

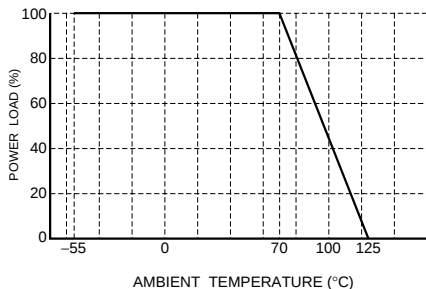
# Compact Chip Resistor Networks

## 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 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           | Power must be derated according to the power derating curve in Figure 1 when ambient temperature exceeds 70°C.<br><br>Fig.1                                                                                 | 0.125W (1 / 8W)<br>at 70°C |      |
| Rated voltage         | The voltage rating is calculated by the following equation.<br>If the value obtained exceeds the limiting element voltage,<br>the voltage rating is equal to the maximum operating voltage.<br>$E = \sqrt{P \times R}$ E: Rated voltage (V)<br>P: Rated power (W)<br>R: Nominal resistance (Ω) | Limiting element voltage   | 200V |
| Nominal resistance    | See Table 1.                                                                                                                                                                                                                                                                                   |                            |      |
| Operating temperature |                                                                                                                                                                                                                                                                                                | -55°C to +125°C            |      |

## Resistors

Jumper type

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

Table 1

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

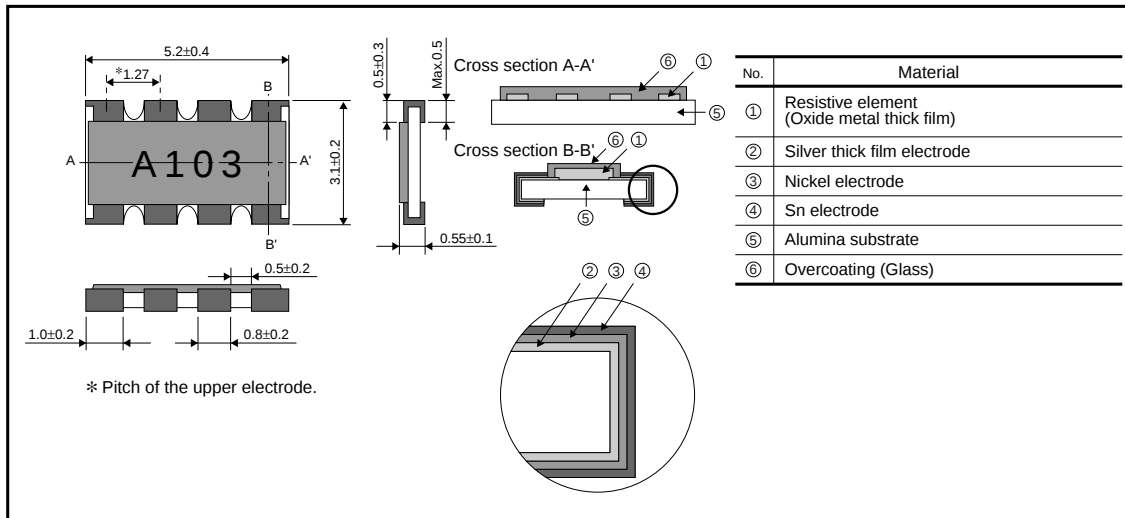
•Before using components in circuits where they will be exposed to transients such as pulse loads (short-duration, high-level loads), be certain to evaluate the component in the mounted state. In addition, the reliability and performance of this component cannot be guaranteed if it is used with a steady state voltage that is greater than its rated voltage.

## ●Characteristics

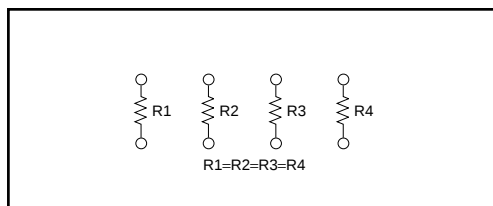
| Item                                     | Guaranteed value                                                                               |             | Test conditions (JIS C 5201-1)                                                                                   |
|------------------------------------------|------------------------------------------------------------------------------------------------|-------------|------------------------------------------------------------------------------------------------------------------|
|                                          | 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<br>Measurement : -55 / +25 / +125°C                                                             |
| Overload                                 | ± (2.0%+0.1Ω)                                                                                  | Max. 50mΩ   | JIS C 5201-1 4.13<br>Rated voltage (current) ×2.5, 2s.<br>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<br>Rosin-Ethanol (25%WT)<br>Soldering condition : 235±5°C<br>Duration of immersion : 2.0±0.5s. |
| Resistance to soldering heat             | ± (1.0%+0.05Ω)<br>No remarkable abnormality on the appearance.                                 | Max. 50mΩ   | JIS C 5201-1 4.18<br>Soldering condition : 260±5°C<br>Duration of immersion : 10±1s.                             |
| Rapid change of temperature              | ± (1.0%+0.05Ω)                                                                                 | Max. 50mΩ   | JIS C 5201-1 4.19<br>Test temp. : -55°C to +125°C 5cyc                                                           |
| Damp heat, steady state                  | ± (3.0%+0.1Ω)                                                                                  | Max. 50mΩ   | JIS C 5201-1 4.24<br>40°C, 93%RH<br>Test time : 1,000h to 1,048h                                                 |
| Endurance at 70°C                        | ± (3.0%+0.1Ω)                                                                                  | Max. 50mΩ   | JIS C 5201-1 4.25.1<br>Rated voltage (current), 70°C<br>1.5h : ON – 0.5h : OFF<br>Test time : 1,000h to 1,048h   |
| Endurance                                | ± (3.0%+0.1Ω)                                                                                  | Max. 50mΩ   | JIS C 5201-1 4.25.3<br>125°C<br>Test time : 1,000h to 1,048h                                                     |
| Resistance to solvent                    | ± (1.0%+0.05Ω)                                                                                 | Max. 50mΩ   | JIS C 5201-1 4.29<br>23±5°C, Immersion cleaning, 5±0.5min.<br>Solvent : 2-propanol                               |
| Bend strength of the end face plating    | ± (1.0%+0.05Ω)<br>Without mechanical damage such as breaks.                                    | Max. 50mΩ   | JIS C 5201-1 4.33                                                                                                |

