

Compact Thick Film Chip Resistors

MCR10 (0805 size)

Features

- 1) Power rating of 1 / 8W (tolerance J,F)
- 2) Highly reliable chip resistor

Ruthenium oxide dielectric offers superior resistance to the elements.

- 3) Electrodes not corroded by soldering
 - Thick film makes the electrodes very strong.
- 4) Leading the world in development and mass production.
 - Since start of production in 1982 (first in the wold), this component has established a solid reputation as a general–purpose chip resistor.
- 5) ROHM resistors have approved ISO9001- / ISO/TS 16949- certification.

Ratings

Design and specifications are subject to change without notice. Carefully check the specification sheet before using or ordering ...

Item	Conditions	Specifications		
Rated power	Power must be derated according to the power derating curve in Figure 1 when ambient temperature exceeds 70°C.	J, F	0.125W (1 / 8W) at 70°C	
	100	D	0.1W (1 / 10W) at 70°C	
	80 90 60 20 0 -55 0 70 100 155 AMBIENT TEMPERATURE (°C) Fig.1			
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: Rated voltage (V)			
	$E=\sqrt{P\times R}$ P: Rated power (W)			
	R: Nominal resistance (Ω)	Limitin	g element voltage	150V
Nominal resistance	See Table 1.			
Operating temperature		-55°C	C to + 155°C	

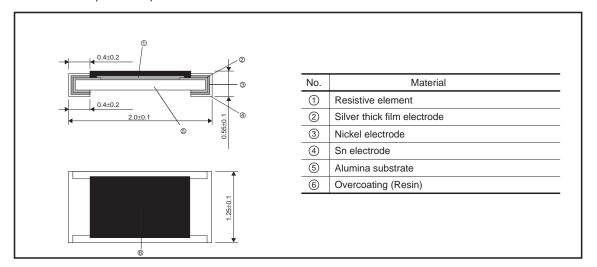
Jumper type					
Resistance	Max. 50mΩ				
Rated current	2A				
Operating temperature	-55°C to +155°C				

Table 1					
Resistance tolerance	Resistance (Ω)	0	Resistance temperature coefficient (ppm/°C)		
D (±0.5%)	10 to 91	(E24)	±100		
	100 to 1M	(E24)	±50		
F (±1%)	10 to 2.2M	(E24,96)	±100		
J (±5%)	1.0 to 9.1	(E24)	±400		
	10 to 10M	(E24)	±200		

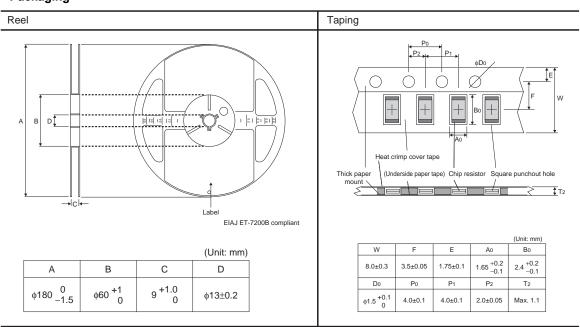
Characteristics

lto vo	Guara	inteed value	Test conditions (IIC C 5204.4)	
Item	Resistor type	Jumper type	Test conditions (JIS C 5201-1)	
Resistance	J: ±5% F: ±1% D: ±0.5%	Max. 50mΩ	JIS C 5201-1 4.5	
Variation of resistance with temperature	See Table.1		JIS C 5201-1 4.8 Measurement : +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 : 300V	
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	$\begin{array}{c c} \pm \mbox{ (1.0\%+0.05$\Omega)} & \mbox{Max. 50m}\Omega \\ \mbox{No remarkable abnormality on the appearance.} \end{array}$		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. $50m\Omega$	JIS C 5201-1 4.19 Test temp. : –55°C to +125°C 5cyc	
Damp heat, steady state	± (3.0%+0.1Ω)	Max. 100mΩ	JIS C 5201-1 4.24 40°C, 93%RH Test time : 1,000h to 1,048h	
Endurance at 70°C	± (3.0%+0.1Ω)	Max. 100mΩ	JIS C 5201-1 4.25.1 Rated voltage (current), 70°C 1.5h : ON – 0.5h : OFF Test time : 1,000h to 1,048h	
Endurance	± (3.0%+0.1Ω)	Max. 100mΩ	JIS C 5201-1 4.25.3 155°C Test time : 1,000h to 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	Max. 50 m $Ω$ I damage such as breaks.	JIS C 5201-1 4.33	

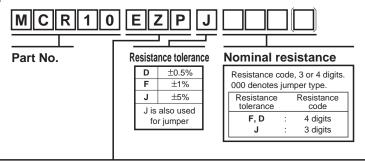
●Dimensions (Unit: mm)



Packaging



●Part No. Explanation



Packaging Specifications Code

Part No. Code	Codo	Resistance tolerance		rance	Packaging specifications	Reel	Dogio ordering unit (noc)
	Code	J(±5%)	F(±1%)	D(±0.5%)	Packaging specifications	Keei	Basic ordering unit (pcs)
MCR10	EZP	0	0	0	Paper tape (4mm Pitch)	φ180mm (7inch)	5,000

Reel (\(\daggregath\)180mm) : Compatible with JEITA standard "EIAJ ET-7200B" \(\infty\) : Standard product

Notes

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