



ISO9001-2000 CERTIFIED

REV NO: A/0



产品承认书

SPECIFICATION FOR APPROVAL

CUSTOMER : 立创

PRODUCT NAME: 网络排阻 RA 0--2MΩ

RESISTANCE VALUE: 470Ω ±2%

MONEC P/N: (example) RAA09471GFN

CUSTOMER P/N: _____

ISSUE DATE: 一月 23, 2019

| APPROVED | PREPARED |
|----------|----------|
| | |

CUSTOMER APPROVAL:

| APPROVED | CHECKED |
|----------|---------|
| | |

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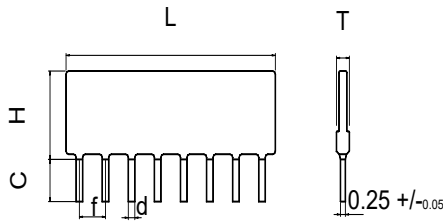
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1. Instruction

This sheet is the statement of the resistor network specification that our company productions can meet.

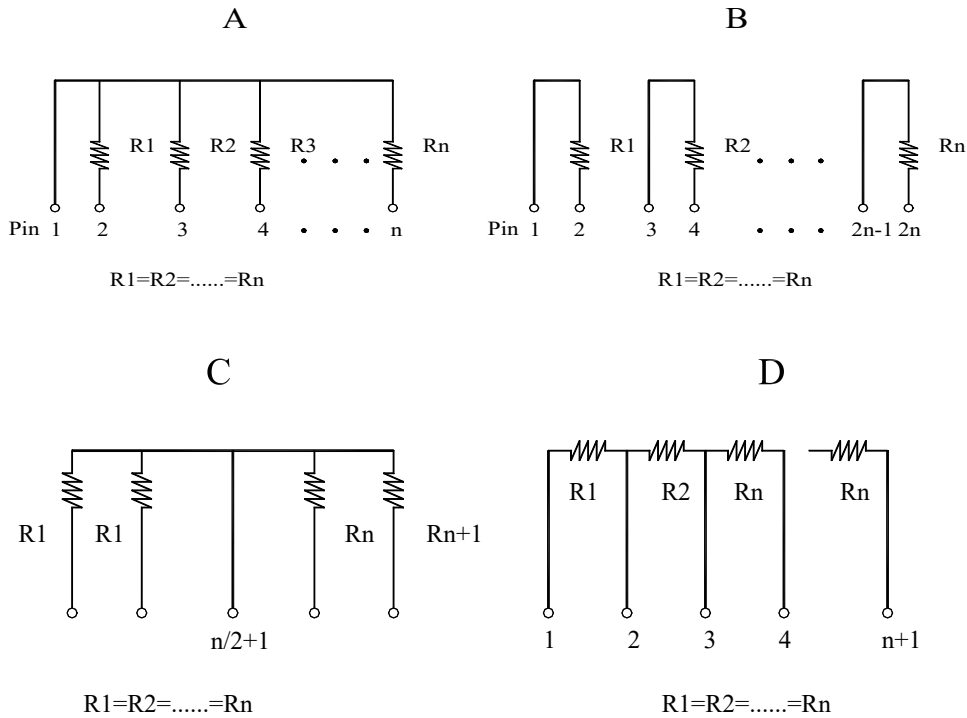
2. Construction & Dimensions

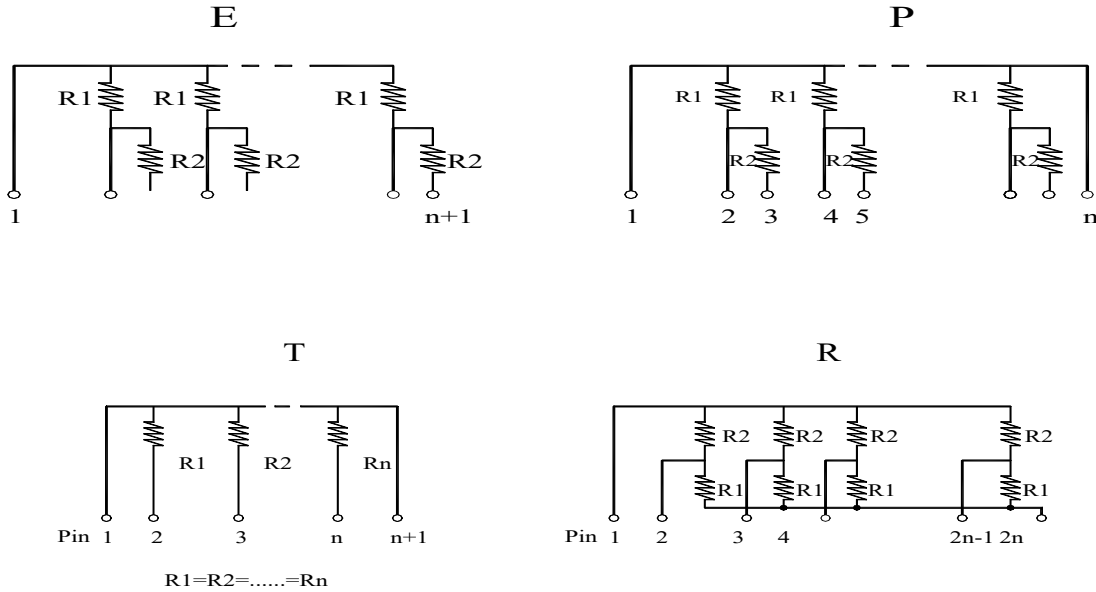
Unit: mm



| Style | L (max) | H max | | T (max) | C ±0.60 | d ±0.1 | f ±0.20 |
|--------|------------|-------|-----|------------|------------|-----------|------------|
| | | RA | RB | | | | |
| 4 pin | 10.2 | | | | | | |
| 5 pin | 12.7 | | | | | | |
| 6 pin | 15.3 | | | | | | |
| 7 pin | 17.8 | | | | | | |
| 8 pin | 20.4 | | | | | | |
| 9 pin | 22.9 | 5.80 | 8.5 | 2.9 | 3.3 | 0.5 | 2.54 |
| 10 pin | 25.4 | | | | | | |
| 11 pin | 28.0 | | | | | | |
| 12 pin | 30.5 | | | | | | |
| 13 pin | 33.1 | | | | | | |
| 14 pin | 35.6 | | | | | | |

3. Circuit diagram





4. How to order

| <u>RA</u> | <u>A</u> | <u>09</u> | <u>103</u> | <u>J</u> | <u>F</u> |
