PTC Thermistors

Selection guide

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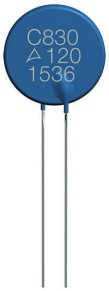
Selection guide

PTC thermistors for overcurrent protection

Type	V_R V	I_R mA	I_S mA	T_{ref} °C	R_R Ω	Page
	12	150 ... 1500	300 ... 3050	160	0.45 ... 13	
	12, 24	120 ... 1800	240 ... 3600	120	0.3 ... 13	
	63	30 ... 1000	60 ... 1500	80, 120, 130	1.2 ... 62	
	110	35 ... 525	70 ... 1050	160	3.7 ... 150	
	230	15 ... 650	40 ... 980	80, 120, 130	3.5 ... 160	
	230, lead-free series	50 ... 220	75 ... 330	120	10 ... 120	
	380, 500	12 ... 21	24 ... 39	115, 120	600 ... 1500	

PTC thermistors for overcurrent protection

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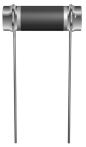
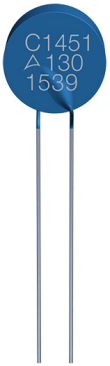
	500	2.5, 4	6.5, 9	60	3500, 5500	
SMD  Case sizes 0603 and 1210	24, 42, 63, 230	12 ... 90	22 ... 180	–	27 ... 1500	
SMD  Case sizes 3225 and 4032	24 63	90 ... 310 40 ... 150	185 ... 640 85 ... 310	80, 120 80, 120	3.1 ... 13 16 ... 55	

PTC thermistors for overcurrent protection and as inrush current limiters

Type	V_R V	I_R mA	I_S mA	$V_{link,max}$ V DC	R_R Ω	C_{th} J/K	Page
Leaded disks, coated							
	400 ... 1000	8 ... 123	17 ... 245	370 ... 800	25 ... 7500	0.4 ... 2.1	

PTC thermistors as inrush current limiters in housing

Type	$V_{link,max}$ V DC	R_R Ω	C_{th} J/K	Page
	400, 620, 800	22 ... 100	1.1, 2.3	

PTC thermistors for telecom applications

Type	R_R Ω	I_R @ 70 °C mA	I_S @ 25 °C mA	Page
Leaded disks				
	6 ... 55	40 ... 110	150 ... 440	
Telecom pair protector (TPP)				
SMD   	9 ... 50	50 ... 120	170 ... 360	
Telecom pair protector (TPP) for GR-1089 Central Office				
SMD 	70	40	150	

PTC thermistors for switching applications (e.g. lighting, general-purpose)

Type	V_{max} V	I_R mA	I_S mA	T_{ref} °C	R_R Ω	Page
	265	7 ... 20	15 ... 40	115, 120	500 ... 5000	

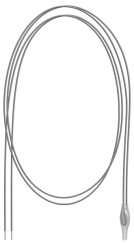
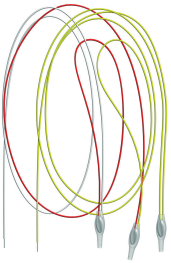
PTC thermistors for motor starting

Type	R_R Ω	I_{max} A	V_{max} V	T_{ref} °C	Page
	4.7 ... 38 4.7 ... 47	6 ... 12 5 ... 12	180 ... 400 180 ... 400	120, 135 135	

PTC thermistors as point level sensors

Type	V_{max} V DC	t_E s	R_R Ω	Page
Overflow protection in oil tanks				
	25	40	140	
Water level sensing				
	18	60	40 ... 80	

PTC thermistors for motor protection

Type	V_{max} V DC	T_{sense} °C	R_R Ω	Page
	30	60 ... 180	≤ 100	
	30	100 ... 180	≤ 300	

PTC thermistors as limit temperature sensors

Type	V_{max} V DC	T_{sense} °C	R_R Ω	Page
	30	70 ... 160	≤ 250	
	30	80 ... 140	≤ 100	
	30	60 ... 120	≤ 100	

PTC thermistors as limit temperature sensors

Type	V_{max} V DC	T_{sense} °C	R_R Ω	Page
	30	100 ... 120	≤ 330	

SMD



PTC thermistors as limit temperature sensors

EIA case size	V_{max} V DC	T_{sense} °C	R_R Ω	Page
Superior series				
0402	32	75 ±5 ... 135 ±5	470	
0603	32	75 ±5 ... 145 ±5	470	
0805	32	70 ±5 ... 130 ±5	680	
Standard series				
0402	32	–	10000	
0603	32	75 ±5 ... 135 ±5	470	
0603	32	85 ±3 ... 125 ±3	470	
0603	32	55 ±5 ... 105 ±5	110, 470	
0805	32	70 ±5 ... 140 ±5	680	

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PTC thermistors as heating elements

Type	Size mm	V_R V	T_{ref} °C	R_R ($V_{meas} \leq 1.5$ V) Ω	Page
	Round disk 12 × 1	12	0 ... 220	9, ≥ 320	
	Rectangular 35 × 6.2 × 1.4	12	80 ... 220	3.2, 6.4	
	Round disk 8 × 3	230	110 ... 220	4200, 6000	
	Rectangular 35 × 6.2 × 2	230	50 ... 270	700, 1000, 1300	
	Rectangular 28.8 x 12.4 x 2.1	400	155	3000	