

CPP Series

PTC Power Thermistor



◆ Product Introduction

The PTC power thermistor is a circuit protection and control component with a positive temperature coefficient characteristic, functioning as a "self-recovering safety guard" for equipment. Its core is based on barium titanate ceramic or polymer materials, enabling precise protection and regulation through nonlinear resistance changes with temperature.

Its operational mechanism is highly intelligent: at room temperature, it remains in a low-resistance state (several ohms to several thousand ohms) and has minimal impact on normal circuit operation when connected in series. When faults such as overcurrent or short circuits occur, heat generated by the excessive current rapidly raises its temperature to the critical Curie point (typically 60°C–125°C), causing resistance to instantaneously increase by 3–8 orders of magnitude. This shift from low to high resistance quickly limits the current to a safe range, effectively "disconnecting" hazardous currents. Once the fault is resolved and temperature decreases, it automatically returns to the low-resistance state without replacement, allowing reuse for over 100,000 cycles—a significant advantage over traditional one-time fuses.

◆ Features

1. Excellent inrush current suppression capability
2. Long lifespan and high reliability
3. Comprehensive product series with broad application range

◆ Applications

1. UPS (Uninterruptible Power Supplies)
2. On-Board Chargers (OBC) for new energy vehicles
3. Pre-charge/discharge circuits for energy storage inverters
4. Lighting equipment
5. Power adapters and ballasts

◆ Coding principles

1	2	3	4	5	6	7	8	9	10	11	
Product Type		Body size		resistance value		resistance value accuracy		packaging method		pin length (optional suffix)	
CPP	PTC power thermistor	06	Φ6mm	0R5	0.5Ω	M	±20%	R	radial	A	20mm
		11	Φ11mm	2R5	2.5Ω	H	±25%				
		16	Φ16mm	080	8Ω	N	±30%				
		20	Φ20mm	200	20Ω	T	±40%				
		25	Φ25mm	500	50Ω	P	±50%				
				121	120Ω						