

CP - Chip Resistor

Specifications Per

- CECC 40101
- IEC 40621/2/3
- DIN 45921

Features:

- EIA standard sizes
- High-reliable thick film resistive element
- Wraparound termination
- Dipping, wave and reflow soldering applicable
- Lead Free



Dimensions:

Type	Size	L , mm	W , mm	T , mm	t , mm	H , mm
CP04	0402	1.00±0.10	0.50±0.05	0.25±0.10	0.25±0.10	0.30±0.05
CP06	0603	1.60±0.10	0.80±0.15	0.30±0.15	0.30±0.15	0.45±0.10
CP12	0805	2.00±0.10	1.25±0.15	0.40±0.10	0.40±0.15	0.55±0.10
CP25	1206	3.20±0.10	1.60±0.15	0.50±0.10	0.50±0.15	0.60±0.10
CP33	1210	3.10±0.15	2.50±0.15	0.50±0.20	0.50±0.20	0.55±0.15
CP50	2010	5.00±0.20	2.50±0.20	0.6±0.20	0.60±0.20	0.55±0.10
CP100	2512	6.30±0.20	3.20±0.20	0.60±0.20	0.60±0.20	0.55±0.10

Specifications:

Type	Power Rating (At 70°C)	Max Working Voltage	Max Overload Voltage	Min. Resistance	Max. Resistance	Resistance Tolerance	Standard Resistance Value
CP04	1/16 W	50V	100V	1Ω	1MΩ	±2 & 5%	E-24
						±1%	E-96
CP06	1/10 W	50V	100V	1Ω	10MΩ	±2 & 5%	E-24
						±0.1 & 0.5 & 1%	E-96
CP12	1/8 W	150V	300V	10Ω	1MΩ	±2 & 5%	E-24
						±0.1 & 0.5 & 1%	E-96
CP25	1/4 W	200V	400V	10Ω	1MΩ	±2 & 5%	E-24
						±0.1 & 0.5 & 1%	E-96
CP33	1/3 W	200V	400V	10Ω	10MΩ	±2 & 5%	E-24
						±0.1 & 0.5 & 1%	E-96
CP50	1/2 W	200V	400V	1Ω	10MΩ	±2 & 5%	E-24
						±0.1 & 0.5 & 1%	E-96
CP100	1 W	200V	400V	1Ω	10MΩ	±2 & 5%	E-24
						±0.1 & 0.5 & 1%	E-96

For zero-ohm jumper resistance value is under 50mohm and rated current is 1A for CP04 through CP12, 2A for CP25 through CP100. Special specifications not listed available on special request.

Nov. 1, 2004

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Performance Specifications

Characteristics	Limits		
Power Derating, Linear	100% @ $+70^{\circ}\text{C}$, down to 0% @ $+125^{\circ}\text{C}$		
Temperature Coefficient, PPM / $^{\circ}\text{C}$	CP04	$\pm 1\%$ (10R-1M)	$\pm 100, \pm 200$
		$\pm 2\%, \pm 5\%$ (10R-1M)	$\pm 100, \pm 200$
		$\pm 1\%, \pm 2\%, \pm 5\%$ (1R-9R9)	-200~+500
	CP06	$\pm 0.1\%, \pm 0.5\%$ (10R-1M)	$\pm 50, \pm 100$
	CP12		$\pm 50, \pm 100$
	CP25		± 200
	CP33		± 400
CP50			
CP100			
Operating Temperature Range, $^{\circ}\text{C}$	-55 ~ +125		
Insulation Resistance, M Ω	10^4		
Voltage Coefficient, PPM / V	100		

Performance Specifications

Tests Characteristics	Test Conditions		Limit
Short Time Overload	IEC 60115-1 4.13	$\pm 2\%, 5\%$	$\pm(2\%+0.1R)$
	5 seconds 2.5x rated voltage (not over max. overload voltage)	$\pm 0.1\sim 1\%$	$\pm(0.4\%+0.1R)$
Load Life In Humidity	IEC 60115-1 4.24	56 days at 40 $^{\circ}\text{C}$ and 93% relative humidity	$\pm(3\% + 0.1R)$
Load Life 1,000 hours	IEC 60115-1 4.25.1	Rated load 1.5 hours ON, 0.5 hours OFF, at 70 $^{\circ}\text{C}$	$\pm(3\% + 0.1R)$
Resistance To Soldering Heat	IEC 60115-1 4.18	10 seconds at 260 $^{\circ}\text{C}$ solder bath temperature	$\pm(2\% + 0.1R)$
Solderability	MIL-STD-202 Method 208	Solder area covered after 230 $\pm 5^{\circ}\text{C}/5\pm 0.5$ seconds w/ flux applied	95% Min.
Vibration	IEC 60115-1 4.22	Six hours in each parallel and axial direction w/ a simple harmonic motion having an amplitude of 0.75mm and 10 to 500 Hz.	$\pm(2\% + 0.1R)$
Thermal Endurance	IEC 60115-1 4.25.3	1000 hours at 125 $^{\circ}\text{C}$ without load	$\pm(2\% + 0.1R)$
Thermal Shock	IEC 60115-1 4.19	-55 $^{\circ}\text{C}$ 30minutes, +125 $^{\circ}\text{C}$ 30minutes, 5 cycles	$\pm(3\% + 0.1R)$

Ordering Information

Type	Tolerance	Temperature Coefficient	Resistance Value	Packaging	Special Request (Optional)
CP25 CP100	B(0.1%), D(0.5%) F(1%), G(2%) J (5%)	TK100	10K	TR (Tape/Reel)	LV (Low value)

Nov. 1, 2004