Excellent Integrated System Limited

Stocking Distributor

Click to view price, real time Inventory, Delivery & Lifecycle Information:

Rohm Semiconductor
MNR12E0ABJ000

For any questions, you can email us directly:
sales@integrated-circuit.com

Distributor of Rohm Semiconductor: Excellent Integrated System Limited
Datasheet of MNR12E0ABJ000 - RES ARRAY 2 RES ZERO OHM 0606
Contact us: sales@integrated-circuit.com Website: www.integrated-circuit.com

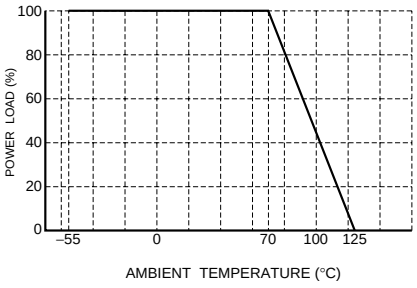
Chip resistor networks

MNR12 (1608×2 size)

●Features

1) Convex electrodes
Easy to check the fillet after soldering is finished.
2) Small, light, rectangular 2-chip network
Area ratio is 65% smaller than that of MNR32, while weight ratio has been cut 75%.
3) High-density mounting
Can be mounted even more densely than two 1608 chips (MCR03), and mounting costs are lower.
4) Compatible with a wide range of mounting equipment.
Squared corners make it excellent for mounting using image recognition devices.
5) 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	0.063W (1 / 16W) 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: 50V
Nominal resistance	See Table 1.	
Operating temperature		–55°C~+125°C

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Resistors

Jumper type

Resistance	Max. 50mΩ
Rated current	1A
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 : 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	± (1.0%+0.05Ω)	Max. 50mΩ 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)	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)	Max. 50mΩ Without mechanical damage such as breaks.	JIS C 5201-1 4.33

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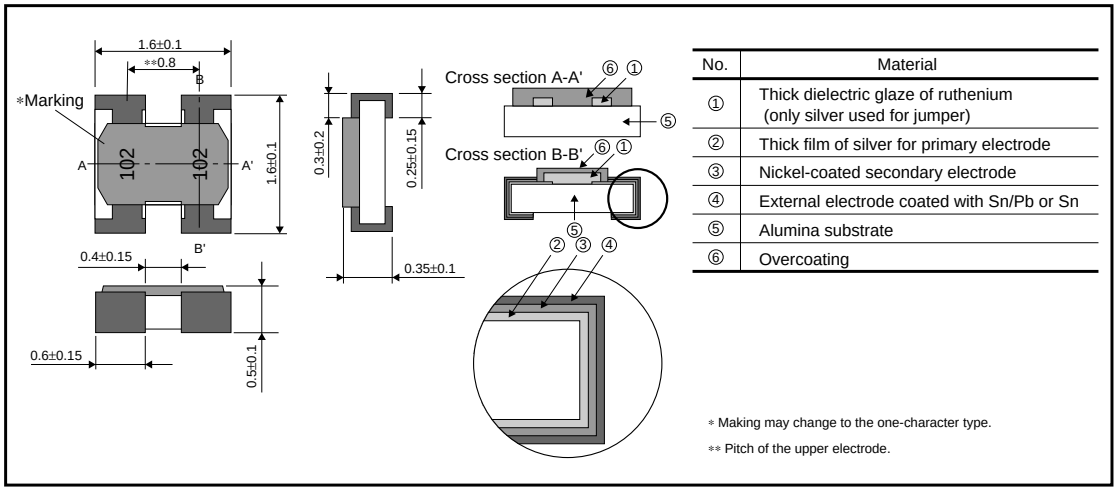
Resistors

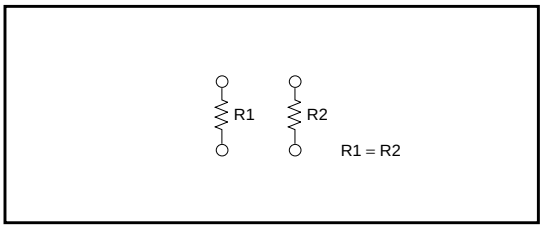
●External dimensions (Units : mm)



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

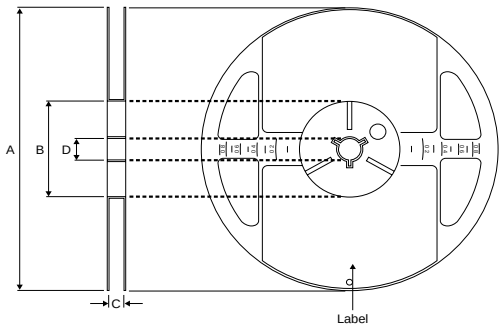
* Making may change to the one-character type.
** Pitch of the upper electrode.