## Resistors

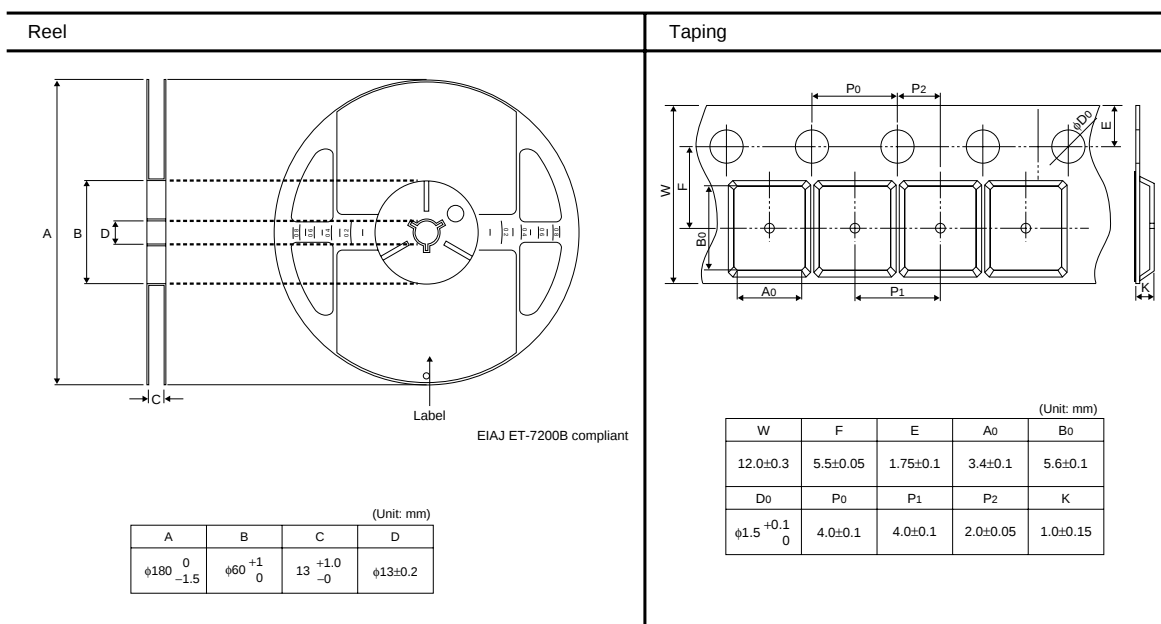
## ●Dimensions (Unit : mm)



## ●Equivalent circuit

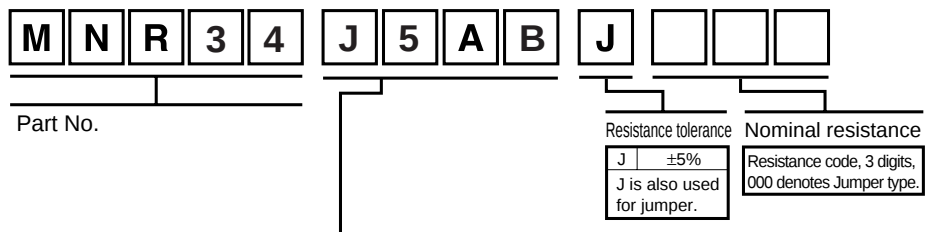


## ●Packaging



## Resistors

## ●Part No. Explanation



## Packaging Specifications Code

| Part No. | Code | Resistance tolerance<br>J(±5%) | Packaging specifications | Reel          | Basic ordering unit (pcs) |
|----------|------|--------------------------------|--------------------------|---------------|---------------------------|
| MNR34    | J5AB | ◎                              | Embossed tape (4mmPitch) | φ180mm (7in). | 4,000                     |

Reel (φ180mm) : Compatible with JEITA standard "EIAJ ET-7200B"  
 ◎ : Standard product

### Notes

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