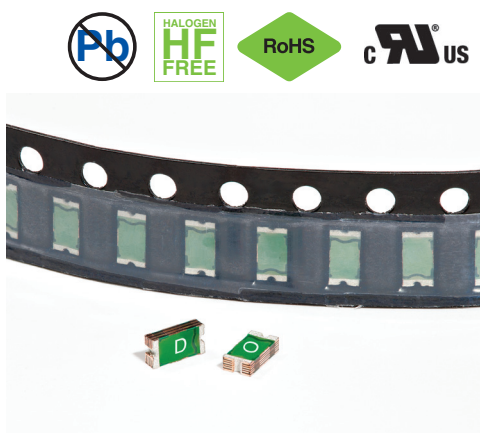


PTS0805

6-24 Volt DC surface mount resettable PTC devices



Product features

- Positive temperature coefficient (PTC)
- SMT resettable device
- Low resistance
- 6 to 24 volts
- Current ratings from 0.1 A to 0.75 A
- Fast time-to-trip
- Small EIA size 0805 (2012 metric) footprint

Applications

- USB Peripherals
- Disk drives
- Power tools
- Rechargeable battery pack protection
- Plug and play protection for motherboards and peripherals
- Mobile phones - battery and port protection
- Game console port protection
- Digital cameras
- Set-top boxes
- Tablets/notebooks/netbooks

Agency information

- cURus Recognized card, File No: E343021
- TÜV, File: R 50283843

Part number system/ordering:

PT S 0805 6V 035

- PT = PolyTron™ PTC device series
- S = Surface mount
- 0805 = Dimension code
- 6V = Maximum voltage
- 035 = Current hold (I_{hold})

Product specifications- (+23 °C)

Catalog number	Part marking	V _{max} (Vdc)	I _{max} (A)	I _{hold} (A)	I _{trip} (A)	P _d max. (W)	Time to trip (max.)		Resistance (Ω)		Agency information	
									Initial (R _i)	Post trip (R _t)		
							(A)	(sec)	min.	max.	cURus	TUV
PTS080524V010	D	24	100	0.1	0.30	0.6	0.5	1.5	1.0	6.0	X	X
PTS08059V020	L	9	100	0.2	0.50	0.5	8.0	0.05	0.65	3.5	X	X
PTS08056V035	T	6	100	0.35	0.75	0.5	8.0	0.1	0.25	1.2	X	X
PTS08056V050	O	6	100	0.5	1.00	0.5	8.0	0.2	0.15	0.85	X	X
PTS08056V075	X	6	100	0.75	1.50	0.5	8.0	0.3	0.09	0.40	X	X

Notes:

I_{hold} – Hold current: Maximum current device will pass without interruption in +23 °C still air.

I_{trip} – Trip current: Minimum current that will switch the device from low resistance to high resistance in +23 °C still air.

V_{max}: Maximum continuous voltage device can withstand without damage at rated current.

I_{max}: Maximum fault current device can withstand without damage at rated voltage.

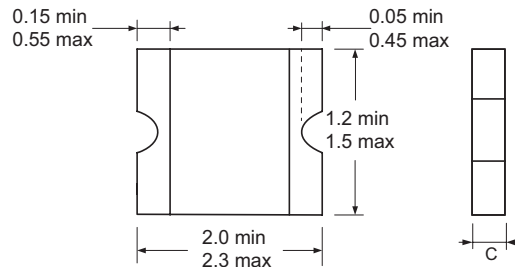
P_d: Power dissipated from device when in the tripped state in +23 °C still air.

R_i (min.): Minimum resistance of device as supplied at +23 °C unless otherwise specified.

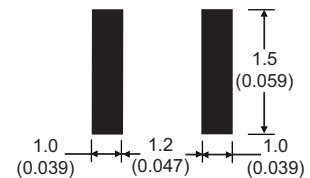
R_t (max.): Maximum resistance of device when measured one hour post reflow (SMD) or one hour post trip (radial-leaded device) at +23°C unless otherwise specified.

