

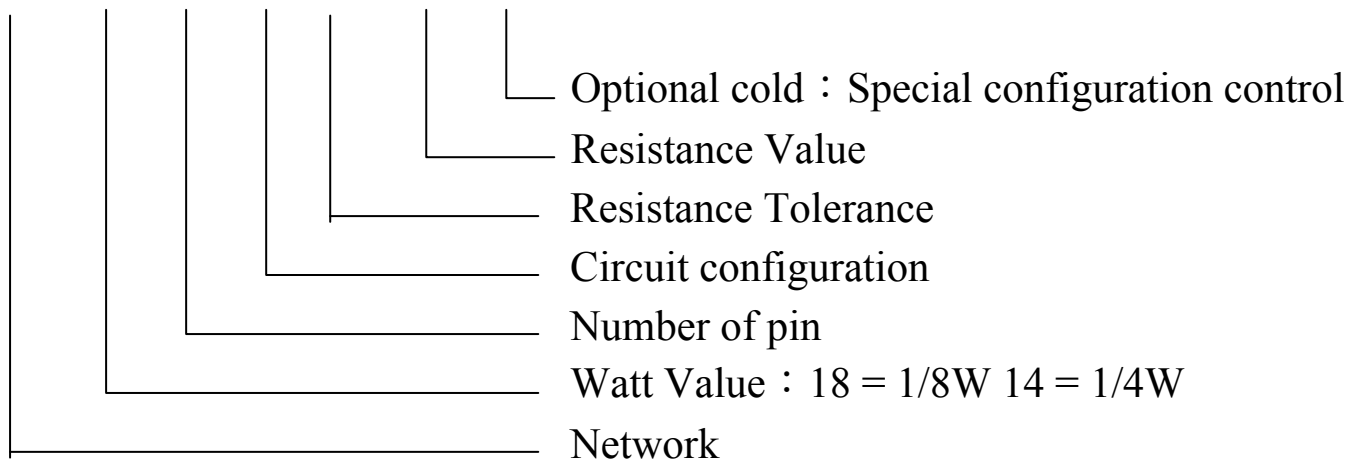
公司名稱 Company Name	TOP-QUALITY ELECTRIC CO; LTD.
品名 Product Name	排列電阻 <b>NETWORKS TYPE FOR RW</b>

## 1. Scope

This specification based on our company's standard quality level is applicable to film resistors SIP NETWORK series

## 2. Ordering tree :

**RW 18 05 A F 102 O**



RW1804AG1020---4Pin A Type 1K ohm  $\pm 2\%$  1/8W

RW1804BG1020---4Pin B Type 1K ohm  $\pm 2\%$  1/8W

RW1809AG1020---9Pin A Type 1K ohm  $\pm 2\%$  1/8W

RW1809BG1020---9Pin B Type 1K ohm  $\pm 2\%$  1/8W

RW1410TG1030---10Pin T Type 10K ohm  $\pm 2\%$  1/4W

### 2.1 Number of elements :

Number of elements for Resistor NETWORK

### 2.2 Shape

Shape for our company's Resistor NETWORK

### 2.3 Circuit configurations :

Please refer to below table-1

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Table-1

Circuit Symbol	A
Circuit Configuration	
Circuit Symbol	B
Circuit Configuration	

\* Customer Designed Resistor Networks Are Available.

2.4

Circuit Symbol	T TYPE
Circuit Configuration	
Circuit Symbol	L TYPE
Circuit Configuration	
Circuit Symbol	D TYPE
Circuit Configuration	
Circuit Symbol	E TYPE
Circuit Configuration	

2.5 Tolerances :

F :  $\pm 1\%$    G :  $\pm 2\%$    J :  $\pm 5\%$

2.6 Resistance Value :

Example 472  $\longrightarrow$  (47 x 100) ohm = 4K7  $\Omega$ (ohm)

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3. Standard Specification :

Please refer to below table-2

Clause	Function
Element standard working watt	0.125~0.25 W / Element
Element surge voltage	150 Voltage
Standard operating temperature	70°C
Operating temperature	2.2Ω ~ 2.2MΩ

