



## RLT Series 0mΩ (JUMPER)

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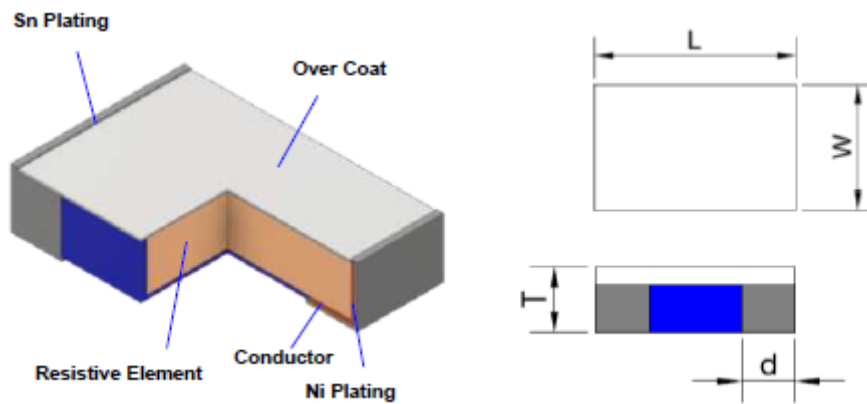
### 1. Scope

This specification applied to the products of jumper resistor of metal plate for RLT series manufactured by TA-I TECHNOLOGY CO., LTD.

### 2. Type Designation

<b>RLT10</b>	<b>J</b>	<b>T</b>	<b>S</b>	<b>R000</b>
<b>Series No.</b>	<b>Tolerance</b>	<b>Packaging</b>	<b>Power</b>	<b>Resistance</b>
10 : 0805	J= ±5%	T= Paper	S= 0.5W	e.g. R000 ≤ 0.2 mΩ

### 3. Construction and Dimension



Type	L	W	d	T
RLT10	2.05 ±0.15	1.30 ±0.20	0.35 ± 0.20	0.40 ±0.10

UNIT: mm



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### 4. Features

Series	Size	Resistance Value (Max.)	Power (W)	Operation Temperature Range	Max Rated Current (A)	TCR (ppm/°C)
RLT10	0805	≤0.2 mΩ	0.5	-55°C~+150°C	50	3800

### 5. Reliability Tests

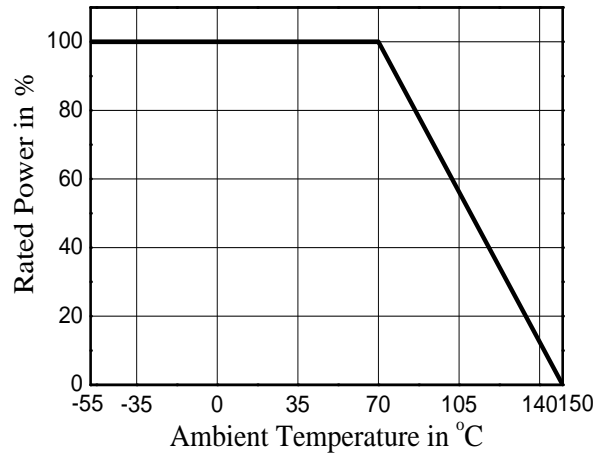
Test Items	Reference standard	Condition of Test	Test Limits
Short Time Over Load	IEC60115-1-4.13 JIS-C5201-4.13	5 X rated power, 5s	≤0.2 mΩ
Load Life	IEC60115-1 4.25.1 JIS C 5201-1 4.25.1	1000hours at rated power, 70 °C, 1.5hours “ON”, 0.5hour “OFF”	≤0.2 mΩ
Moisture no Load	IEC60115-1 4.24.2.1a) JIS C 5201-1 4.24.2.1a)	85°C, 85%RH, 1000hrs	≤0.2 mΩ
Temperature cycle	JESD22 Method JA-104	-55°C (30 min.) / +125 °C (30 min.) 1000 cycles	≤0.2 mΩ
Resistance to Soldering Heat	IEC60115-1-4.18 JIS-C5201-4.18	260 ± 5°Csolder, 10 ± 1 sec dwell.	≤0.2 mΩ
Solderability	IEC60115-1-4.17 JIS-C5201-4.17	245±5°C solder, 2±0.5 sec dwell. Solder: Sn96.5 / Ag3.0 / Cu0.5	At least 95% of surface area of electrode shall be covered with new solder.
Robustness of Termination (Bending Strength)	IEC60115-1-4.33 JIS-C5201-4.33	Bending width 2mm	≤0.2 mΩ
High Temperature Exposure	IEC60115-1-4.23.2 JIS-C5201-4.23.2	150°C, 1000hrs	≤0.2 mΩ



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### 5.1 Derating Curve



### 5.2 Rated Current

The rated current is calculated by the following formula:

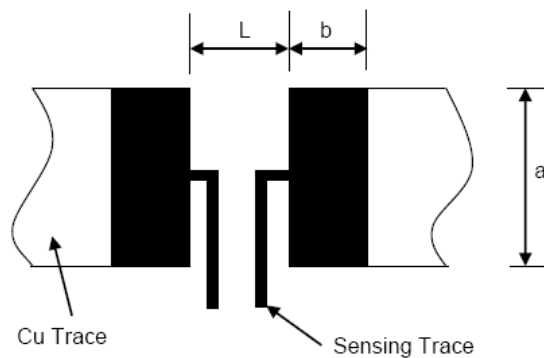
$$I = \sqrt{P \div R}$$

I: Rated Current (A)

P: Rated Power (W)

R: Resistance Value (Ω)

### 6. Recommended Solder Pad Dimension



Type	Land pattern Size	Dimension (mm)		
		A	B	L
RLT	10 (0805)	1.4	1.20	0.80



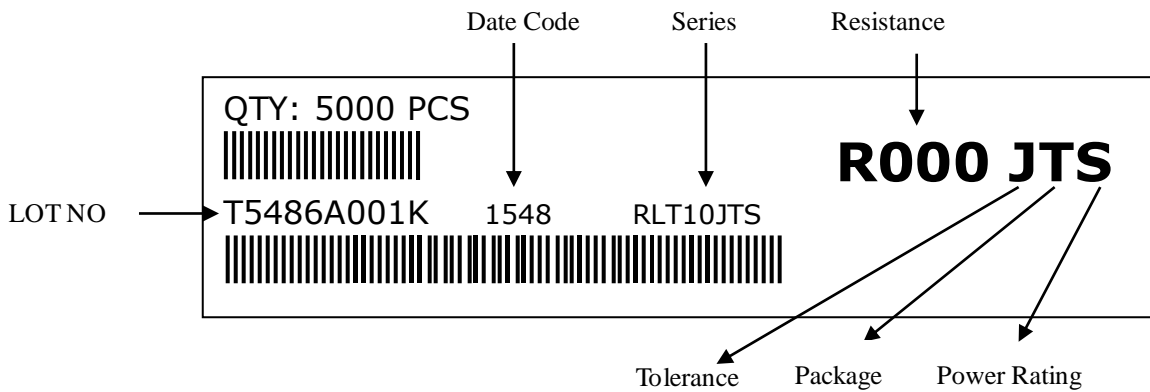
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### 8. Number of Package

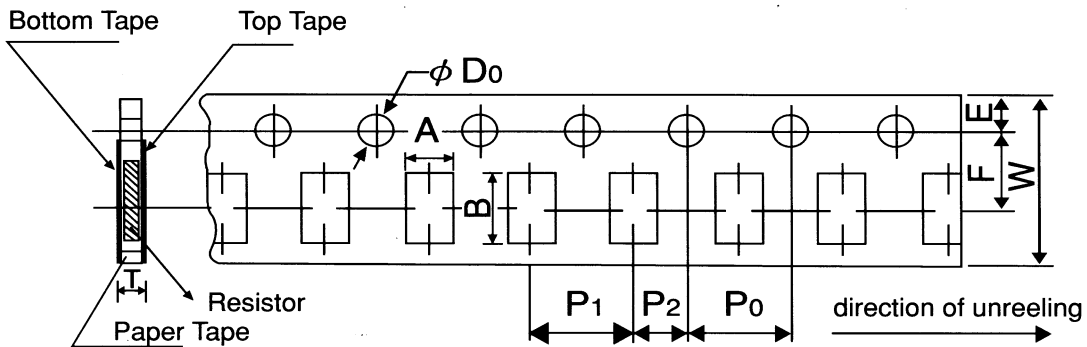
Package		Paper Tape
		4 mm pitch
Type	Size	178mm/R
RLT	10	5000

### 9. Label



### 10. Packaging

#### 10.1 4mm pitch paper



Packing	Type	A	B	W	F	E	P <sub>1</sub>	P <sub>2</sub>	P <sub>0</sub>	$\psi D_0$	T
Paper Tape	RLT10	1.6 ±0.15	2.4 ±0.2	8.0 ±0.2	3.5 ±0.05	1.75 ±0.1	4.0 ±0.1	2.0 ±0.05	4.0 ±0.1	$\phi 1.5$ +0.1 -0	0.64 ±0.1

Unit: mm



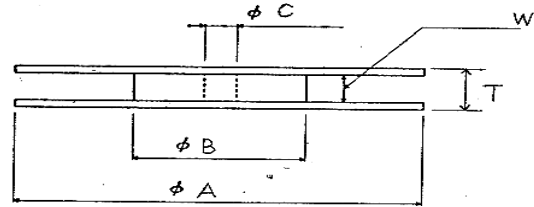
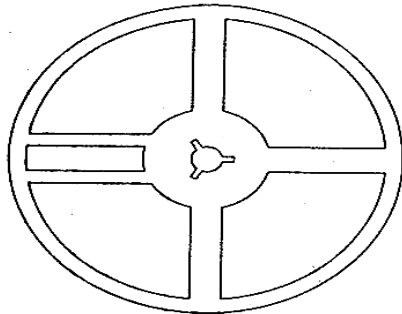
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### 11. Reel Specification