Dimensions - mm

Part number	C max.
PTS080524V010	1.00
PTS08059V020	1.00
PTS08056V035	0.75
PTS08056V050	1.25
PTS08056V075	1.25



Recommended land pattern - mm (in)



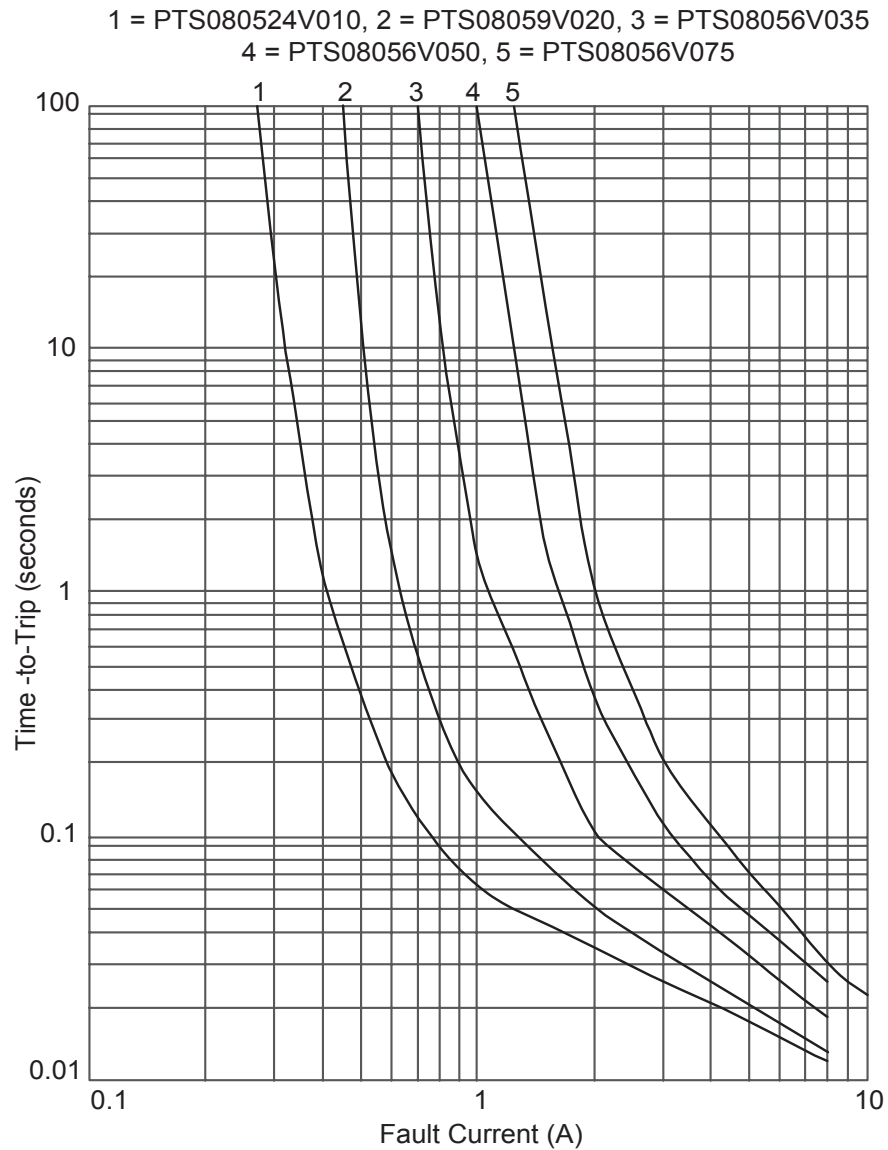
Environmental specifications

Characteristic	Value
Operating temperature range	-40 °C to +85 °C
Surface temperature in tripped state	+125 °C max.
Thermal shock	+85 °C to -40 °C, 20 cycles, -33% typical resistance change
Solvent resistance	MIL-STD-202 Method 215, no change
Humidity age test	Specified temperature (+23 °C ± 3 °C)+85 °C, 85% RH, 100 hours ±5% typical resistance change.
Storage temperature range	-10 °C to +40 °C
Storage duration	One year
Storage relative humidity	≤75%
Storage conditions	Keep away from corrosive atmosphere and sunlight