|----------------|---------------|-----------|---------------|----------|-------------------|
| Series | Circuit style | 04= 4 Pin | RES. Value | RES. | F=Pb Free 本体印 F |
| RA= Low power | A style | 05= 5 Pin | 220= 22 Ω | F = ± 1% | FN=Pb Free 本体未印 F |
| RB= High power | B | 06= 6 Pin | 101= 100 Ω | G = ± 2% | 其它特殊见料号说明 |
| | C | 07= 7 Pin | 103= 10K Ω | J = ± 5% | |
| | D | : | 105= 1M Ω | | |
| | E | : | 1822= 18.2K Ω | | |
| | P | : | 1005= 1M Ω | | |
| | R | : | | | |
| | T | 14=14 Pin | | | |

5. Characteristics

Power rating

| Series | Circuit style | Power rating |
|--------|---------------|--------------|
| RA | B | 0.2W |
| | A | 0.125W |
| RB | All Style | 0.25W |

Mechanical characteristics

| Item | Requirement | Test methods |
|--------------------------------------|---|--|
| Resistance to soldering heat | $\Delta R \leq \pm(1\% R_0 + 0.1 \Omega)$ | With $260 \pm 5^\circ\text{C}$, for 3 sec. |
| Solder ability | Over 95% of termination must be covered with new solder | After immersing flux, dip in the $235 \pm 5^\circ\text{C}$ molten solder bath for 2 ± 0.5 sec. |
| Terminal strength (Tensile strength) | $\Delta R \leq \pm(1\% R_0 + 0.1 \Omega)$ No mechanical damage | Tensile: 1kg for 30 sec. Bending: 500g for 2 times |
| Exterior | No mechanical defect | Visual |
| Size | Within specification | Vernier calipers |

