

Resistors

Chip resistor networks

MNR34 (3216 × 4 size)

●Features

- 1) Convex electrodes
Easy to check the fillet after soldering is finished.
- 2) Compatible with a wide range of mounting equipment.
Squared corners make it excellent for mounting using image recognition devices.
- 3) High-density mounting
Can be mounted even more densely than four 3216 chips (MCR18). Also, the number of parts and cost of mounting have been reduced.
- 4) ROHM resistors have approved ISO-9001 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	Power must be derated according to the power derating curve in Figure 1 when ambient temperature exceeds 70°C.	0.125W (1 / 8W) at 70°C	
	<p style="text-align: center;">Fig.1</p>		
Rated voltage	The voltage rating is calculated by the following equation. If the value obtained exceeds the maximum operating voltage, the voltage rating is equal to the maximum operating voltage. $E = \sqrt{P \times R}$ E: Rated voltage (V) P: Rated power (W) R: Nominal resistance (Ω)	Max. operating voltage	200V
		Max. overload voltage	400V
		Max. intermittent overload voltage	400V
Nominal resistance	See Table 1.		
Operating temperature		-55°C to +125°C	



Jumper type

Resistance	Max. 50mΩ
Rated current	2A
Peak current	10A
Operating temperature	-55°C to +125°C

Table 1

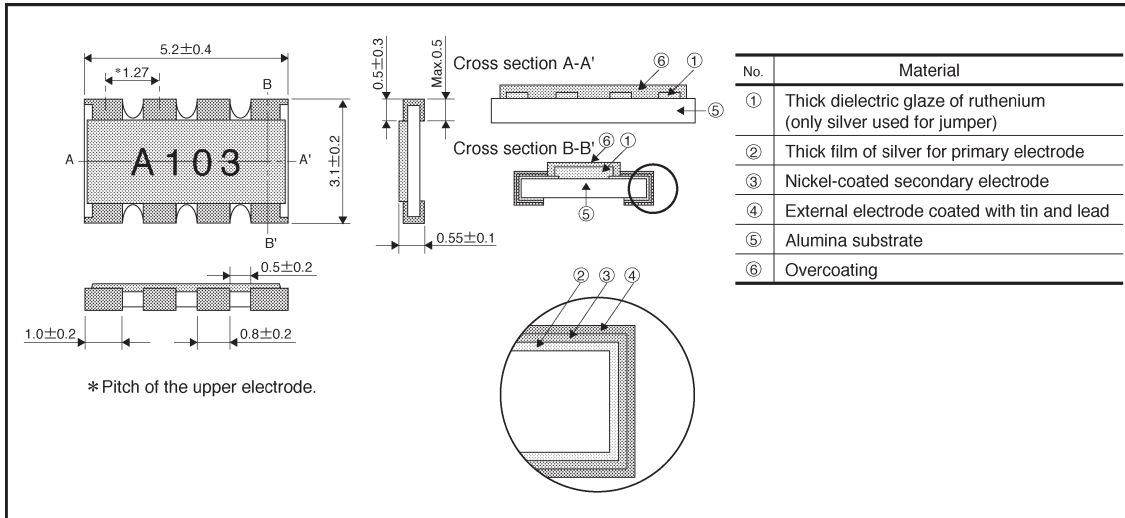
Resistance tolerance	Resistance range (Ω)	Resistance temperature coefficient (ppm / °C)
J (±5%)	10 ≤ R ≤ 1M (E24)	±200

● 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.

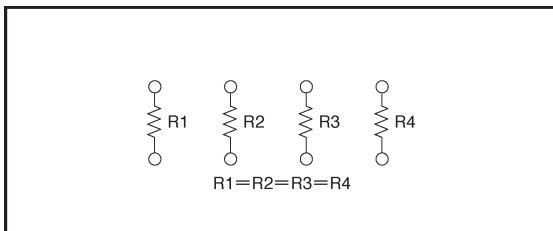
● Characteristics

Characteristics	Specifications		Test method (JIS C 5202)
	Chip resistance	Jumper type	
DC resistance	J : ±5%	Max. 50mΩ	JIS C 5202 5.1 Applied voltage: A
Resistance temperature characteristics	See Table 1.		JIS C 5202 5.2 Test conditions: +25 / -55 / +25 / +125°C
Short-time overload	± (5.0%+0.1Ω)	Max. 50mΩ	JIS C 5202 5.5 Rated voltage (current) : ×2.5, 5s. Maximum overload voltage: 400V
Resistance to soldering heat	± (2.5%+0.1Ω) Outside must not be noticeably damaged.	Max. 50mΩ	JIS C 5202 6.4 Soldering conditions: 260±5°C Soldering time: 10±1s.
Solderability	95% of terminal surface must be covered by new soldering, and there must be no soldering corrosion.		JIS C 5202 6.5 Rosin methanol: (25%WT) Soldering conditions: 235±5°C Soldering time: 2±0.5s.
Resistance to dry heat	± (5.0%+0.1Ω)	Max. 100mΩ	JIS C 5202 7.2 125°C Test time: 1,000 to 1,048 hrs.
Endurance (rated load)	± (5.0%+0.1Ω)	Max. 100mΩ	JIS C 5202 7.10 Rated voltage (current), 70°C 1.5h: ON — 0.5h: OFF Test time: 1,000 to 1,048 hrs.
Endurance (under load in damp environment)	± (5.0%+0.1Ω)	Max. 100mΩ	JIS C 5202 7.9 Rated voltage (current), 60°C, 95%RH 1.5h: ON — 0.5h: OFF Test time: 1,000 to 1,048 hrs.
Resistance to humidity (steady state)	± (5.0%+0.1Ω)	Max. 100mΩ	JIS C 5202 7.5 85°C, 85%RH Test time: 1,000 to 1,048 hrs.
Temperature cycling	± (2.5%+0.1Ω)	Max. 50mΩ	JIS C 5202 7.4 Test temperature: -55°C to +125°C 100cyc.
Resistance to solvents	± (1.0%+0.05Ω) Markings must not be dissolved away.	Max. 50mΩ	JIS C 5202 6.9 Room temperature, static immersion, 1 min. Solvent: Isopropyl alcohol