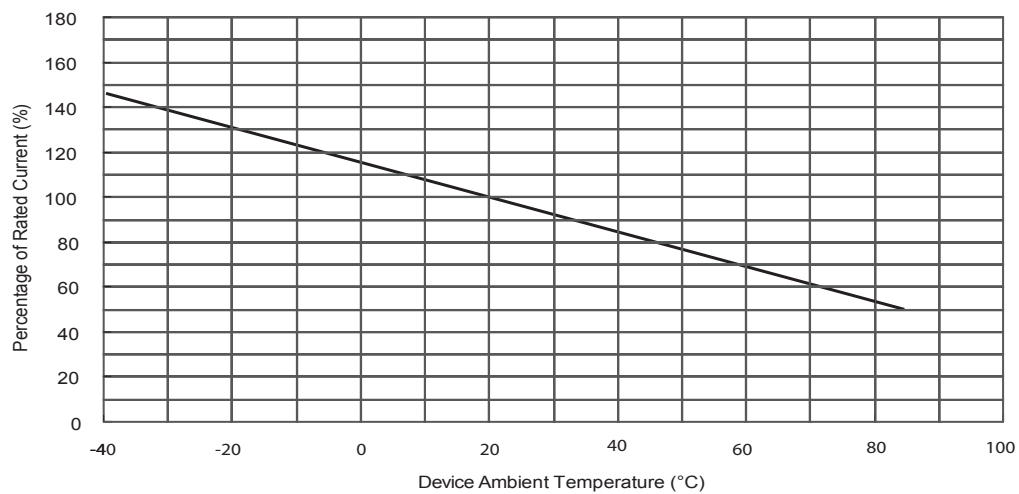
Terminal material:

- Nickel/tin-plated copper

Time to trip curves at +23°C

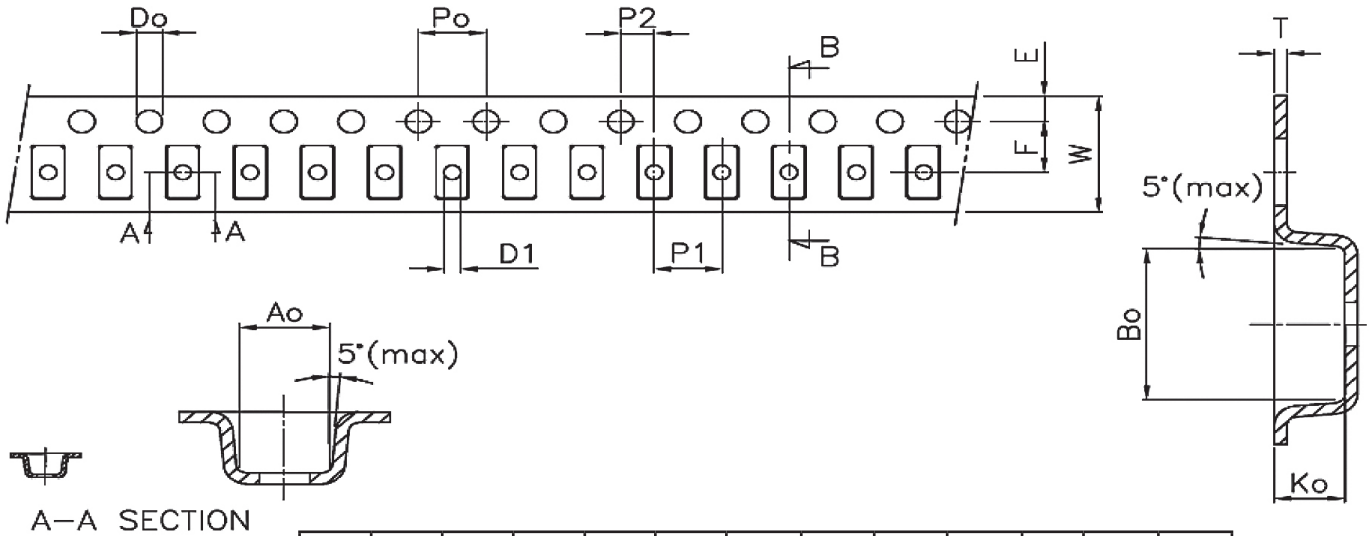


Temperature derating curve



Packaging information - mm

4000 devices per 178 mm diameter reel

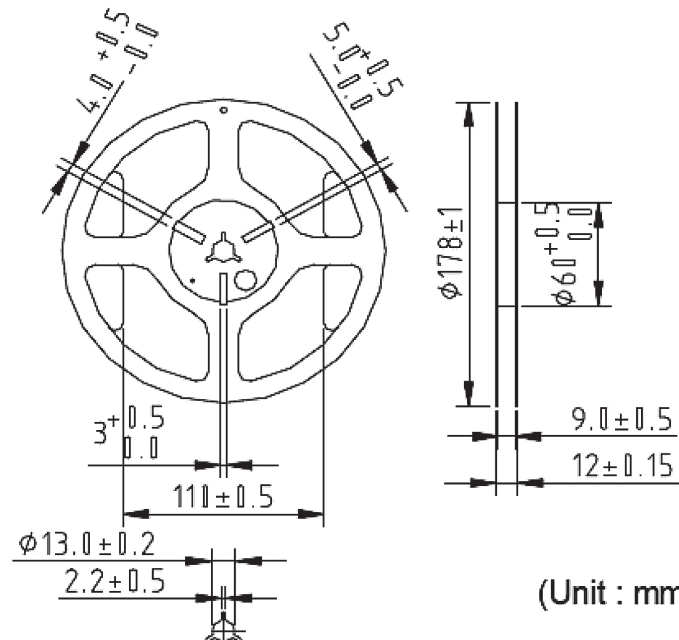


A-A SECTION

A0	B0	K0	P0	P1	P2	T	E	F	D0	D1	W	10P0
± 0.10	± 0.10	± 0.10	± 0.10	± 0.10	± 0.05	± 0.05	± 0.10	± 0.05	± 0.10	Min.	± 0.10	± 0.20
1.6	2.3	0.9	4.0	4.0	2.0	0.25	1.75	3.5	1.5	1.0	8.1	40.0

Reel specifications

4000 devices per 178 mm diameter reel



(Unit : mm)

Solder reflow profile

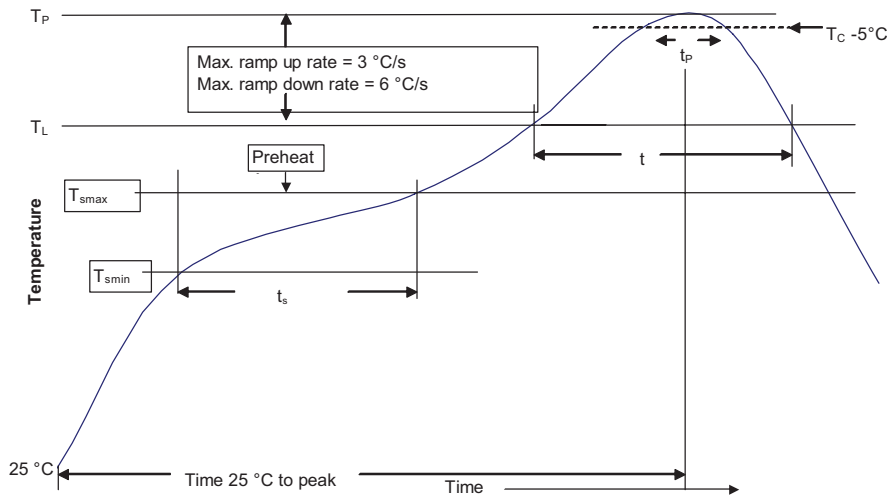


Table 1 - Standard SnPb solder (T_C)

Package thickness	Volume mm ³ <350	Volume mm ³ ≥350
<2.5 mm	235 °C	220 °C
≥2.5 mm	220 °C	220 °C

Table 2 - Lead (Pb) free solder (T_C)

Package thickness	Volume mm ³ <350	Volume mm ³ 350 - 2000	Volume mm ³ >2000
<1.6 mm	260 °C	260 °C	260 °C
1.6 – 2.5 mm	260 °C	250 °C	245 °C
>2.5 mm	250 °C	245 °C	245 °C

Reference J-STD-020

Profile feature	Standard SnPb solder	Lead (Pb) free solder
Preheat and soak		
• Temperature min. (T_{smin})	100 °C	150 °C
• Temperature max. (T_{smax})	150 °C	200 °C
• Time (T_{smin} to T_{smax}) (t_s)	60-120 seconds	60-120 seconds
Ramp up rate T_L to T_p	3 °C/ second max.	3 °C/ second max.
Liquidous temperature (T_L)	183 °C	217 °C
Time (t_L) maintained above T_L	60-150 seconds	60-150 seconds
Peak package body temperature (T_p)*	Table 1	Table 2
Time (t_p)* within 5 °C of the specified classification temperature (T_C)	20 seconds*	30 seconds*
Ramp-down rate (T_p to T_L)	6 °C/ second max.	6 °C/ second max.
Time 25 °C to peak temperature	6 minutes max.	8 minutes max.

* Tolerance for peak profile temperature (T_p) is defined as a supplier minimum and a user maximum.

Wave solder

Reservoir temperature: 260 °C

Time in reservoir: 10 seconds maximum

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