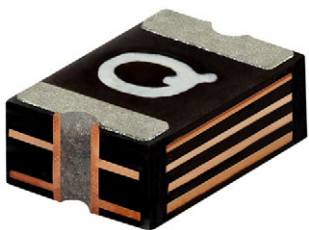


SMD 0805 Polymer PTCs



FEATURES

- Fast response to overcurrent
- Low resistance for minimal voltage drop
- Compact design and low profile
- Compatible with high temperature solders
- Material categorization:
for definitions of compliance please see
www.vishay.com/doc?99912



RoHS
COMPLIANT
HALOGEN
FREE

QUICK REFERENCE DATA

PARAMETER ⁽¹⁾	VALUE	UNIT
Hold current (I_{hold}) ⁽²⁾⁽³⁾	0.1 to 0.5	A
Trip current (I_{trip}) ⁽²⁾⁽³⁾	0.3 to 1	A
Maximum voltage ($V_{max.}$) ⁽²⁾⁽³⁾	6 to 15	V _{DC}
Maximum current ($I_{max.}$) ⁽²⁾⁽³⁾	100	A
Power dissipation (P_D typ.) ⁽³⁾	0.5	W
Minimum initial resistance ($R_{min.}$) ⁽²⁾⁽³⁾	0.15 to 1	Ω
Maximum resistance after tripping and 1 h cool down (R_1 max.) ⁽²⁾⁽³⁾	0.85 to 6	Ω
Operating temperature	-40 to +85	°C
Storage temperature	-40 to +85	°C
Maximum surface temperature in tripped state	125	°C

Notes

- (1) Definitions, measurements, and tests are made in accordance with standard IEC 62319-1 "Polymeric thermistors - Directly heated positive step function temperature coefficient"
- (2) Other values available on request
- (3) All the parameters are characterized at 25 °C still air

APPLICATIONS

Overcurrent protection in:

- USB ports
- HDMI source
- PC motherboards - plug and play
- Mobile phones - battery and port
- PDAs / digital cameras
- Mobile internet devices
- IC VCC
- Battery protection
- Home automation sensors

DESCRIPTION

These polymer-based thermistors have a positive temperature coefficient and are primarily intended for resettable overcurrent protection. The terminals are 100 % matte tin plated. The part is laser marked with an identification letter.

PACKAGING

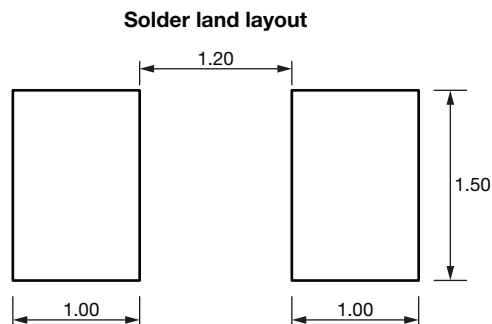
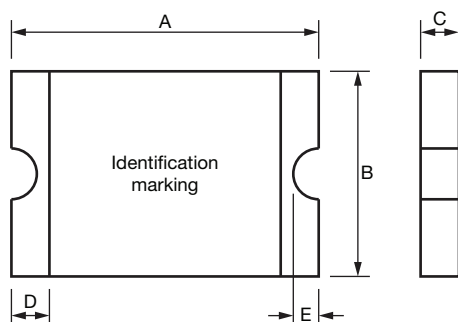
Available in 8 mm tape on 178 mm reel containing 4000 pieces, sealed in a plastic bag.

ELECTRICAL DATA AND ORDERING INFORMATION

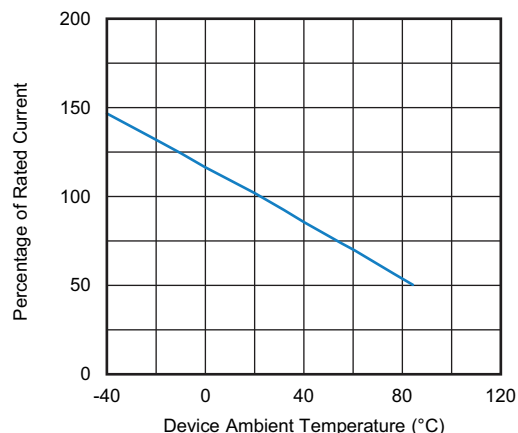
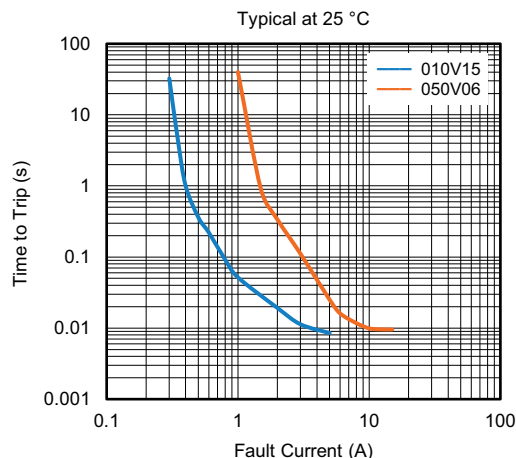
PART NUMBER	I_{hold} (A)	I_{trip} (A)	$V_{max.}$ (V _{DC})	$I_{max.}$ (A)	P_D TYP. (W)	MAX. TIME TO TRIP		RESISTANCE AT 25 °C	
						CURRENT (A)	TIME (s)	$R_{min.}$ (Ω)	R_1 max. (Ω)
PPTC0805E3010V15	0.10	0.30	15	100	0.5	0.50	1.50	1.000	6.000
PPTC0805E3050V06	0.50	1.00	6	100	0.5	8.00	0.10	0.150	0.850