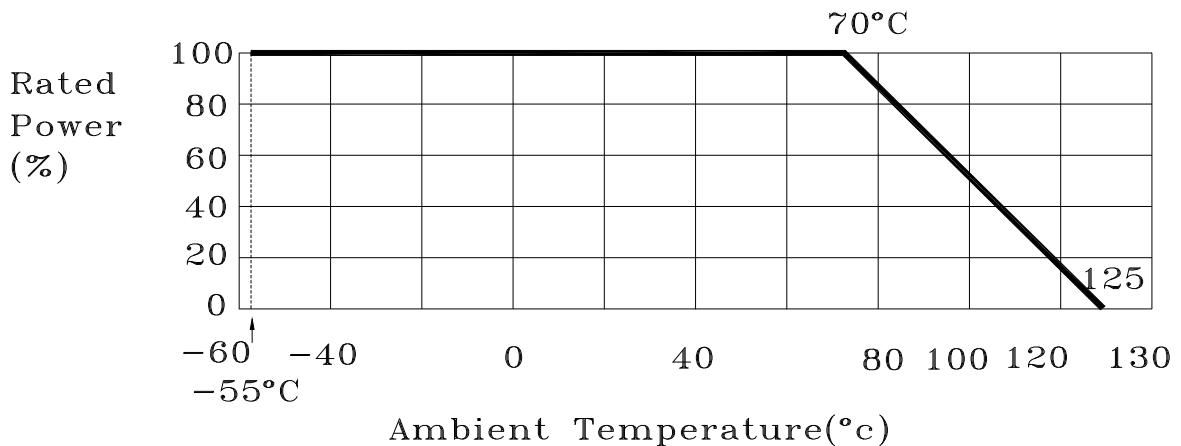
3.1 Element standard working watt :

This is maximum watt applicable to continuous use.

Based on temperature max70°C.

Please refer to below Graph – 1 With respect to watt over 70°C

Sketch -1



3.2 Element standard working voltage :

This is Voltage for DC or AC as opposed to element standard working watt.]

Please refer to below calculation system.

But even if value from below calculation is over.

Element surge voltage 150voltage is max.

$$E = \sqrt{P.R} \quad E = \text{Element standard voltage}$$

$$P = \text{Element standard watt}$$

$$R = \text{Resistance value / element}$$

4. Outside view :

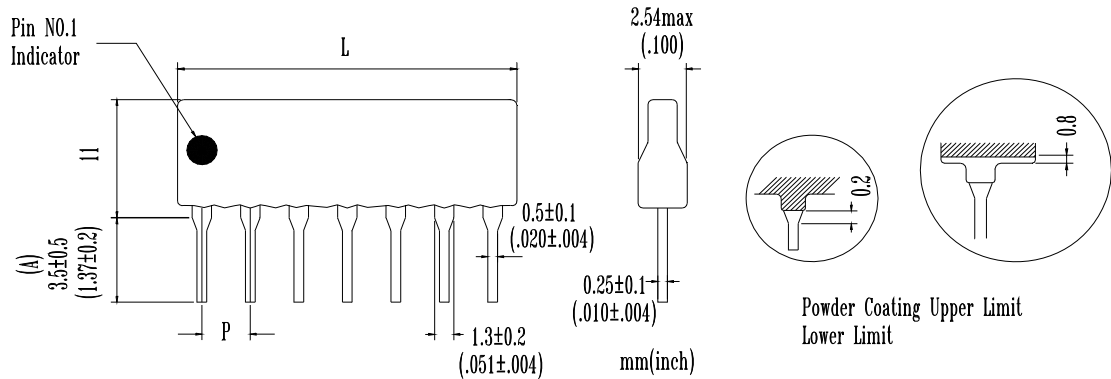
The Color of dip is black also marking is whit or silver.

4.1 Appearance dimension :

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Please refer to below sketch -2 and -3.

Sketch -2



#### 4.2

Pin Length (A)  $3.5 \pm 0.5$

Type	W max. mm(inch)	L max. mm(inch)	P mm(inch)	Pin No	Element No
Low profile (1/8W)	5.08 (.200)	Pin No.x2.54+0.25 (Pin No.x.100+0.010)	2.54±0.2 (.100±.008)	4-12	3-11
High profile (1/4W)				4-12	2-6

#### 4.3 Marking :

- (1) No.1 contact mark
- (2) Pins , Example : 5 = 5 Pins
- (3) Circuit configurations
- (4) Resistance value
- (5) Tolerance

#### 4.4 Contact :

Every contact completely terminates electrically and mechanically  
Shape of contact is rectangle and must be easy to solder.