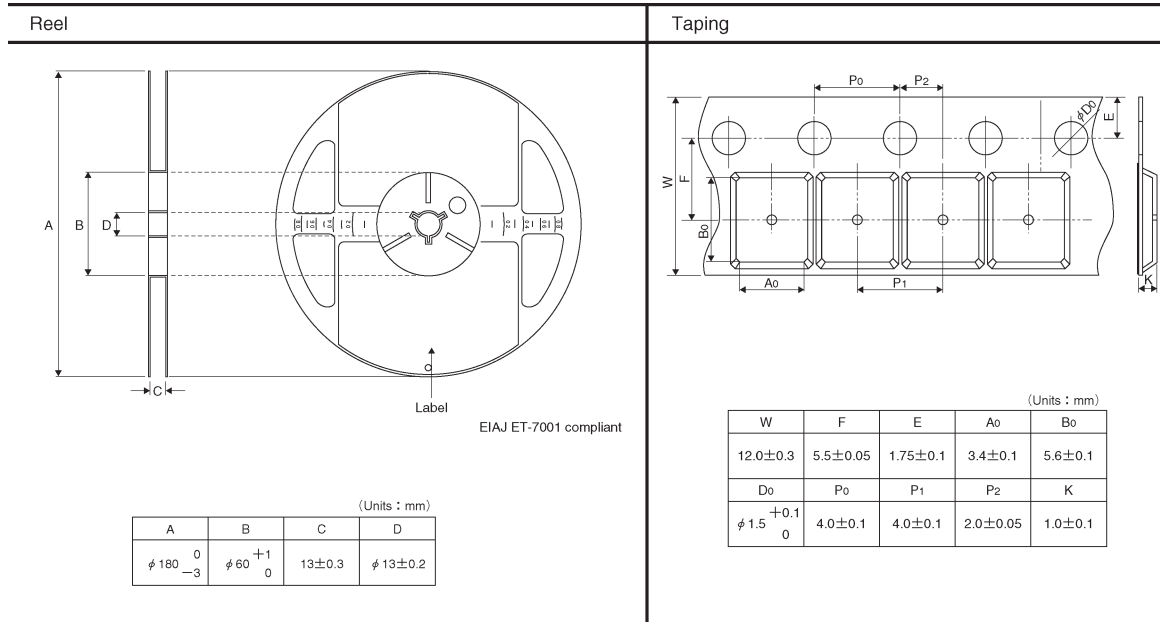
●External dimensions (Units: mm)