**PERFORMANCE**

ENVIRONMENTAL SPECIFICATIONS	
Operating temperature	-40 °C to +85 °C
Storage condition	10 °C to 35 °C, ≤ 70 % RH, without condensation
Maximum device surface temperature in tripped state	125 °C
Passive aging	+85 °C, 1000 h ± 5 % typical resistance change
Humidity aging	+85 °C, 85 % RH, 1000 h ± 5 % typical resistance change
Thermal shock	MIL-STD-202 Method 107G +85 °C / -40 °C, 20 times -30 % typical resistance change
Solvent resistance	MIL-STD-202, Method 215 < ± 5 % resistance change
Vibration	MIL-STD-883C, Method 2007.1, Condition A < ± 5 % resistance change
Moisture sensitivity level	Level 1, J-STD-020C

DIMENSIONS AND MARKING in millimeters

COMPONENT DIMENSIONS in millimeters											
PART NUMBER	MARKING	A		B		C		D		E	
		MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.	MAX.
PPTC0805E3010V15	G	2.00	2.20	1.20	1.50	0.55	1.00	0.20	0.55	0.05	0.45
PPTC0805E3050V06	O	2.00	2.20	1.20	1.50	0.75	1.25	0.20	0.55	0.05	0.45

THERMAL DERATING**TIME TO TRIP CURVE**

RECOMMENDED HOLD CURRENT in Amperes

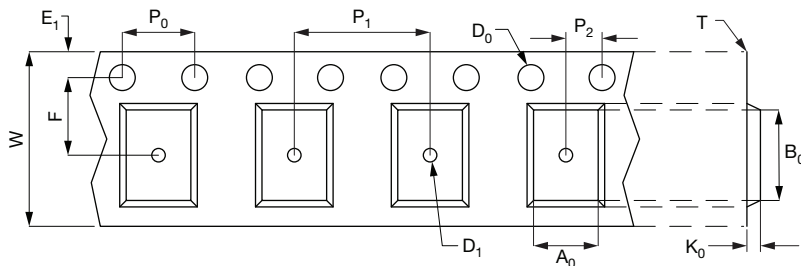
PART NUMBER	-40 °C	-20 °C	0 °C	25 °C	40 °C	50 °C	60 °C	70 °C	85 °C
PPTC0805E3010V15	0.14	0.12	0.11	0.10	0.08	0.07	0.06	0.05	0.03
PPTC0805E3050V06	0.68	0.62	0.55	0.50	0.40	0.37	0.33	0.29	0.23

Note

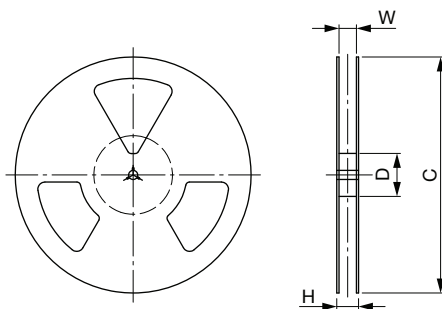
- Recommended hold currents prevail the thermal derating graph; hold and trip currents are depending on mounting

TAPE AND REEL DIMENSIONS

Taping on reel according to EIA-481.


TAPE DIMENSIONS in millimeters

PART NUMBER	W	F	E ₁	D ₀	D ₁	P ₀	P ₁	P ₂	A ₀	B ₀	T	K ₀
PPTC0805E3010V15	8.00 ± 0.10	3.50 ± 0.05	1.75 ± 0.10	1.55 ± 0.05	1.00 (min.) ± 0.10	4.00 ± 0.08	4.00 ± 0.10	2.00 ± 0.05	1.60 ± 0.10	2.30 ± 0.10	0.25 ± 0.10	0.90 ± 0.10
PPTC0805E3050V06	8.00 ± 0.30	3.50 ± 0.05	1.75 ± 0.10	1.55 ± 0.05	1.00 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	1.65 ± 0.10	2.35 ± 0.10	0.20 ± 0.10	1.05 ± 0.10


REEL DIMENSIONS in millimeters

C	D	H	W
Ø 178 ± 1.0	Ø 60.2 ± 0.5	11.0 ± 0.5	9.0 ± 1.5



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