

Thick film rectangular Low resistance series

MCR100 (6432 size (2512 size) : 1W)

●Features

- 1) Highly reliable chip resistor
Ruthenium oxide dielectric offers superior resistance to the elements.
- 2) Electrodes not corroded by soldering
Suitable for re-flow soldering.
- 3) 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

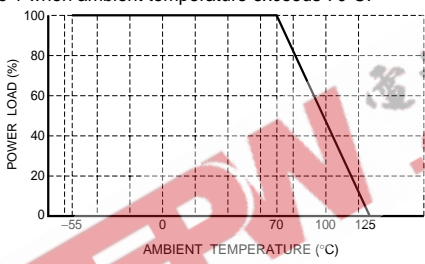
Item	Conditions	Specifications		
Rated power	Power must be derated according to the power derating curve in Figure 1 when ambient temperature exceeds 70°C.	1W at 70°C		
	 <p>Fig.1</p>			
Rated voltage	The voltage rating is calculated by the following equation. If the value obtained exceeds the limiting 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)	<table border="1"> <tr> <td>Limiting element voltage</td> <td>3.16V(10Ω)</td> </tr> </table>	Limiting element voltage	3.16V(10Ω)
Limiting element voltage	3.16V(10Ω)			
Nominal resistance	See Table 1.			
Operating temperature		-55°C to +125°C		

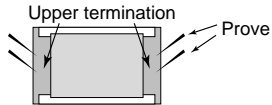
Table 1

Resistance tolerance	Special code	Resistance range (Ω)	Resistance temperature coefficient (ppm / °C)
F (±1%)	L	0.15≤R≤9.1 (E24)	±250
	L	0.1≤R≤0.13 (E24)	400±200
	S	0.047≤R≤0.091 (E24)	500±300
J (±5%)	L	0.15≤R≤0.91 (E24)	±250
	L	0.1≤R<0.13 (E24)	400±200
	S	0.047≤R≤0.091 (E24)	500±300

●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.

