

Compact 8-element Chip Resistor Networks

MNR15 (0603×5 size)

●Features

- 1) Suitable for pull-up and pull-down resistors.
- 2) No direction to be mounted by placing common electrode with symmetry.
- 3) Convex electrodes
Easy to check the fillet after soldering is finished.
- 4) High-density mounting
Can be mounted even densely than eight 0402chips (MCR01), and mounting costs are lower.
- 5) Compatible with a wide range of mounting machines.
Squared corners make it excellent for mounting using image recognition machines.
- 6) ROHM resistors have approved ISO9001- / ISO/TS 16949- certification.
Design and specifications are subject to change without notice. Carefully check the specification sheet supplied with the product before using or ordering it.

●Ratings

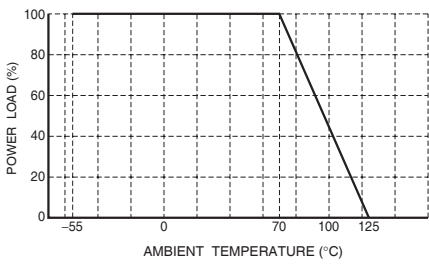
Item	Conditions	Specifications		
Rated power	<p>Power must be derated according to the power derating curve in Figure 1 when ambient temperature exceeds 70°C.</p>  <p style="text-align: center;">Fig.1</p>	0.031W (1 / 32W) at 70°C		
Rated voltage	<p>The voltage rating is calculated by the following equation. If the value obtained exceeds the limiting element voltage, the voltage rating is equal to the maximum operating voltage.</p> $E = \sqrt{P \times R}$ <p>E : Rated voltage (V) P : Rated power (W) R : Nominal resistance (Ω)</p>	<table border="1" style="width: 100%;"> <tr> <td>Limiting element voltage</td> <td>12.5V</td> </tr> </table>	Limiting element voltage	12.5V
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Nominal resistance	See Table 1.			
Operating temperature		-55°C to +125°C		

Table 1

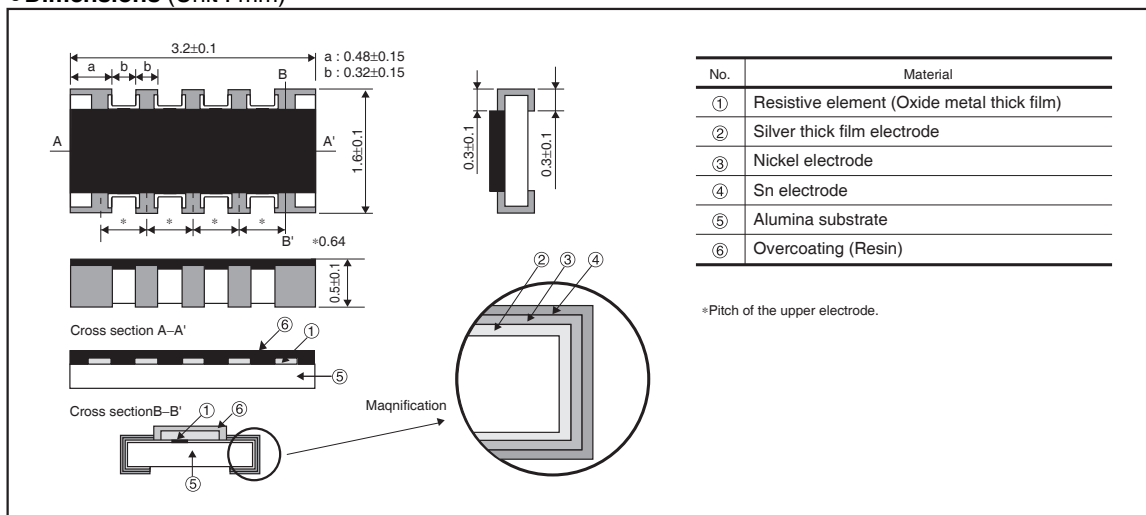
Resistance tolerance	Resistance range (Ω)	Resistance temperature coefficient (ppm / °C)
J (±5%)	56≤R≤100k (E24)	±200

*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.

