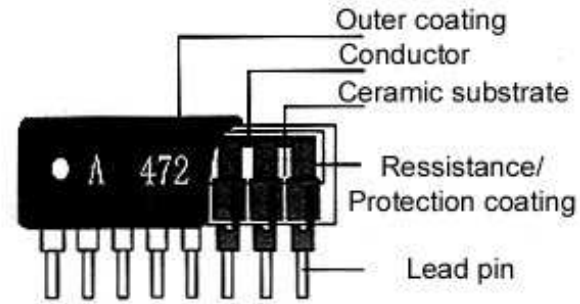
● Features

· Miniature, high density assembly.
· Stable electrical capability, high reliability.
· Combinations of different ohmic value are available

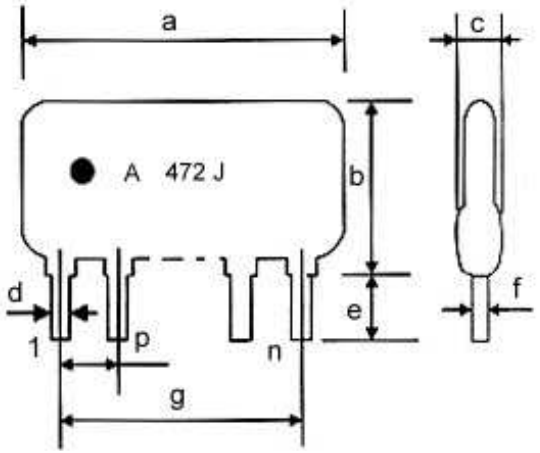
● Construction and dimensions

unit:mm

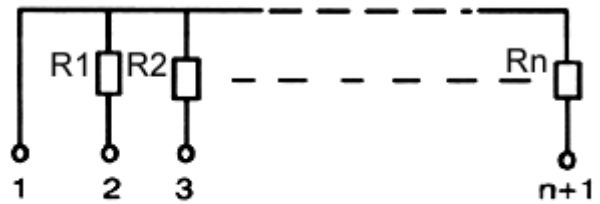
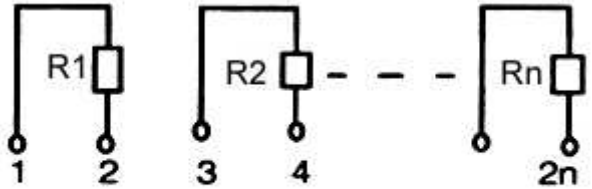
Code	Normal dimension		Special dimension	
a	2.54x(n-1)+2.5max		1.778x(n-1)+1.5max	
b	A.B.C.D. E.F.G.H Type	5.08max	A.B.C.D. E.F.G.H Type	5.08max
	T Type	8.50max	T Type	8.50max
c	3.00max		3.00max	
d	0.50±0.1		0.50±0.1	
e	3.50±0.5		3.50±0.5	
f	0.25±0.1		0.30±0.1	
g	2.54x(n-1)±0.3		1.778x(n-1)±0.3	
p	2.54±0.1		1.778±0.1	

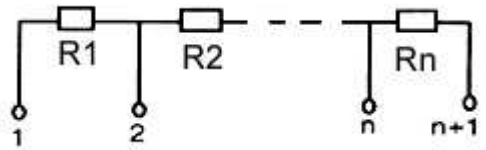
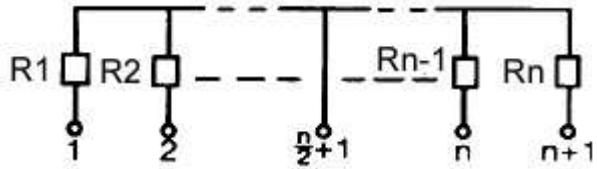
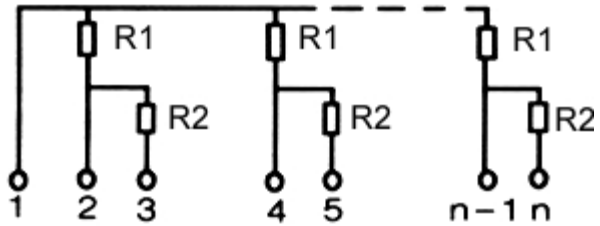
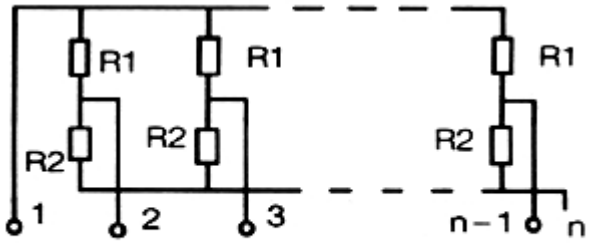
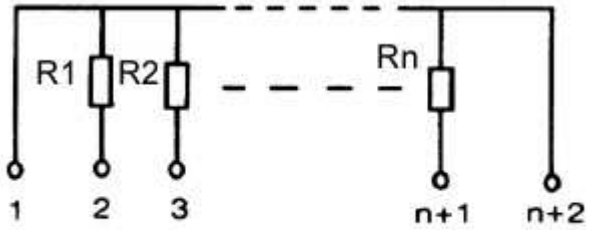
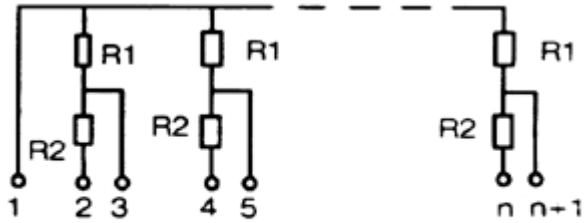
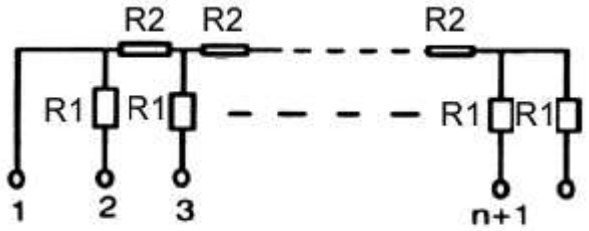