●Equivalent circuit



●Packaging

Reel

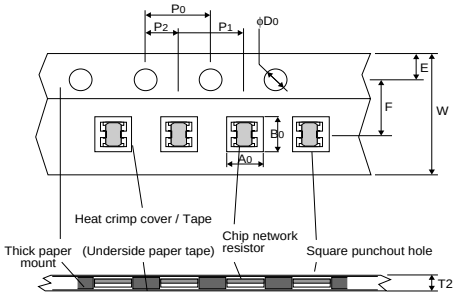


EIAJ ET-7200A compliant

(Units : mm)

A	B	C	D
$\phi180^{0}_{-3}$	$\phi60^{+1}_{0}$	$9^{+1.0}_{0}$	$\phi13\pm0.2$

Taping



(Units : mm)

W	F	E	A0	B0
8.0±0.3	3.5±0.05	1.75±0.1	1.8±0.1	1.8±0.1
D0	P0	P1	P2	T2
$\phi1.5^{+0.1}_{0}$	4.0±0.1	4.0±0.1	2.0±0.05	Max. 1.1

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Resistors

●Product designation

Part No.

M	N	R	1	2	E	0	A	B	J			

Packaging / Processing specifications

Circuit configuration code

Resistance tolerance

Nominal resistance

Code	Part No.	Packaging	Package style
E0	MNR12 / 14	Taping	Paper tape with reel

AB	MNR04 / 12 / 14 / 32 / 34

J	±5%

3-digit IEC coding system

●Electrical characteristics

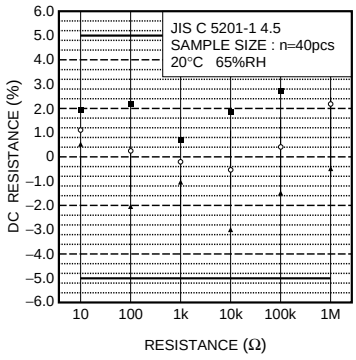

Fig.2 Resistance

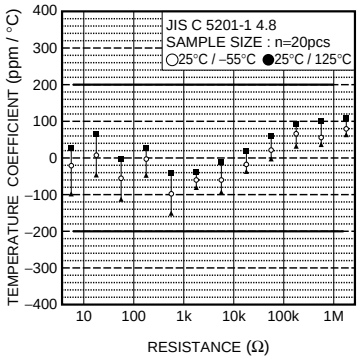

Fig.3 Variation resistance with temperature

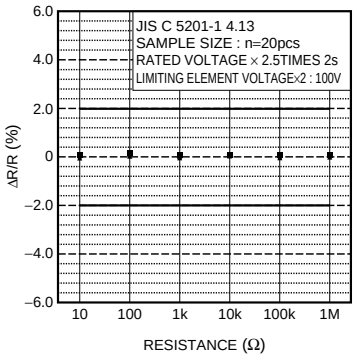

Fig.4 Overload

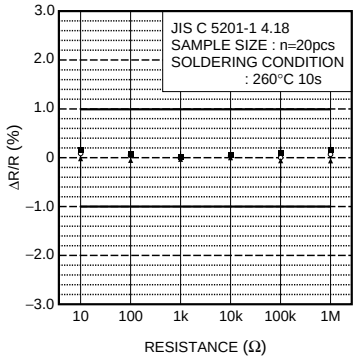

Fig.5 Resistance to soldering heat

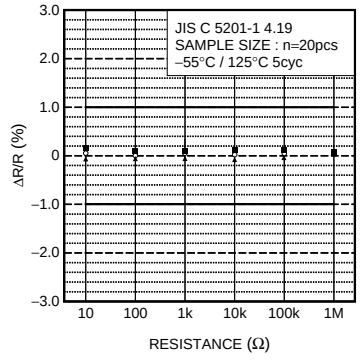

Fig.6 Rapid change of temperature

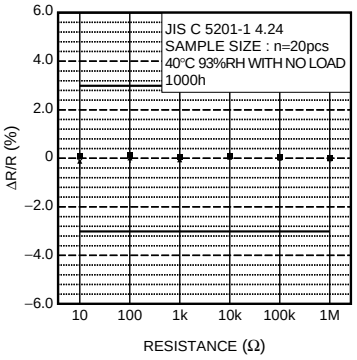

Fig.7 Damp heat, steady state

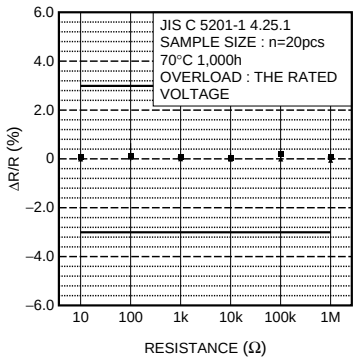

Fig.8 Endurance at 70°C

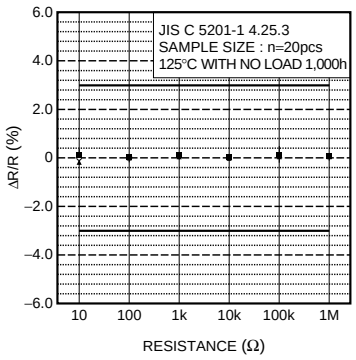

Fig.9 Endurance

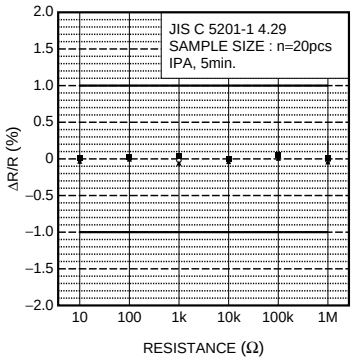

Fig.10 Resistance to solvents