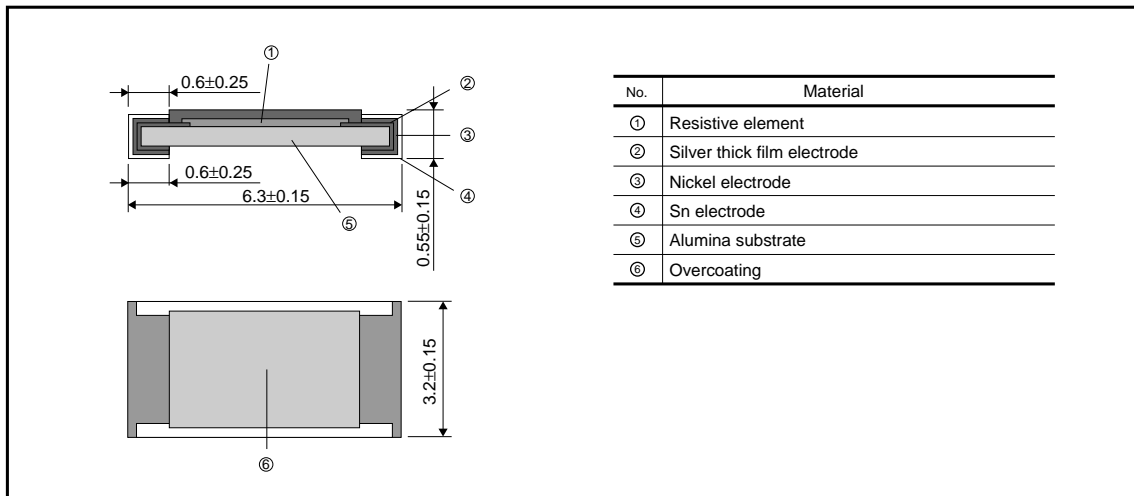
Resistors

●Characteristics

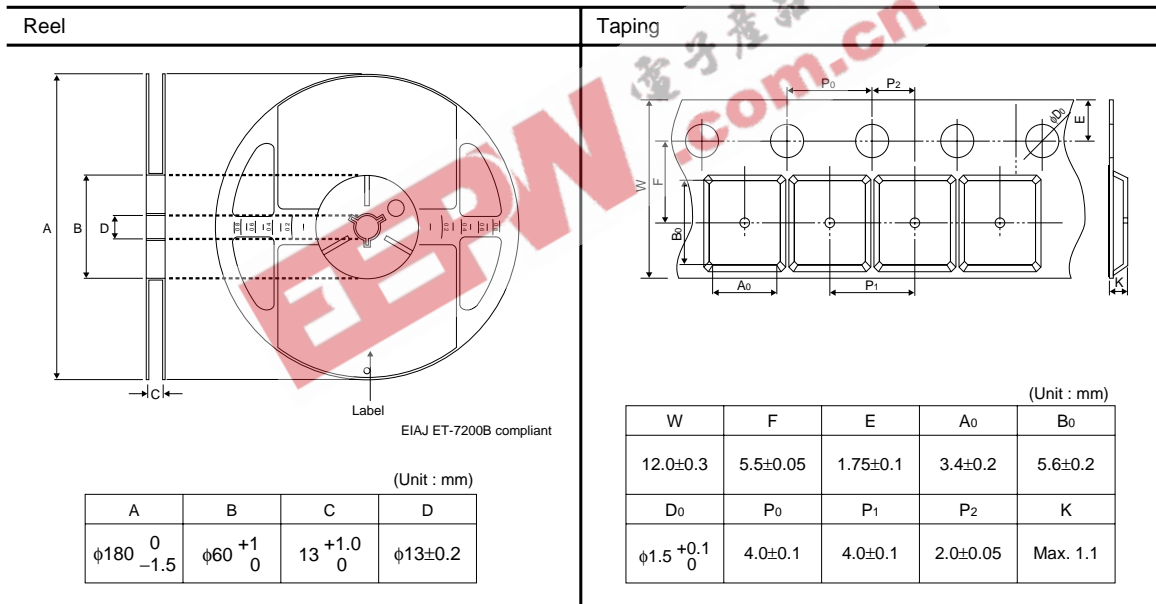
Item	Guaranteed value	Test conditions (JIS C 5201-1)
	Resistor type	
Resistance	J : $\pm 5\%$ F : $\pm 1\%$	JIS C 5201-1 4.5 Load voltage : A Measuring method : measure upper termination by 4 probes. 
Variation of resistance with temperature	See Table.1	JIS C 5201-1 4.8 Measurement : $+25 / -55 / +25 / +125^{\circ}\text{C}$
Overload	$\pm (2.0\%+0.005\Omega)$	JIS C 5201-1 4.13 Rated voltage (current) $\times 2.5$, 2s.
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 : $235\pm 5^{\circ}\text{C}$ Duration of immersion : $2.0\pm 0.5\text{s}$.
Resistance to soldering heat	$\pm (1.0\%+0.005\Omega)$ No remarkable abnormality on the appearance.	JIS C 5201-1 4.18 Soldering condition : $260\pm 5^{\circ}\text{C}$ Duration of immersion : $10\pm 1\text{s}$.
Rapid change of temperature	$\pm (1.0\%+0.005\Omega)$	JIS C 5201-1 4.19 Test temp. : -55°C to $+125^{\circ}\text{C}$ 5cyc
Damp heat, steady state	$\pm (3.0\%+0.005\Omega)$	JIS C 5201-1 4.24 40°C , 93%RH Test time : 56days
Endurance at 70°C	$\pm (3.0\%+0.005\Omega)$	JIS C 5201-1 4.25.1 70°C , Rated voltage 1.5h : ON – 0.5h : OFF Test time : 1,000h
Endurance	$\pm (3.0\%+0.005\Omega)$	JIS C 5201-1 4.25.3 125°C Test time : 1,000h to 1,048h
Component solvent resistance	$\pm (0.5\%+0.005\Omega)$	JIS C 5201-1 4.29 $23^{\circ}\text{C}\pm 5^{\circ}\text{C}$ Solvent : 2-propanol
Bend strength of the end face plating	Without open.	JIS C 5201-1 4.33

Resistors

●Dimensions (Unit: mm)

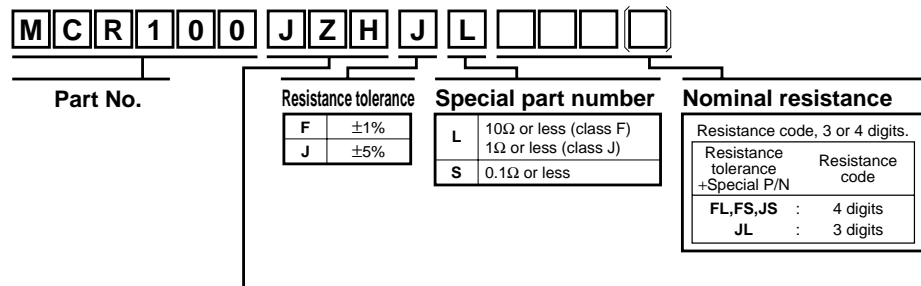


●Packaging



Resistors

●Part No. Explanation



Packaging Specifications Code

Part No.	Code	Resistance tolerance		Packaging specifications	Reel	Basic ordering unit(pcs)
		J(±5%)	F(±1%)			
MCR100	JZH	⊙	⊙	Embossed tape (4mm Pitch)	φ180mm (7in.)	4,000

Reel (φ180) : JEITA ET-7200B
 ⊙ : Standard product



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