THE DATASHEET OF

MNR34J5ABJ220

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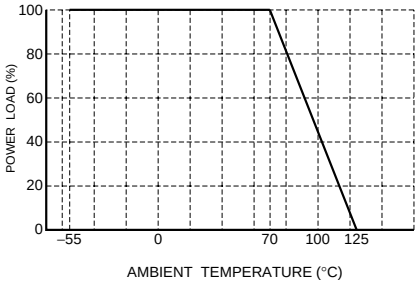
Chip resistor networks

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.  Fig.1	0.125W (1 / 8W) at 70°C
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. $E=\sqrt{P\times R}$ E: Rated voltage (V) P: Rated power (W) R: Nominal resistance (Ω)	Limiting element voltage: 200V
Nominal resistance	See Table 1.	
Operating temperature		–55°C~+125°C

Jumper type

Resistance	Max. 50mΩ
Rated current	2A
Operating temperature	–55°C~+125°C

Table 1

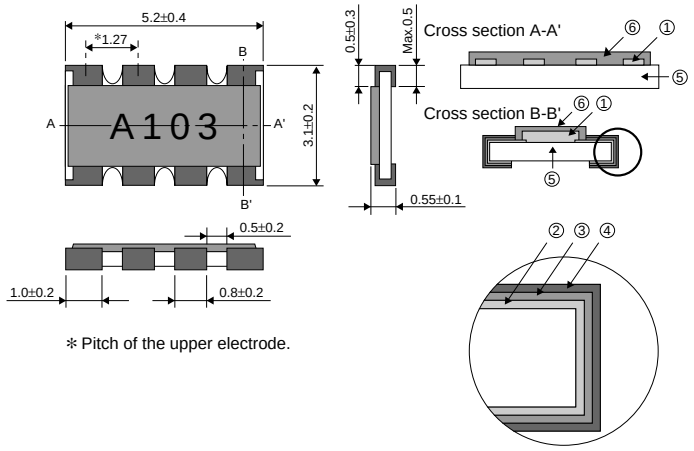
Resistance tolerance	Resistance range (Ω)	Resistance temperature coefficient (ppm / °C)
J (±5%)	10≤R≤1M (E24)	±200

•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

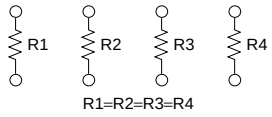
Item	Guaranteed value		Test conditions (JIS C 5201-1)
	Resistor type	Jumper type	
Resistance	J : ±5%	Max. 50mΩ	JIS C 5201-1 4.5
Variation of resistance with temperature	See Table.1		JIS C 5201-1 4.8 Measurement : –55 / +25 / +125°C
Overload	± (2.0%+0.1Ω)	Max. 50mΩ	JIS C 5201-1 4.13 Rated voltage (current) ×2.5, 2s. Limiting Element Voltage×2 : 400V
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.	Max. 50mΩ	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. 50mΩ	JIS C 5201-1 4.19 Test temp. : –55°C~+125°C 5cyc
Damp heat, steady state	± (3.0%+0.1Ω)	Max. 50mΩ	JIS C 5201-1 4.24 40°C, 93%RH Test time : 1,000h~1,048h
Endurance at 70°C	± (3.0%+0.1Ω)	Max. 50mΩ	JIS C 5201-1 4.25.1 Rated voltage (current), 70°C 1.5h : ON – 0.5h : OFF Test time : 1,000h~1,048h
Endurance	± (3.0%+0.1Ω)	Max. 50mΩ	JIS C 5201-1 4.25.3 125°C Test time : 1,000h~1,048h
Resistance to solvent	± (1.0%+0.05Ω)	Max. 50mΩ	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.	Max. 50mΩ	JIS C 5201-1 4.33

●External dimensions (Units : mm)



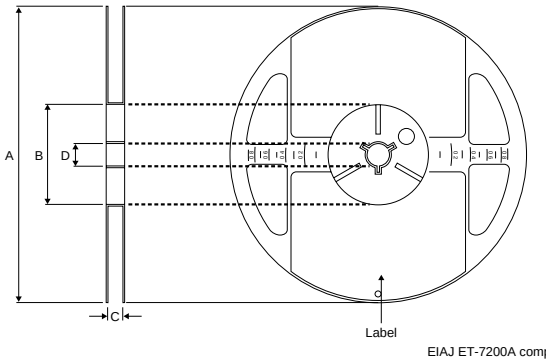
No.	Material
①	Thick dielectric glaze of ruthenium (only silver used for jumper)
②	Thick film of silver for primary electrode
③	Nickel-coated secondary electrode
④	External electrode coated with Sn/Pb or Sn
⑤	Alumina substrate
⑥	Overcoating

●Equivalent circuit



●Packaging

Reel

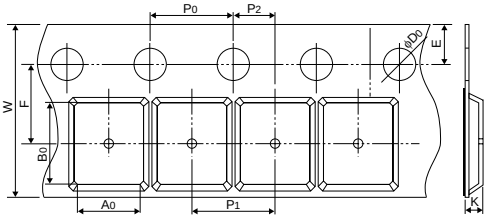


EIAJ ET-7200A compliant

(Units: mm)

A	B	C	D
$\phi180^{\ 0}_{-3}$	$\phi60^{+1}_{\ 0}$	13±0.3	φ13±0.2

Taping



(Units: mm)

W	F	E	A0	B0
12.0±0.3	5.5±0.05	1.75±0.1	3.4±0.1	5.6±0.1
D0	P0	P1	P2	K
$\phi1.5^{+0.1}_{\ 0}$	4.0±0.1	4.0±0.1	2.0±0.05	1.0±0.1

●Product designation

Part No.

