

Spectra Trading (Pty) Ltd

Reg No: 2025/525554/07

Resistor Types & Specifications

Resistor Type	Resistance Range	Power Rating	Tolerance	Package Type	Typical Applications
Carbon Film Resistor	1Ω – 10MΩ	0.125W – 2W	±5% – ±10%	Through-hole	General-purpose electronics, consumer devices
Metal Film Resistor	0.1Ω – 10MΩ	0.25W – 2W	±0.1% – ±1%	Through-hole, SMD	Precision circuits, instrumentation, audio systems
Wirewound Resistor	0.01Ω – 100kΩ	1W – 100W+	±1% – ±5%	Through-hole, chassis	Power supplies, motor control, industrial equipment
Thick Film Resistor	1Ω – 10MΩ	0.25W – 3W	±1% – ±5%	SMD	Compact electronics, automotive, telecom
Thin Film Resistor	10Ω – 1MΩ	0.05W – 0.5W	±0.01% – ±1%	SMD	High-precision applications, medical devices
Fusible Resistor	1Ω – 10Ω	0.5W – 2W	±5%	Through-hole	Overcurrent protection, safety circuits
Variable Resistor (Potentiometer)	100Ω – 1MΩ	0.1W – 2W	Adjustable	Rotary, slider, trimmer	Volume control, calibration, tuning circuits

Thermistor (NTC/PTC)	1Ω – 100kΩ	0.1W – 5W	±5% – ±20%	Disc, bead, SMD	Temperature sensing, protection, compensation circuits
Photoresistor (LDR)	100Ω – 1MΩ (light-dependent)	0.1W – 1W	Variable	Through-hole, SMD	Light detection, automatic lighting, solar devices
Shunt Resistor	0.001Ω – 1Ω	1W – 100W+	±0.5% – ±5%	Metal strip, chassis	Current measurement, battery management, power monitoring