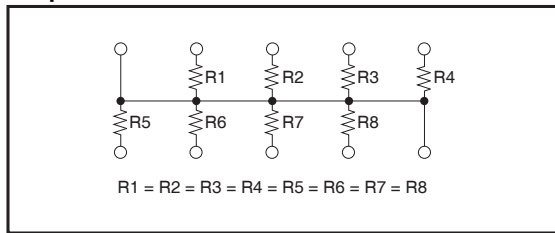
●Characteristics

Item	Guaranteed value	Test conditions (JIS C 5201-1)
	Resistor type	
Resistance	J : ±5%	JIS C 5201-1 4.5
Variation of resistance with temperature	See Table.1	JIS C 5201-1 4.8 Measurement : -55 / +25 / +125°C
Overload	± (2.0%+0.1Ω)	JIS C 5201-1 4.13 Rated voltage×2.5, 2s. Maximum Overload Voltage : 25V
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	± (1.0%+0.05Ω) No remarkable abnormality on the appearance.	JIS C 5201-1 4.18 Soldering condition : 260±5°C Duration of immersion : 10±1s.
Rapid change of temperature	± (1.0%+0.05Ω)	JIS C 5201-1 4.19 Test temp. : -55°C to +125°C 5cyc
Damp heat, steady state	± (3.0%+0.1Ω)	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)	JIS C 5201-1 4.25.1 Rated voltage, 70°C 1.5h : ON – 0.5h : OFF Test time : 1,000h to 1,048h
Endurance	± (3.0%+0.1Ω)	JIS C 5201-1 4.25.3 125°C Test time : 1,000h to 1,048h
Resistance to solvent	± (1.0%+0.05Ω)	JIS C 5201-1 4.29 23±5°C, Immersion cleaning, 5±0.5min. Solvent : 2-propanol
Bend strength of the end face plating	± (1.0%+0.05Ω) Without mechanical damage such as breaks.	JIS C 5201-1 4.33

●Dimensions (Unit : mm)



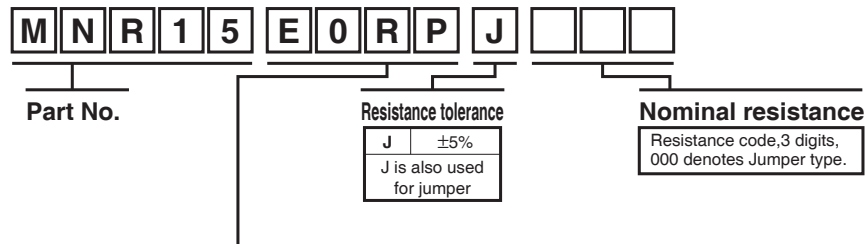
●Equivalent circuit



●Packaging

Reel	Taping																				
	 <div style="text-align: right;">(Unit : mm)</div> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>W</td> <td>F</td> <td>E</td> <td>A0</td> <td>B0</td> </tr> <tr> <td>8.0±0.3</td> <td>3.5±0.05</td> <td>1.75±0.1</td> <td>1.8±0.1</td> <td>3.4±0.1</td> </tr> <tr> <td>D0</td> <td>P0</td> <td>P1</td> <td>P2</td> <td>T2</td> </tr> <tr> <td>φ1.5 ^{+0.1}/₀</td> <td>4.0±0.1</td> <td>4.0±0.1</td> <td>2.0±0.05</td> <td>Max. 1.1</td> </tr> </table>	W	F	E	A0	B0	8.0±0.3	3.5±0.05	1.75±0.1	1.8±0.1	3.4±0.1	D0	P0	P1	P2	T2	φ1.5 ^{+0.1} / ₀	4.0±0.1	4.0±0.1	2.0±0.05	Max. 1.1
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●Part No.Explanation



Packaging Specifications Code

Part No.	Code	Resistance tolerance	Packaging specifications	Reel	Basic ordering unit (pcs)
		J(±5%)			
MNR15	EORP	◎	Paper tape (4mm Pitch)	φ180mm (7in.)	5,000

Reel (φ180) : JEITA ET-7200B
 ◎ : Standard product

Notes

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