



Low Resistance Chip Resistors (RBL62 20mΩ~100mΩ)

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1. Scope :

The specification applies for the RBL62 of low resistance chip resistors made by TA-I.

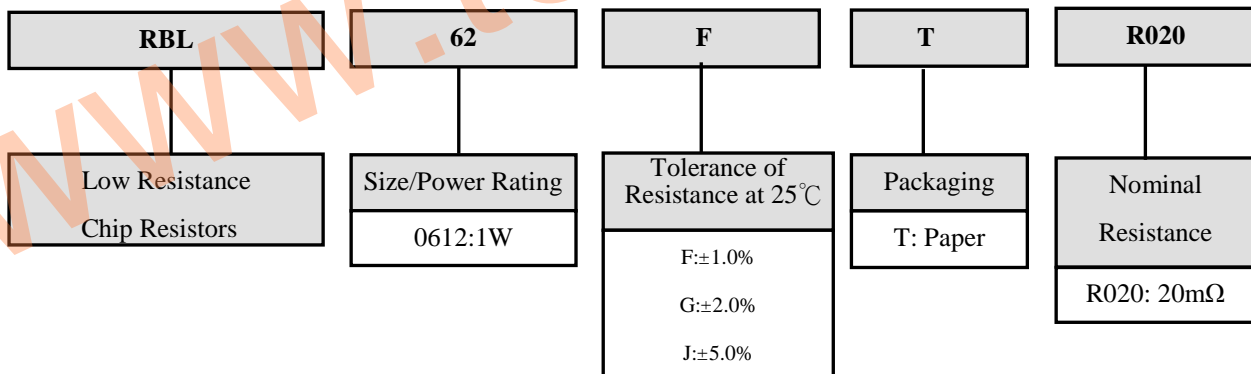
2. Features:

- ◆ Low Resistance and High Accuracy Resistor for Current Detection
- ◆ Large Electrode (All series)
- ◆ Good Performance for Heat Dissipation
- ◆ High Purity Alumina Substrate for High Power Dissipation
- ◆ Pb-free to Meet RoHS Requirements

3. Applications:

- ◆ Power Management Applications
- ◆ Switching Power Supply
- ◆ DC-DC Converter, Battery Pack, Charger, Adaptor
- ◆ Portable Instruments (PDA and Cell Phone)
- ◆ Voltage Regulation Module (VRM)
- ◆ Computer

4. Type Designation:

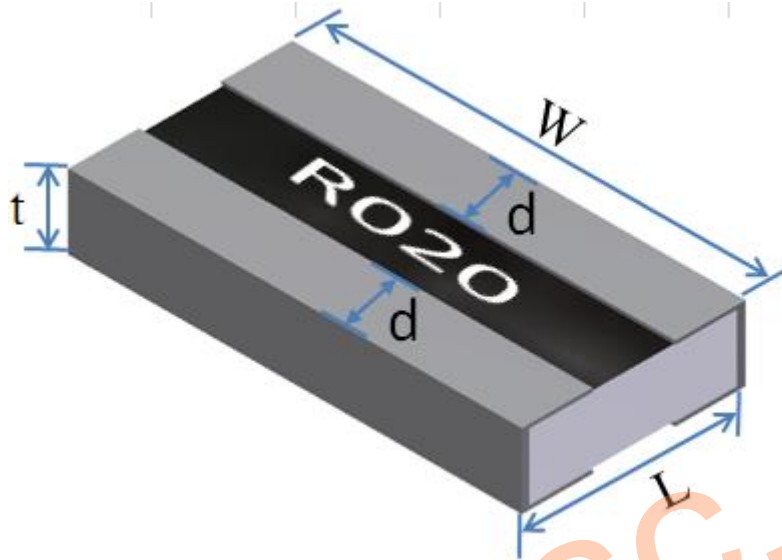




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5. Dimensions:



