



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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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

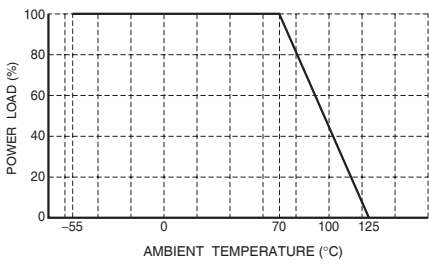
Item	Conditions	Specifications		
Rated power	<p>Power must be derated according to the power derating curve in Figure 1 when ambient temperature exceeds 70°C.</p>  <p style="text-align: center;">Fig.1</p>	0.031W (1 / 32W) at 70°C		
Rated voltage	<p>The voltage rating is calculated by the following equation. 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
Limiting element voltage	12.5V			
Nominal resistance	See Table 1.			
Operating temperature		-55°C to +125°C		

Table 1

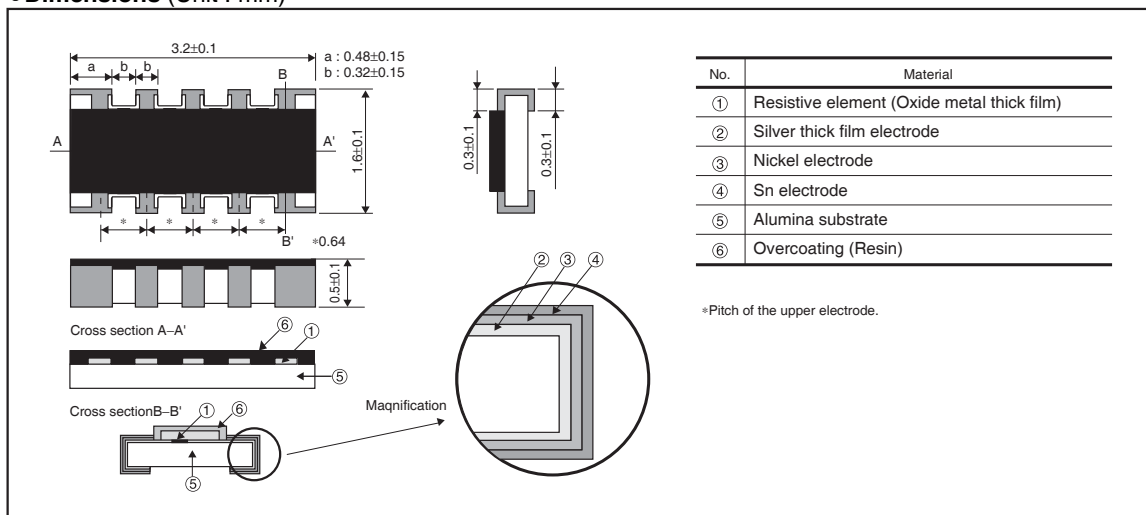
Resistance tolerance	Resistance range (Ω)	Resistance temperature coefficient (ppm / °C)
J (±5%)	56≤R≤100k (E24)	±200

*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.

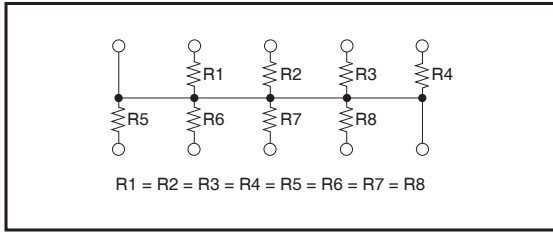
●Characteristics

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)



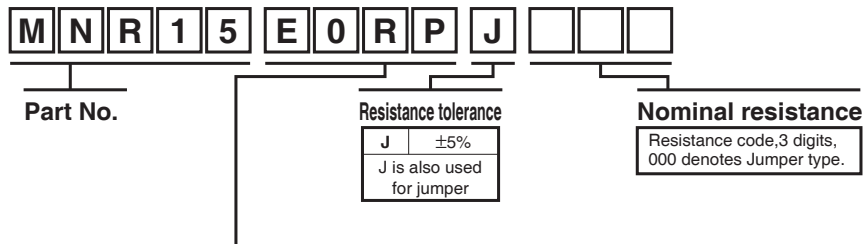
●Equivalent circuit



●Packaging

Reel	Taping																												
<p style="text-align: center;">EIAJ ET-7200B (RRM) compliant</p> <p style="text-align: center;">EIAJ ET-7200B (RRV) compliant (Unit: mm)</p> <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th>A</th> <th>B</th> <th>C</th> <th>D</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">$\phi 180 \begin{smallmatrix} 0 \\ -1.5 \end{smallmatrix}$</td> <td style="text-align: center;">$\phi 60 \begin{smallmatrix} +1 \\ 0 \end{smallmatrix}$</td> <td style="text-align: center;">$9 \begin{smallmatrix} +1.0 \\ 0 \end{smallmatrix}$</td> <td style="text-align: center;">$\phi 13 \pm 0.2$</td> </tr> </tbody> </table>	A	B	C	D	$\phi 180 \begin{smallmatrix} 0 \\ -1.5 \end{smallmatrix}$	$\phi 60 \begin{smallmatrix} +1 \\ 0 \end{smallmatrix}$	$9 \begin{smallmatrix} +1.0 \\ 0 \end{smallmatrix}$	$\phi 13 \pm 0.2$	<p style="text-align: center;">(Unit: mm)</p> <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th>W</th> <th>F</th> <th>E</th> <th>A0</th> <th>B0</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">8.0 ± 0.3</td> <td style="text-align: center;">3.5 ± 0.05</td> <td style="text-align: center;">1.75 ± 0.1</td> <td style="text-align: center;">1.8 ± 0.1</td> <td style="text-align: center;">3.4 ± 0.1</td> </tr> <tr> <th>D0</th> <th>P0</th> <th>P1</th> <th>P2</th> <th>T2</th> </tr> <tr> <td style="text-align: center;">$\phi 1.5 \begin{smallmatrix} +0.1 \\ 0 \end{smallmatrix}$</td> <td style="text-align: center;">4.0 ± 0.1</td> <td style="text-align: center;">4.0 ± 0.1</td> <td style="text-align: center;">2.0 ± 0.05</td> <td style="text-align: center;">Max. 1.1</td> </tr> </tbody> </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	$\phi 1.5 \begin{smallmatrix} +0.1 \\ 0 \end{smallmatrix}$	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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