M	N	R	3	4	J	5	A	B	J			

Packaging / Processing specifications | Circuit configuration code | Resistance tolerance | Nominal resistance

Code	Part No.	Packaging	Package style
J5	MNR34	Taping	Embossed reel

AB	MNR04/12/14/32/34

J	±5%

3-digit IEC coding system

●Electrical characteristics

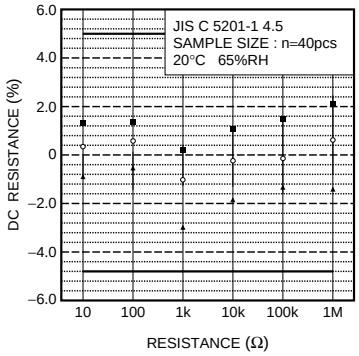


Fig.2 Resistance

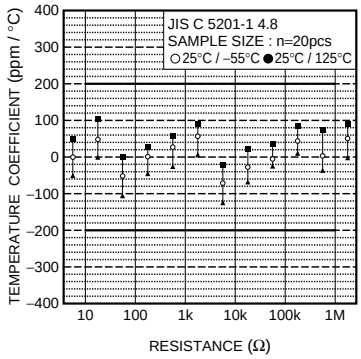


Fig.3 Variation resistance with temperature

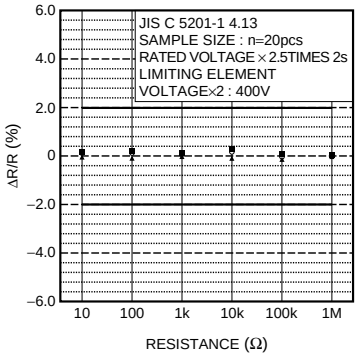


Fig.4 Overload

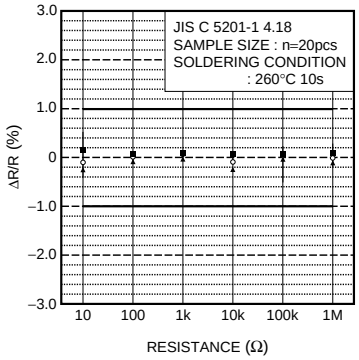


Fig.5 Resistance to soldering heat

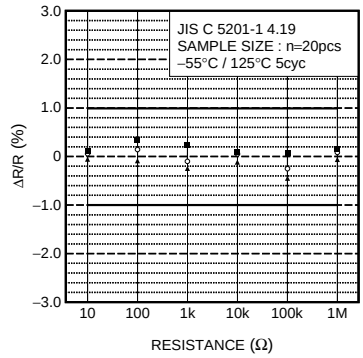


Fig.6 Rapid change of temperature

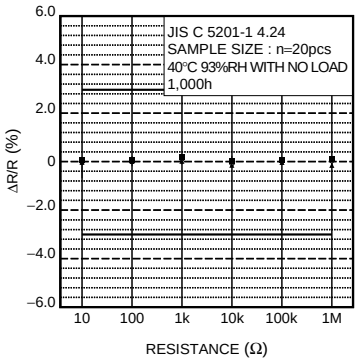


Fig.7 Damp heat, steady state

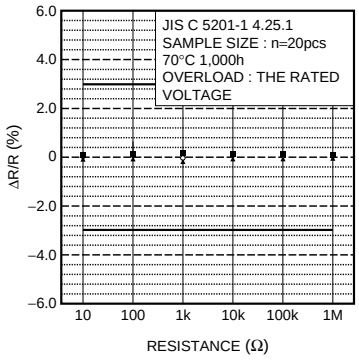


Fig.8 Endurance at 70°C

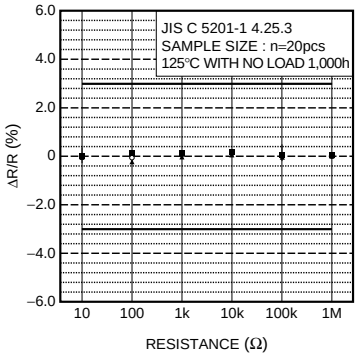


Fig.9 Endurance

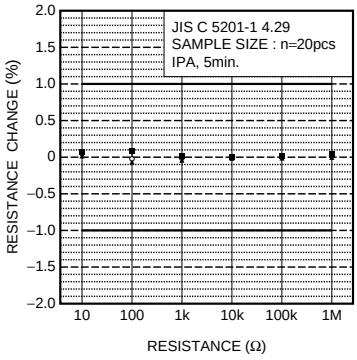


Fig.10 Resistance to solvents

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