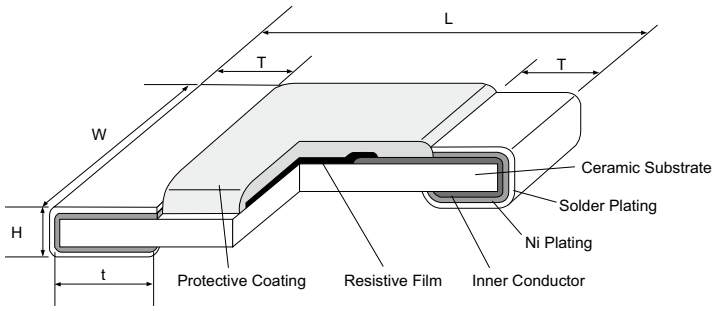
Firstohm®

CP
Chip Resistor

Quality • Reliability
Cost-Down via Technology



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	0.60 ± 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 oC)	Max Working Voltage	Max Overload Voltage	Min. Resistance	Max. Resistance	Resistance Tolerance	Standard Resistance Value
CP04	1/16 W	50V	100V	1Ω	10MΩ	±2, ±5%	E-24
						±0.5%, ±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	1Ω	10MΩ	±2, ±5%	E-24
						±0.1, ±0.5, ±1%	E-96
CP25	1/4 W	200V	400V	1Ω	10MΩ	±2, ±5%	E-24
						±0.1, ±0.5, ±1%	E-96
CP33	1/3 W	200V	400V	1Ω	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.

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TECHNICAL SPECIFICATIONS

Characteristics	Limits			
Power Derating, Linear	100% @ <+70 °C, down to 0% @ +125 °C			
Temperature Coefficient, PPM / °C	CP04	10R-1M	±0.5%, ±1%	±50, ±100
			±2%, ±5%	±100
		1R-9R9	±1%, ±2%, ±5%	±200
	CP06 CP12 CP25 CP33 CP50 CP100	10R-1M	±0.1%, ±0.5%, ±1%	±50, ±100
			±2%, ±5%	±100
		1R-9R9	±1%, ±2%, ±5%	±200
		1M-10M	±2%, ±5%	
Operating Temperature Range, °C	-55 ~ +125			
Insulation Resistance, MΩ	10^4			
Voltage Coefficient, PPM / V	100			

PERFORMANCE SPECIFICATIONS

Tests Characteristics	Test Conditions		Limits
Short Time Overload	**IEC 60115-1 4.13** 5 seconds 2.5x rated voltage (not over max. overload voltage)	±2%, ±5%	±(2%+0.1R)
		±0.1~±1%	±(0.4%+0.1R)
Load Life In Humidity	**IEC 60115-1 4.24** 56 days at 40°C and 93% relative humidity		±(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°C		±(3% + 0.1R)
Resistance To Soldering Heat	**IEC 60115-1 4.18** 10 seconds at 260°C solder bath temperature		±(2% + 0.1R)
Solderability	**MIL-STD-202 Method 208** Solder area covered after 230±5°C/5±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.		±(2% + 0.1R)
Thermal Endurance	**IEC 60115-1 4.25.3** 1000 hours at 125°C without load		±(2% + 0.1R)
Thermal Shock	**IEC 60115-1 4.19** -55°C 30minutes, +125°C 30minutes, 5 cycles		±(3% + 0.1R)

ORDERING INFORMATION (EXAMPLES)

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	R68 10K 4M7	TR (Tape/Reel)	LV (Low value)