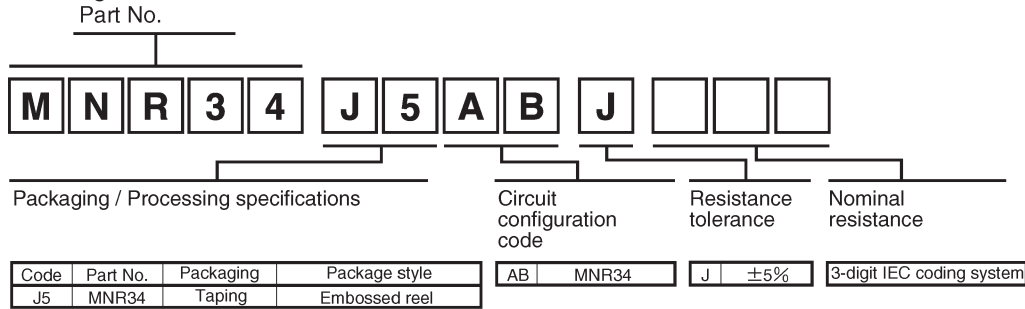
●Equivalent circuit



●Packaging



●Product designation



●Electrical characteristics

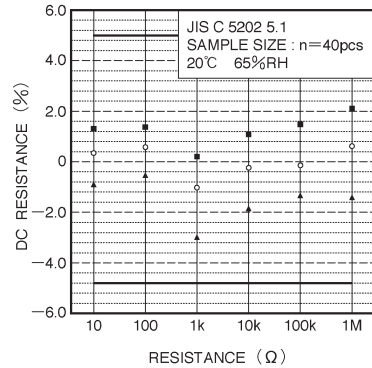


Fig.2 DC resistance

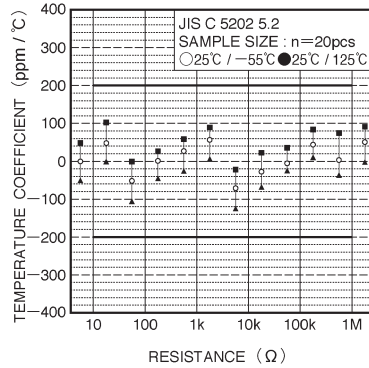


Fig.3 Resistance temperature characteristics

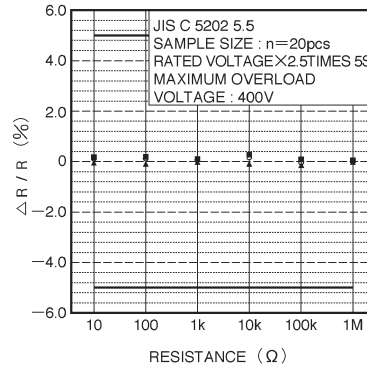


Fig.4 Short time overload

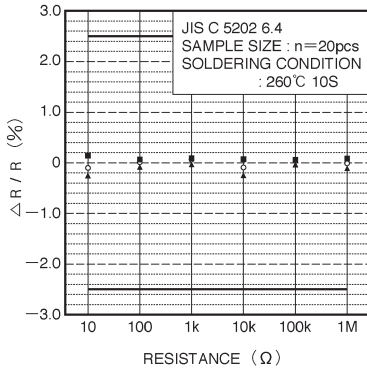


Fig. 5 Resistance to soldering heat

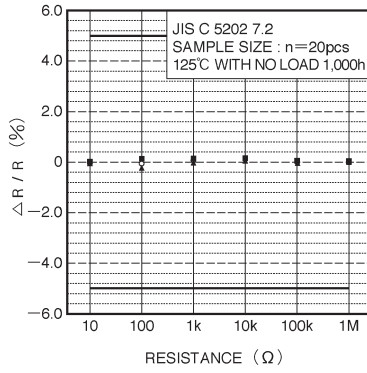


Fig. 6 Resistance to dry heat

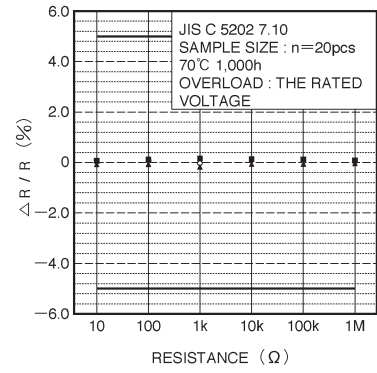


Fig. 7 Endurance (rated load)

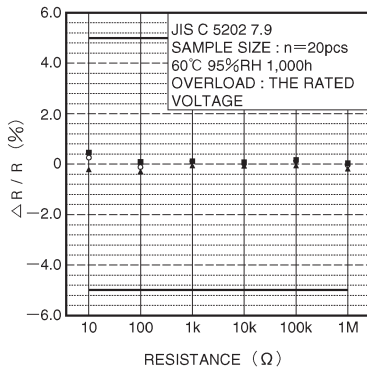


Fig. 8 Endurance (under load in damp environment)

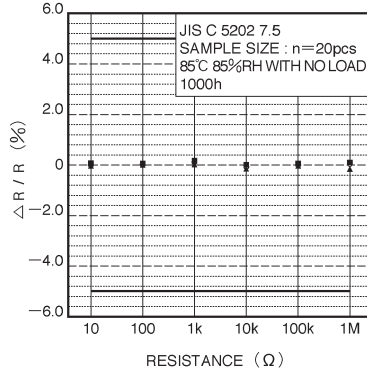


Fig. 9 Resistance to humidity (steady state)

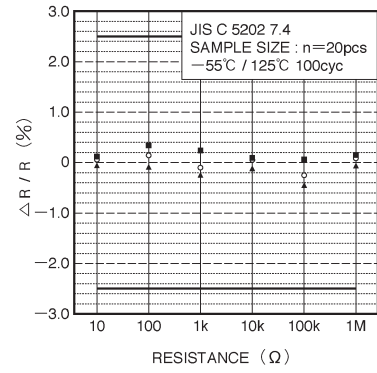


Fig. 10 Temperature cycling

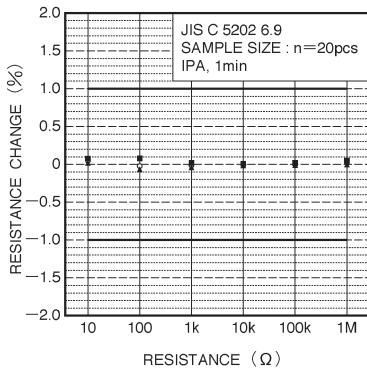


Fig. 11 Resistance to solvents