Note: The white dot means the first pin.



● Equivalent circuit

Type	Equivalent Circuit	Type	Equivalent Circuit
A(R_1=R_2=Rn)		B(R_1=R_2=Rn)	

C(R_1=R_2=Rn)	 R1=R2=……=Rn	D(R_1=R_2=Rn)	 R1=R2=……=Rn
E(R_1=R_2 or not)	 R1 = R2 R1≠ R2	F(R_1=R_2 or not)	 R1 = R2 R1≠ R2
G(R_1=R_2=Rn)	 R1=R2=……=Rn	H(R_1=R_2 or not)	 R1 = R2 R1≠ R2
T(R_1=R_2 or not)	 R1 = R2 R1≠ R2		

● **Ratings**

Item	Specification

Max.Working Voltage	200V
Max.Overload Voltage	280V
Resistance Tolerance	±1%,±2%,±5%, chip jumper: ≤50mΩ
Resistance Range	0Ω(chip jumper),1.0Ω ~ 10MΩ E-24 series.
Operating Temperature Range	-55□ ~ 125□
Resistance Temperature Coefficient	10Ω≤R≤1MΩ:±100ppm/□ 1Ω≤R< 10Ω,1M< R≤10M:±250ppm/□

● Characteristics

* Electric performance

Item	Specifications	Test Methods (JIS C 5202)
T.C.R	±100ppm/□ , ±250ppm/□	-55□ ~ 125□ 30-50min
Short Time Overload	□R≤±(2.0%R+0.05Ω) No mechanical damage	2.5xRated voltage or Max.Overload Voltage, choose the lower, for 5 seconds
Coating Insulation Resistance	100MΩ Min	Apply 500V DC
Coating Insulation Withstand Voltage	No arc. inflammation and damage	Apply 500V DC 1min
Solderability	95%Cover Min	235□±5□ 2±0.5S
Resistance to Solvent	□R≤±(1.0%R+0.05Ω) No mechanical damage	Dip in chloroethylene for 10h±1h.
Resistance to inflammation	V-0	VL-94

* Mechanical Characteristics

Item	Specifications	Test Methods (JIS C 5202)
Pin strength	□R≤±(1.0%R+0.05Ω) No mechanical damage	Speed:10mm/s, pull strength:500g.
Bending strength	No mechanical damage	Force with 0.5kg on the terminal pin, between the resistor and the terminal pin is 90 degree, duration:5S for 1 cycle. total 2 cycles
Vibration	□R≤±(1.0%R+0.05Ω) No mechanical damage	10HZ→55HZ→10HZ within 1 min. Swing:1.55mm,three directions for X,Y,Z respectively for 2 hours

* Environment test

Item	Specifications	Test Methods (JIS C 5202)
Steady state humidity	□R≤±(3.0%R+0.1Ω) No mechanical damage	40□±2□ 90%～95%RH500h
Temperature Cycling	□R≤±(1.0%R+0.05Ω) No mechanical damage	-55□(30min)～normal temperature (15min) ～125□(30min)5cycles
Load Life(70□)	□R≤±(3.0%R+0.1Ω) No mechanical damage	70□±2□ 1000h Apply Rated voltage for 1.5h on/1.5h off
Endurance at upper temperature	□R≤±(3.0%R+0.1Ω) No mechanical damage	125□±2□ 1000h
Resistance to Soldering Heat	□R≤±(1.0%R+0.05Ω) No mechanical damage	260□±5□ 10S±1S