#### 4.5 Number of elements :

Number of elements for resistor NETWORK RW series is complied with table -4

公司名稱 Company Name	TOP-QUALITY ELECTRIC CO; LTD.
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table -4

Circuit Configurations Mark	NBR Of Elements
A Type	3 ~ 13
B Type	2 ~ 7
T Type	6 ~ 18
E Type	4 ~ 24
L Type	2 ~ 12
D Type	3 ~ 13

5. Function :

Please refer to table -5

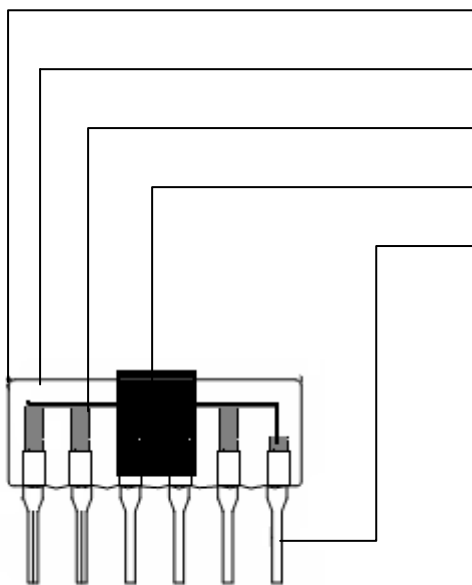
table -5

Clause	Function
Resistance value	Must be within regulated tolerance of resistance value
Temperature Coefficient(T.C.R.)	Within $\pm 100\text{ppm}/^\circ\text{C}$ (JIS-C-5202.5.2B)
Short time overload	Within $\pm(1\%+0.05\Omega)$ (JIS-C-5202.5.5)
Lead strength	No evidence of mechanical damage
Resistance to soldering heat	Within $\pm(0.25\%+0.05\Omega)$ (JIS-C-5202.6.4)
Solderability	After immersing flux, dip in the $260^\circ\text{C}$ Max. solder bath for $3\pm 0.5$ Sec.
Temperature cycle	Within $\pm(1\%+0.05\Omega)$ (JIS-C-5202.7.4)
Load lift in moisture	Within $\pm 3\%$ , no defect (JIS-C-5202.7.9)
Load life	Within $\pm 3\%$ , no defect (JIS-C-5202.7.10)
Resistance to solvents	Able to read marking

6. They are high performance and high reliable thick film resistor NETWORKS using materials having excellent characteristics.

Name	Material	Characteristics
Base substrate	Alumina / Ceramic	It has excellent heat conductivity, heat stability and mechanical strength.
Resistor elements	Ruthenium oxide base	It has high resistance against heat and weathering
Conductor	Silver / Palladium	It cause no migration so as to make the design reliable
Terminal	Solder-Lined iron leads	The thick solder lining facilitates the soldering
Outer coating	Epoxy resin paint	It has high resistance against heat and weathering and solvents

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- Base substrate – alumina / ceramic
- Resistor elements – ruthenium oxide base
- Conductor – silver / palladium
- Outer coating – epoxy resin paint
- Terminal – solder hined iron leads

### 7. Rating

Style	Power Rating		Max Working Voltage	Max Overload Voltage	Rating Ambient Temp.	Resistance Range.	Resistance Tolerance
	Other Type	B Type					
RW18	0.125W	0.20W	150V	250V	70°C	10Ω~1M	J(5%) G(2%) F(1%)
RW14	0.250W	0.35W	200V	280V			

### 8. Packing (Box dimension)

Burst test 8g f / cm<sup>2</sup>

Material : 5 / 5

Quantity : 4~6 pin : 2000 pcs / Box

7~10 pin : 1000 pcs / Box

11~14 pin : 500 pcs / Box

Unit : mm

<b>a</b>	<b>56 ±2</b>
<b>b</b>	<b>125 ±2</b>
<b>c</b>	<b>150 ±2</b>

