

# Compact 8-element Chip Resistor Networks

### MNR18 (0602×8 size)

#### Features

1) Suitable for damping resistors.

product before using or ordering it.

- 2) Convex electrodes
  - Easy to check the fillet after soldering is finished.
- 3) High-density mounting
  - Can be mounted even densely than eight 0402 chips (MCR01), and mounting costs are lower.
- 4) Compatible with a wide range of mounting machines.
  - Squared corners make it excellent for mounting using image recognition machines.
- 5) ROHM resistors have approved ISO9001- / ISO/TS16949- certification.

  Design and specifications are subject to change without notice. Carefully check the specification sheet supplied with the

#### Ratings

Item	Conditions	Specifications	
Rated power	Power must be derated according to the power derating curve in Figure 1 when ambient temperature exceeds 70°C.	0.063W (1 / 16W) at 70°C	
	80	Power for a Packaging Max 0.25W (1 / 4W)	
Rated voltage	The voltage rating is calculated by the following equation. If the value obtained exceeds the limiting element voltage, the voltage rating is equal to the maximum operating voltage.		
	E : Rated voltage (V) $E = \sqrt{P \times R}$ P : Rated power (W) R : Nominal resistance (Ω)	Limiting element voltage 25V	
Nominal resistance	See Table 1.		
Operating temperature		−55°C to +125°C	

#### Jumper type

Resistance	Max. 50mΩ
Rated current	1 A Power for a Packaging Max 0.25W (1 / 4W)
Operating temperature	-55°C to +125°C

#### Table 1

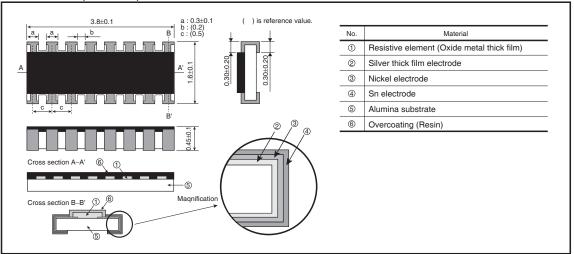
Resistance tolerance	Resistance range $(\Omega)$	Resistance temperature coefficient (ppm / °C)	
J (±5%)	10≤R≤1M (E24)	±200	

<sup>\*</sup>Before using components in circuits where they will be exposed to transients such as pulse loads(short-duration, high-level loads), be certain to evaluate the component in the mounted state. In addition, the reliability and performance of this component cannot be guaranteed if it is used with a steady state voltage that is greater than its rated voltage.

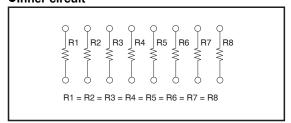
#### Characteristics

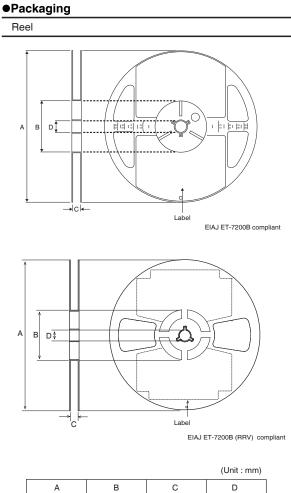
Item	Guaranteed value		Test conditions (IIS C 5201.1)	
nem	Resistor type	Jumper type	Test conditions (JIS C 5201-1)	
Resistance	J:±5%	Max. 50mΩ	JIS C 5201-1 4.5	
Variation of resistance with temperature	See Table.1	Max. 50mΩ	JIS C 5201-1 4.8 Measurement : +25 / +125°C	
Overload	± (2.0%+0.1Ω)	Max. 50mΩ	JIS C 5201-1 4.13 Rated voltage (current) ×2.5, 2s. Maximum Overload Voltage : 100V	
Solderability	A new uniform coating of minimum of 95% of the surface being immersed and no soldering damage.		JIS C 5201-1 4.17 Rosin·Ethanol (25%WT) Soldering condition: 235±5°C Duration of immersion: 2.0±0.5s.	
Resistance to soldering heat	$\begin{array}{c c} \pm \mbox{ (1.0\%+0.05$\Omega)} & \mbox{Max. 50m}\Omega \\ \mbox{No remarkable abnormality on the appearance.} \end{array}$		JIS C 5201-1 4.18 Soldering condition : 260±5°C Duration of immersion : 10±1s.	
Rapid change of temperature	± (1.0%+0.05Ω)	Max. $50m\Omega$	JIS C 5201-1 4.19 Test temp. : –55°C to +125°C 5cyc	
Damp heat, steady state	± (3.0%+0.1Ω)	Max. 100mΩ	JIS C 5201-1 4.24 40°C, 93%RH Test time : 1,000h to 1,048h	
Endurance at 70°C	± (3.0%+0.1Ω)	Max. 100mΩ	JIS C 5201-1 4.25.1 Rated voltage (current), 70°C 1.5h: ON – 0.5h: OFF Test time: 1,000h to 1,048h	
Endurance	± (3.0%+0.1Ω)	Max. 100mΩ	JIS C 5201-1 4.25.3 125°C Test time : 1,000h to 1,048h	
Resistance to solvent	± (1.0%+0.05Ω)	Max. 50mΩ	JIS C 5201-1 4.29 23±5°C, Immersion cleaning, 5±0.5mir Solvent : 2-propanol	
Bend strength of the end face plating	± (1.0%+0.05Ω) Without mechanical	Max. 50mΩ JIS C 5201-1 4.33 cal damage such as breaks.		

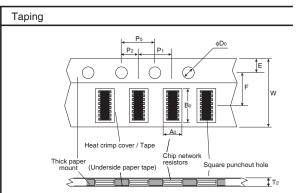
#### ●Dimensions (Unit : mm)



#### •Inner circuit



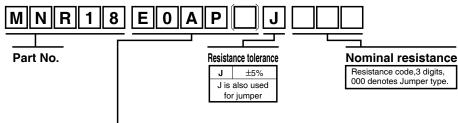




				(Unit : mm)
W	F	E	Ao	Bo
8.0±0.3	3.5±0.05	1.75±0.1	1.95±0.15	4.1±0.15
D <sub>0</sub>	Po	P1	P2	T2
φ1.5 <sup>+0.1</sup> <sub>0</sub>	4.0±0.1	4.0±0.1	2.0±0.05	Max. 1.1

#### ●Part No.Explanation

 $\phi 180 \begin{array}{c} 0 \\ -1.5 \end{array}$ 



#### **Packaging Specifications Code**

Part No.	Code	Resistance tolerance J (±5%)	Packaging specifications	Reel	Basic ordering unit (pcs)
MNR18	E0AP	0	Paper tape (4mm Pitch)	φ180mm (7inch)	5,000

φ13±0.2

Reel (\(\phi\)180mm): Compatible with JEITA standard "EIAJ ET-7200B" (\(\hat{0}\): Standard product

φ60 <sup>+1</sup><sub>0</sub>

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