Unit: mm

Type	L	W	d	t
RBL62	1.60±0.20	3.20±0.20	0.45±0.10	0.60±0.20

6. Electrical Characteristics

Chip Size	Power Rating	TCR (ppm/°C)	Resistance Range (mΩ)			Operating Temp. Range
			F : ±1%	G : ±2%	J : ±5%	
0612	1W	± 50	20mΩ~100mΩ			-55°C~ +125°C



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7. Reliability Tests

Test Items	Reference standard	Condition of Test	Test Limits(ΔR)
Temperature Coefficient of Resistance	IEC60115-1-4.8 JIS-C5201-4.8	25 ~ +125°C	$\pm 50\text{ppm}$
Short Time Overload	IEC60115-1-4.13 JIS-C5201-4.13	5 X rated power, 5s	$\pm (0.5\%+0.0005\Omega)$
Load Life	IEC60115-1-4.25.1 JIS-C5201-4.25.1	1000 hours at rated power , 70°C, 1.5hours "ON ", 0.5hour "OFF"	$\pm (1\%+0.0001\Omega)$
Load Life with Humidity	IEC60115-1-4.24 JIS-C5201-4.24	1000 hours at rated power , 40 \pm 2°C , 90~95% RH1.5hours "ON ", 0.5hour "OFF"	$\pm (1\%+0.0001\Omega)$
Rapid Change of Temperature	IEC60115-1-4.19 JIS-C5201-4.19	-55°C (15 min.) / +125 °C(15 min.) 5 cycle	$\pm (0.5\%+0.0005\Omega)$
Resistance to Soldering Heat	IEC60115-1-4.18 JIS-C5201-4.18	270 \pm 5°C solder, 10 \pm 1 sec dwell.	$\pm (0.5\%+0.0005\Omega)$
Solderability	IEC60115-1-4.17 JIS-C5201-4.17	245 \pm 5°C solder 2 \pm 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	2mm deflection	$\pm (0.5\%+0.0005\Omega)$
Resistance to Dry Heat	IEC60115-1-4.23.2 JIS-C5201-4.23.2	125 \pm 5°C for 96 \pm 4hrs	$\pm (1\%+0.0005\Omega)$

8. Marking:

For 62:

Resistance value is expressed by 4 digits; the first "R" means decimal point and the other digits represent for the normal resistance in Ω .

e.g. 20m Ω = R020

9. Taping & Reel

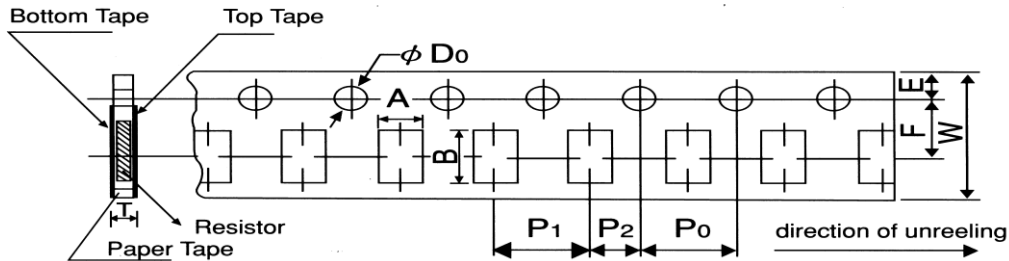
9-1 Taping Dimensions

9-1-1 4 mm pitch paper



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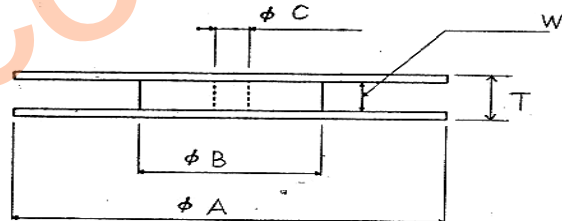
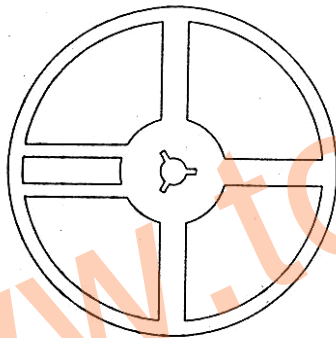
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Packing	Type	A	B	W	F	E	P ₁	P ₂	P ₀	D ₀	T
Paper Tape	RBL62	2.0±0.15	3.6±0.2	8.0±0.2	3.5±0.05	1.75±0.1	4.0±0.1	2.0±0.1	4.0±0.1	Φ1.5 ^{+0.1} _{-0.1}	0.84±0.1