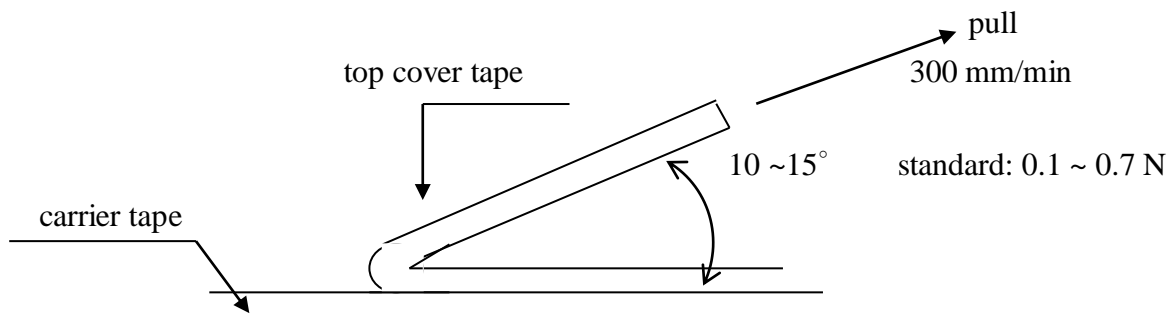


Series	$\phi A$	$\phi B$	$\phi C$	W	T
RLT	$178 \pm 2.0$	$60.0 \pm 1.0$	$13.0 \pm 1.0$	$9.0 \pm 1.0$	$11.5 \pm 1.0$

Unit: mm

### 12. Peeling Strength of Top Cover Tape

Peel – off force of paper and blister tape is in accordance with “JIS” that is, 0.1 to 0.7 N at a peel-off speed of 300 mm / minute.



### 13. Storage Conditions:

Temperature: 5°C~35°C, Humidity:40%~75%

### 14. Shelf Life:

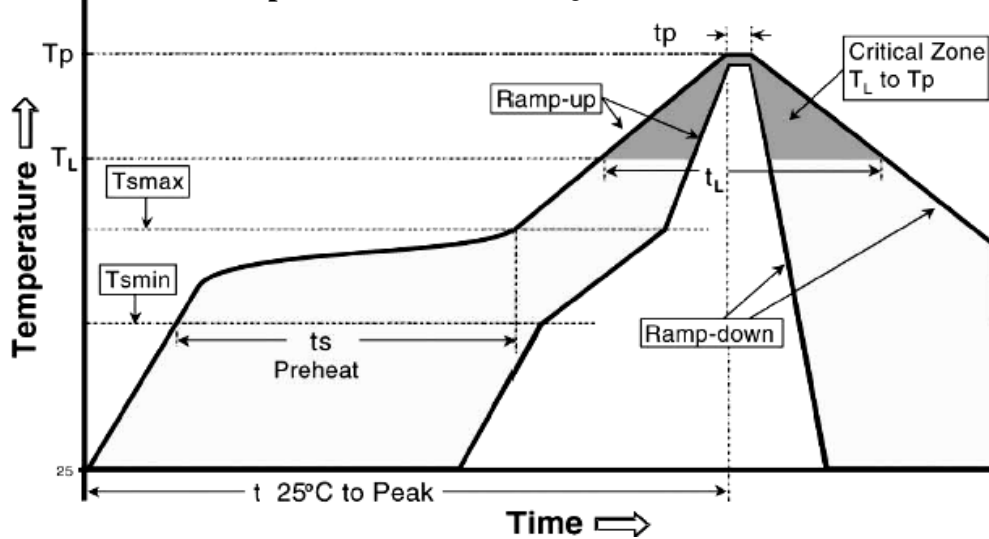
2 years from manufacturing date.



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**15. Recommend IR – Reflow profile** (solder: Sn96.5 / Ag3 / Cu0.5)



Profile Feature	Lead (Pb)-Free Assembly
Average ramp-up rate (Tsmax to Tp)	3°C / second max.
Preheat	
- Temperature Min (Tsmin)	150°C
- Temperature Max (Tsmax)	200°C
- Time (Tsmin to Tsmax) (ts)	60 -120 seconds
Time maintained above:	
- Temperature (Tl)	217°C
- Time (Tl)	60-150 seconds
Peak Temperature (Tp)	260°C
Time within $\begin{matrix} +0 \\ -5 \end{matrix}$ °C of actual Peak Temperature (tp) <sup>2</sup>	10 seconds
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8minutes max.

**Allowed Re-flow times :3 times**

**Remark: To avoid discoloration phenomena of chip on terminal electrodes, please use N2 Re-flow furnace.**



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**16. ECN**

Engineering Change Notice: The customer will be informed with ECN if there is significant modification on the characteristics and materials described in Approval Sheet.

**17. Manufacturing Country & City:**

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