SUBJECT: RESISTORS NETWORK SPECIFICATION SHEET

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Electrical characteristics

| Item | Requirement | Test methods |
|-----------------------------------|--|---|
| DC resistance | Within the specified tolerance | Refer to JIS C 5202 item 5.1 |
| Temperature co-efficient (PPM/°C) | $R < 50 \Omega \pm 250 \text{ PPM}/^\circ\text{C}$ $50 \Omega \leq R < 2.2\text{M} \Omega \pm 100 \text{ PPM}/^\circ\text{C}$ $R \geq 2.2\text{M} \Omega \pm 250 \text{ PPM}/^\circ\text{C}$ | $\text{TCR (PPM}/^\circ\text{C)} = (R_2 - R_1) / [R_1 \times (T_2 - T_1)]$ $T_1: 25^\circ\text{C}$ $T_2: \text{Test temperature } 25/-40/125^\circ\text{C}$ $R_1: \text{Resistance at TEMP. } T_1$ $R_2: \text{Resistance at TEMP. } T_2$ |
| Short-time overload | $\Delta R \leq \pm (1\% R_0 + 0.1 \Omega)$ | $2.5 \times \text{Rated voltage for 5 sec.}$ (200Vmax.) measure resistance after 30 minutes |

Environment test

| Item | Requirement | Test methods |
|-----------------------|--|---|
| Temperature cycle | $\Delta R \leq \pm (1\% R_0 + 0.1 \Omega)$ | Repeat 5 cycles as follows -40°C 室温 125°C 室温 30min 15min 30min 15min |
| Load life in humidity | $\Delta R < \pm (3\% R_0 + 0.1 \Omega)$ | Maintain the temperature of the resistor at $40 \pm 2^\circ\text{C}$ and 90-95% RH with the rated voltage applied for 1000+40/-0 hours. After two hours, measure value. |
| Load life | $\Delta R < \pm (3\% R_0 + 0.1 \Omega)$ | Permanent resistance change after 1000 +40/-0 hours at RCWV of max., keep the resistor at $70 \pm 3^\circ\text{C}$ ambient. |

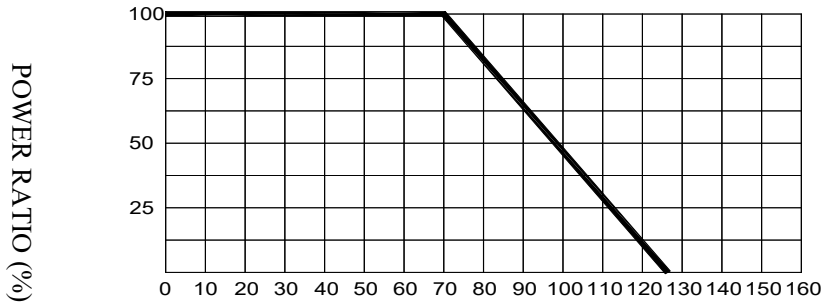
6. Standard Resistance (OHM) E-12 Series

| | | | | | | | | | | | |
|------|------|------|------|------|------|------|------|------|------|------|------|
| 10 | 12 | 15 | 18 | 22 | 27 | 33 | 39 | 47 | 56 | 68 | 82 |
| 100 | 120 | 150 | 180 | 220 | 270 | 330 | 390 | 470 | 560 | 680 | 820 |
| 1K | 1.2K | 1.5K | 1.8K | 2.2K | 2.7K | 3.3K | 3.9K | 4.7K | 5.6K | 6.8K | 8.2K |
| 10K | 12K | 15K | 18K | 22K | 27K | 33K | 39K | 47K | 56K | 68K | 82K |
| 100K | 120K | 150K | 180K | 220K | 270K | 330K | 390K | 470K | 560K | 680K | 820K |
| 1M | 1.2M | 1.5M | 1.8M | 2.2M | | | | | | | |

7. Dual Terminators (R2/R1) (OHM)

240/120 390/330 390/180 470/330
 270/220 3.3K/1.5K 330/220 6.2K/3.0K 4.7K/3.3K

DERATING CURVE



AMBIENT TEMPERATURE(°C)

8. Outgoing inspection sampling plan

1. MIL-STD-105D. Level II, Normal inspection
2. Single sampling
3. AQL:

| | | | |
|-----------|----|------|-----|
| Defective | CR | MA | MI |
| AQL | 0 | 0.15 | 1.0 |

9. Packaging

Standard packing quantity: 200pcs per bag.