UNIT: mm

9-2 Reel Specifications



UNIT: mm

Type	ΦA	ΦB	ΦC	W	T
RBL62	178.0±2.0	60.0±1.0	13.0±1.0	9.0±1.0	11.4±1.0

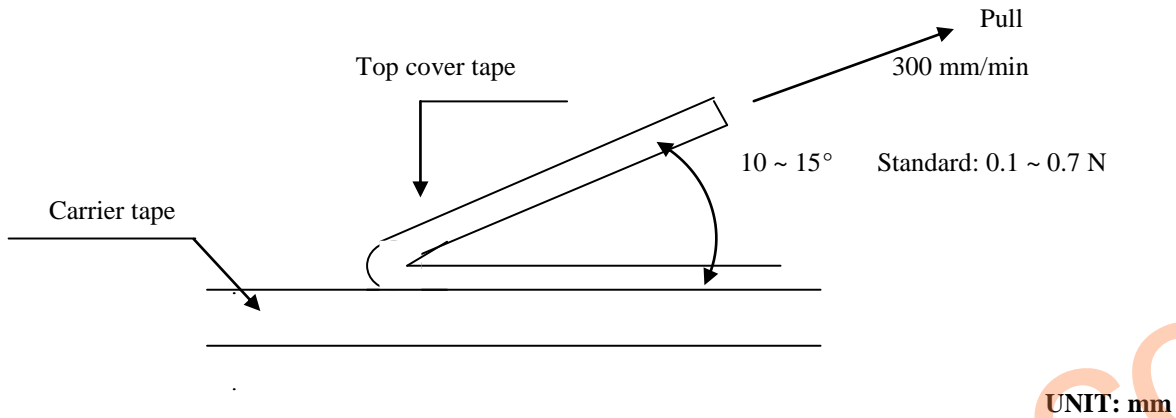


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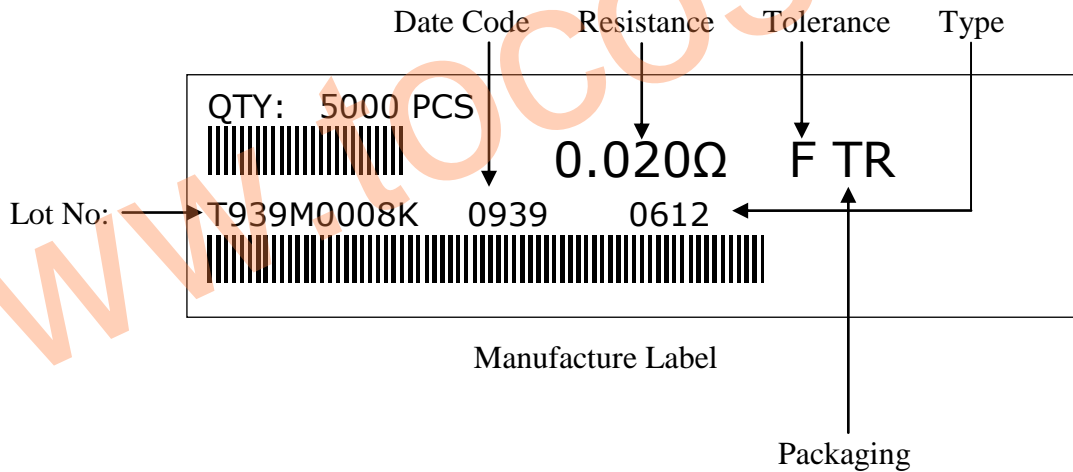
9-3 Peel – off force:

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.



