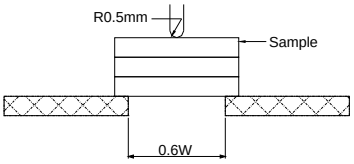
1. Reflow Profile Chart (Reference):



(Table 1)

The products may be exposed to reflow soldering process of above profile up to two times.

. Mechanical Performance /Environmental Test Performance Specifications:

	Test Item	Standard	Test method
MECHANICAL CHARACTERISTICS	Resistance to Deflection	No damage.	The test samples shall be soldered to the test board by the reflow soldering conditions show in Table 1. As illustrated below, apply force in the direction of the Arrow indicating until deflection of the test board Reaches to 2 mm.  Land dimensions Test board size :100×40×10 Test board material l: glass epoxy-resin Solder cream thickness:0.1 Unit: mm
	Adhesion of Terminal Electrode	Shall not come off PC board	The test samples shall be soldered to the test board By the reflow soldering conditions shown in Table 1.  Applied force:10 N to X and Y directions Duration:5 s. Solder cream thickness:0.1 mm (Refer to recommended Land Pattern Dimensions Defined in “Precaution”)
	Body strength	No damage	Applied force :20 N Duration :10 s 

<table>
<tr><th></th><th>Test Item</th><th>Standard</th><th>Test method</th></tr>
<tr><td rowspan="4"></td><td>Resistance to Vibration</td><td>△L/L:within±10%
No abnormality observed
In appearance</td><td>The test samples shall be soldered to the test board by The reflow soldering conditions shown in Table 1.Then It shall be submitted to below test conditions
<table>
<tr><td>Frequency range</td><td>10Hz~55Hz</td></tr>
<tr><td>Total Amplitude</td><td>1.5mm(May not exceed acceleration 196 m/S^2)</td></tr>
<tr><td>Sweeping Method</td><td>10Hz to 55Hz to 10 Hz for 1 min.</td></tr>
<tr><td>Time</td><td>For 2 hours on each X,Y, and Z axis.</td></tr>
</table></td></tr>
<tr><td>Resistance to Soldering heat (Reflow)</td><td>△L/L:within±10%
No abnormality observed
In appearance</td><td>The test sample shall be exposed to reflow oven at 230±5 deg C for 40 seconds, with peak temperature at 260±5 deg C for 5 seconds, 2 times.

Test board thickness:1.0 mm
Test board material :glass epoxy-resin</td></tr>
<tr><td>Solder ability</td><td>At least 90% of surface of terminal electrode is covered by new solder.</td><td>The test samples shall be dipped in flux, and then Immersed in molten solder as shown in below table.
Flux: Methanol solution containing rosin 25%
<table>
<tr><td>Solder Temperature</td><td>245±deg C</td></tr>
<tr><td>Time</td><td>5±1.0 S.</td></tr>
<tr><td>Immersing Speed</td><td>25 mm/s</td></tr>
</table></td></tr>
<tr><td>Temperature Characteristics</td><td>△L/L:within±20%
No abnormality observed
In appearance</td><td>Measurement of inductance shall be taken at temperature Range within -25 deg C to +85 deg C.
With reference to inductance value at +20 deg C, change Rate shall be calculated.</td></tr>
<tr><td rowspan="2"></td><td>Thermal shock</td><td>△L/L:within±10%
No abnormality observed
In appearance</td><td>The test samples shall be soldered to test board
By the reflow soldering conditions shown in Table 1.
The test samples shall be placed at specified
Shown in below table in sequence.
The temperature cycle shall be repeated 100 cycles.

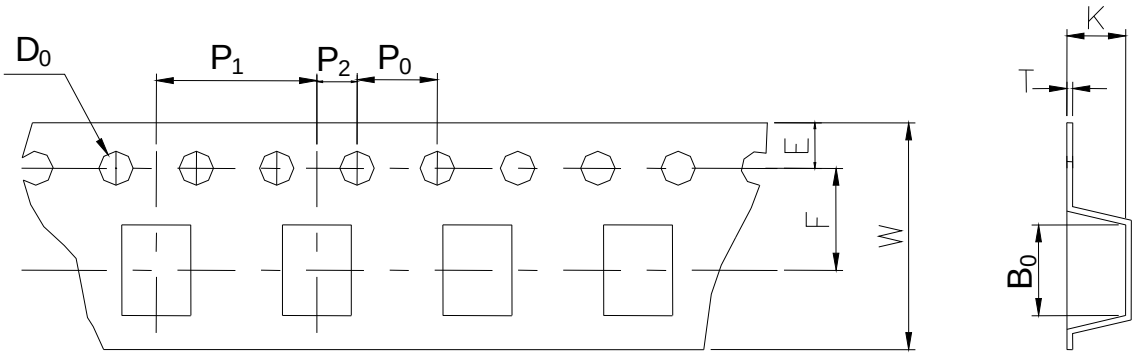
Conditions of steps for 1 cycle
<table>
<tr><th>Step</th><th>Temperature</th><th>Time(min)</th></tr>
<tr><td>1</td><td>-40±3 deg C</td><td>30±3</td></tr>
<tr><td>2</td><td>Room Temp</td><td>3 maximum</td></tr>
<tr><td>3</td><td>85±2 deg C</td><td>30±3</td></tr>
<tr><td>4</td><td>Room Temp</td><td>3 maximum</td></tr>
</table></td></tr>
<tr><td>Low Temperature life Test</td><td>△L/L:within±10%
No abnormality observed
In appearance</td><td>The test samples shall be soldered to the test board by The reflow soldering conditions shown in Table 1.
After that, the test samples shall be placed at test Conditions as shown in below table.
<table>
<tr><td>Temperature</td><td>-40±2 deg C</td></tr>
<tr><td>Time</td><td>500 +24/-0 h</td></tr>
</table></td></tr>
</table>

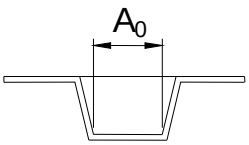
<table>
<tr><th></th><th>Test Item</th><th>Standard</th><th>Test method</th></tr>
<tr><td rowspan="3">ENVIRONMENT TESTS</td><td>Loading at high temperature life test</td><td>△L/L:within±10%
No abnormality observed in appearance.</td><td>The test samples shall be soldered to the test board by the reflow soldering conditions shown in Table 1.
The test samples shall be placed in thermostatic oven set at specified temperature and applied the rated current continuously as shown in below table.
<table><tr><td>Temperature</td><td>85±2 deg C</td></tr><tr><td>Applied current</td><td>Rated current
(Refer to Page 2)</td></tr><tr><td>Time</td><td>500+24/-0 h</td></tr></table></td></tr>
<tr><td>Damp heat life test</td><td>△L/L:within±10%
No abnormality observed
in appearance.</td><td>The test samples shall be soldered to the test board by the reflow soldering conditions shown in Table 1.
The test samples shall be placed in thermostatic oven set at specified temperature and humidity as shown in below table.
<table><tr><td>Temperature</td><td>60±2 deg C</td></tr><tr><td>Humidity</td><td>90~95%RH</td></tr><tr><td>Time</td><td>500+24/-0 h</td></tr></table></td></tr>
<tr><td>Loading under Damp heat life test</td><td>△L/L:within±10%
No abnormality observed
in appearance.</td><td>The test samples shall be soldered to the test board by the reflow soldering conditions shown in Table 1.
The test samples shall be placed in thermostatic oven set at specified temperature and humidity and applied the rated current continuously as shown in below table.
<table><tr><td>Temperature</td><td>60±2 deg C</td></tr><tr><td>Humidity</td><td>90~95%RH</td></tr><tr><td>Applied current</td><td>Rated current
(Refer to Page 2))</td></tr><tr><td>Time</td><td>500+24/-0 h</td></tr></table></td></tr>
</table>