10. Label

10.1 Normal Products:

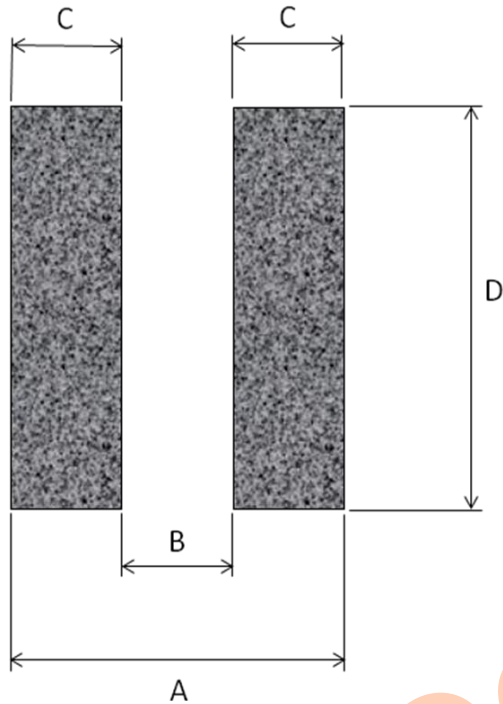




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11. Recommended Land Pattern



Type	RBL	
Size	62	
Dimension (mm)	A	2.63
	B	0.45
	C	1.09
	D	3.82

12. 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.

13. Storage Conditions:

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

14. Shelf Life:

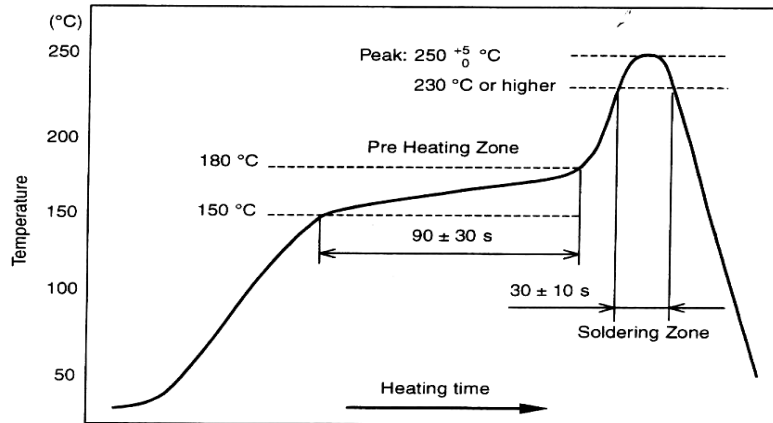
2 years from manufacturing date.



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



Peak: $250 \begin{matrix} +5 \\ -0 \end{matrix} ^\circ\text{C}$, 5 sec

Pre – heat Zone: 150 to 180 °C, 90±30 sec

Soldering Zone: 230°C or higher, 30±10 sec

16. Manufacturing Country & City:

TA-I TECHNOLOGY CO., LTD. (Taiwan– Tao Yuan)

Tel: (+886) 3-3246169 Fax: (+886) 3-3246167

Associated companies:

(1)TA-I TECHNOLOGY (SU ZHOU) CO., LTD. (China – Su Zhou)

Tel: (+86) 512-63457879 Fax: (+86) 512-63457869

(2) TA-I TECHNOLOGY ELECTRONIC (DONGGUAN) CO., LTD. (China –Don Guan)

Tel: (+86) 769-8339-4790~3 Fax: (+86) 769-8339-4794

(3) FORTUNE TASK RESISTOR FACTORY (China – Don Guan)

Tel: (+86) 769-8339-4790~3 Fax: (+86) 769-8339-4794

(4) TAI OHM ELECTRONICS (M) SDN. BHD. (Malaysia – Penang)

Tel: (+60) 4- 3900480 Fax: (+60) 4-3901481

(5) P.T.TAI ELECTRONIC Indonesia (Indonesia – Jakarta)

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