3. Tape & Reel Packaging Dimensions:

3-1 Dimensions

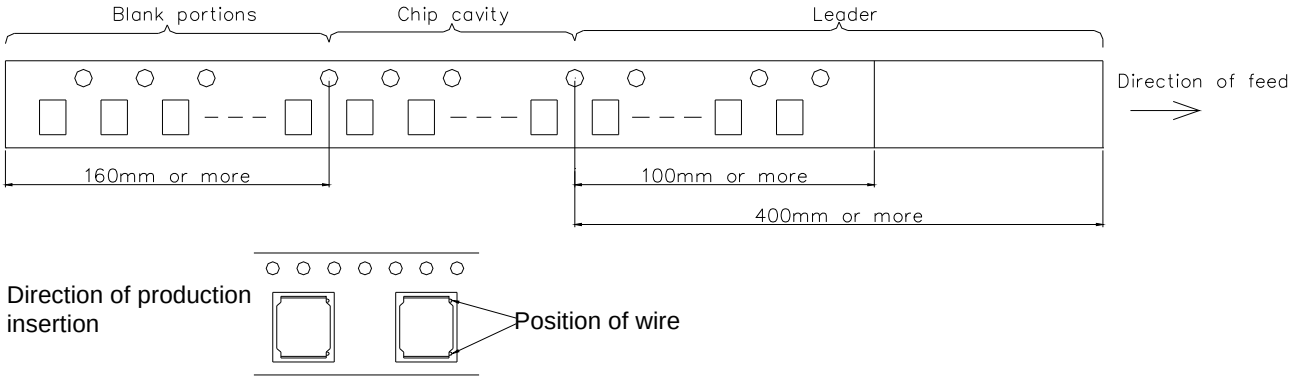
Unit: mm



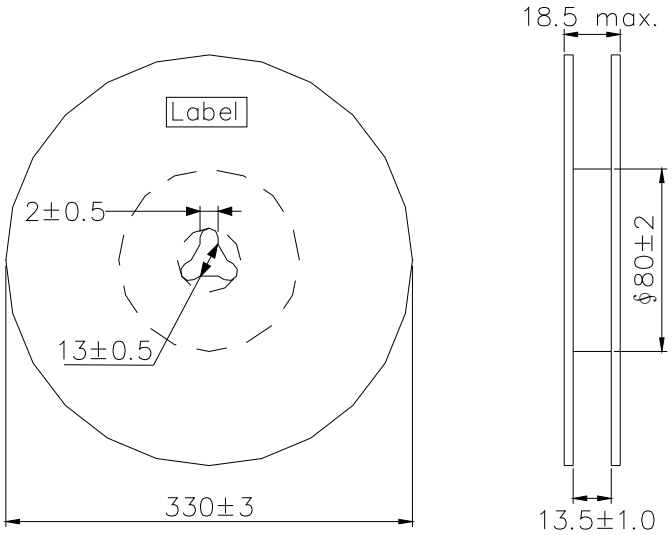


A_0	B_0	W	F	E	P_1	P_2	P_0	D_0	T	K
4.3 ±0.1	4.3 ±0.1	12.0 ±0.3	5.5 ±0.1	1.75 ±0.1	8.0 ±0.1	2.0 ±0.1	4.0 ±0.1	Φ1.5 +0.1 -0	0.3 ±0.05	2.1 ±0.1

3-2 Direction of rolling

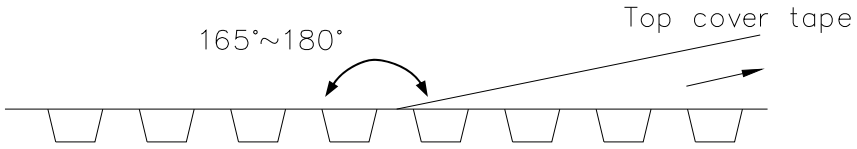


3-3 Reel



Label position: on the opposite side of sprocket holes side of reel

3-4 Top tape strength



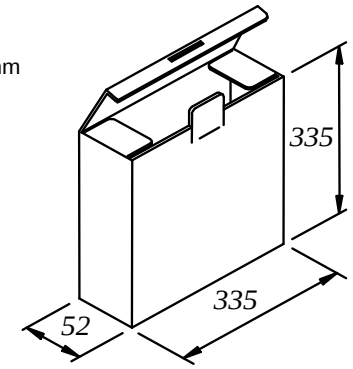
Peel-off strength: 0.1N~1.3N

Peel-off angle:165°~180°

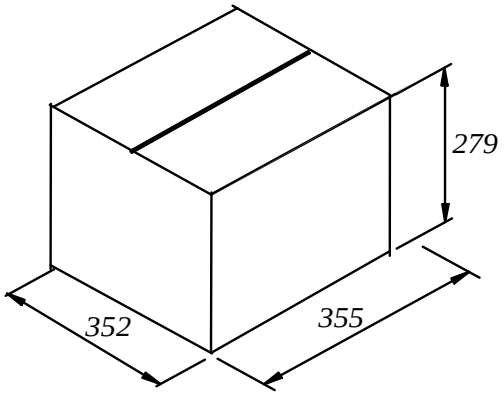
Peel-off speed: 300mm/mm

3-5 Dimensions of packing box (for Tape & Reel package)

UNIT : mm



CONSTURCTION:
THE CASE CONTAINS 2-12mm WIDE CARRIER TAPES.
Q'TY : 3,500/ REEL



TOTAL Q'TY : 28,000 PCS