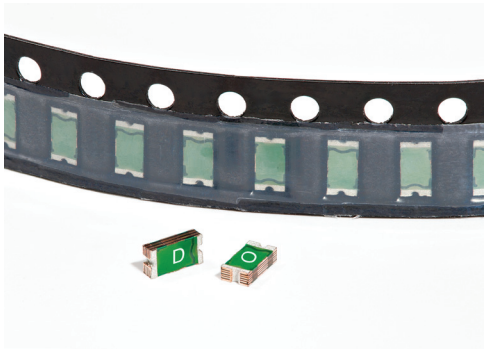
Bussmann PTS0805 Series

6-24 Volt DC surface mount PolyTron™ PTC devices



Product description

The Bussmann PolyTron™ PTC devices are ideally suited for protecting **applications sensitive to high ambient operating temperatures or subject to frequent overcurrent conditions.**

- Lead free, halogen free and RoHS compliant
- PolyTron™ surface mount PTC device
- 6 to 24 volts
- Current ratings from 0.1 to 0.75 amps
- Fast time-to-trip
- Small EIA size 0805 (2012 metric) footprint

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})

Tape and reel packaging/quantities:

- 4000 devices per 178mm diameter reel

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

Bussmann by EATON

The Bussmann brand of circuit protection products (formerly of the Bussmann Division of Cooper Industries) is now part of Eaton's Electrical Group, Electronics Division.

Bussmann is now part of Eaton
Same great products plus even more.

Product specifications @ 23°C

Catalog Number	Part Marking	V_{max} (Vdc)	I_{max} (amps)	I_{hold} (amps)	I_{trip} (amps)	P_d Max. (W)	Time to trip (max.)		Resistance (Ω)		Agency information	
									Initial (R_i)	Post trip (R_1)		
							(Amps)	(Sec)	Min.	Max.	cURus	TUV
PTS080524V010	D	24	100	0.1	0.30	0.5	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.

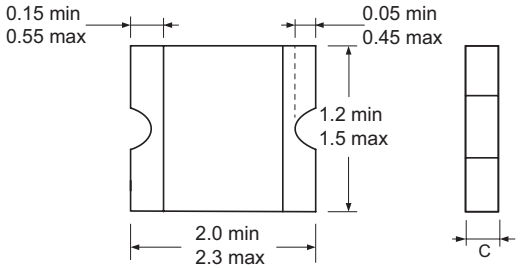
P_d: Power disspated from device when in the tripped state in 23°C still air.

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

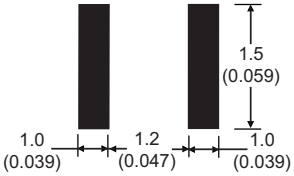
R_1(max.): Maximum resistance of device when measured one hour post reflow (SMD) or one hour post trip (radial-leaded device) at 23°C unless otherwise specified.

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)



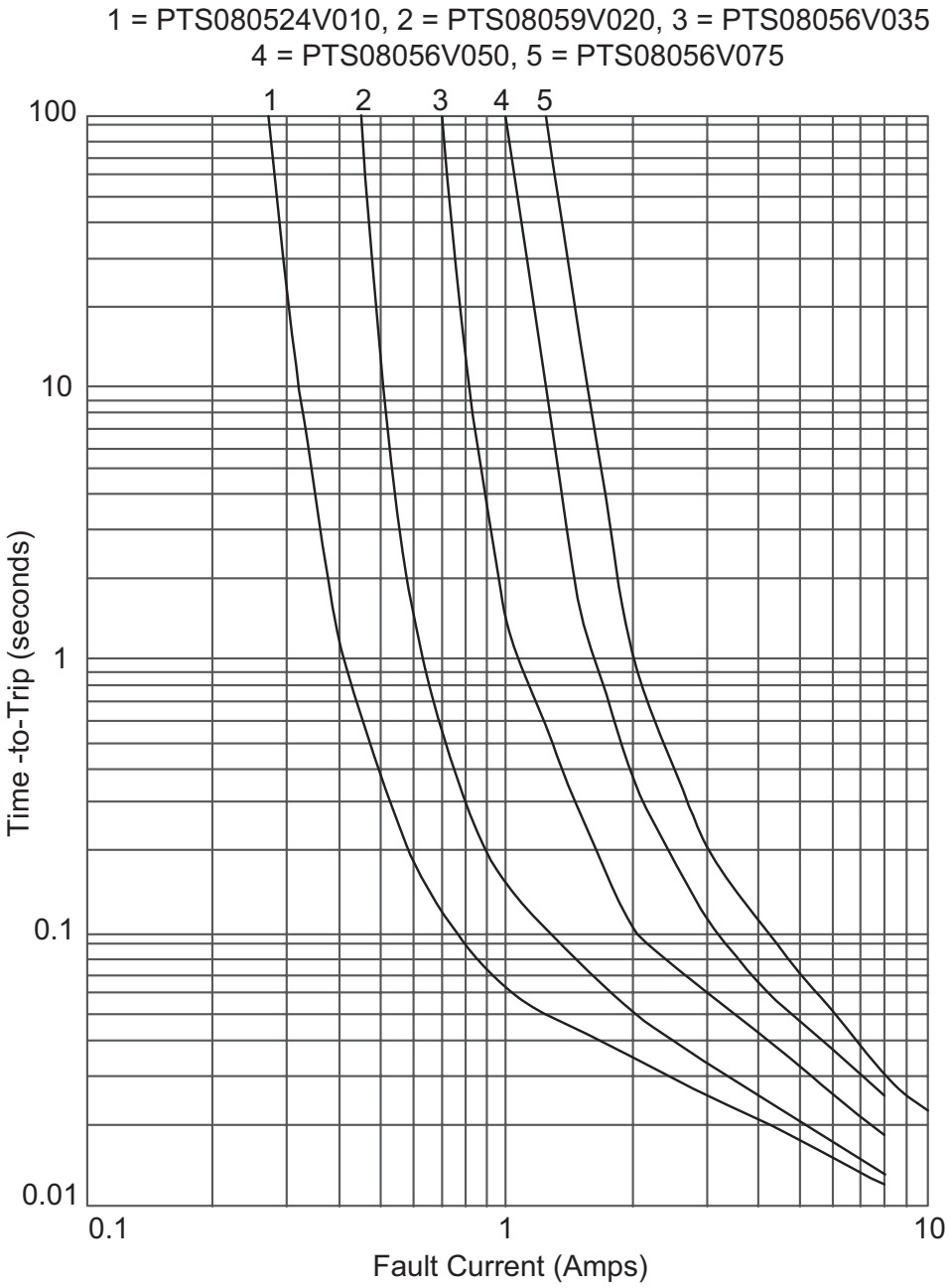
Environmental specifications

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

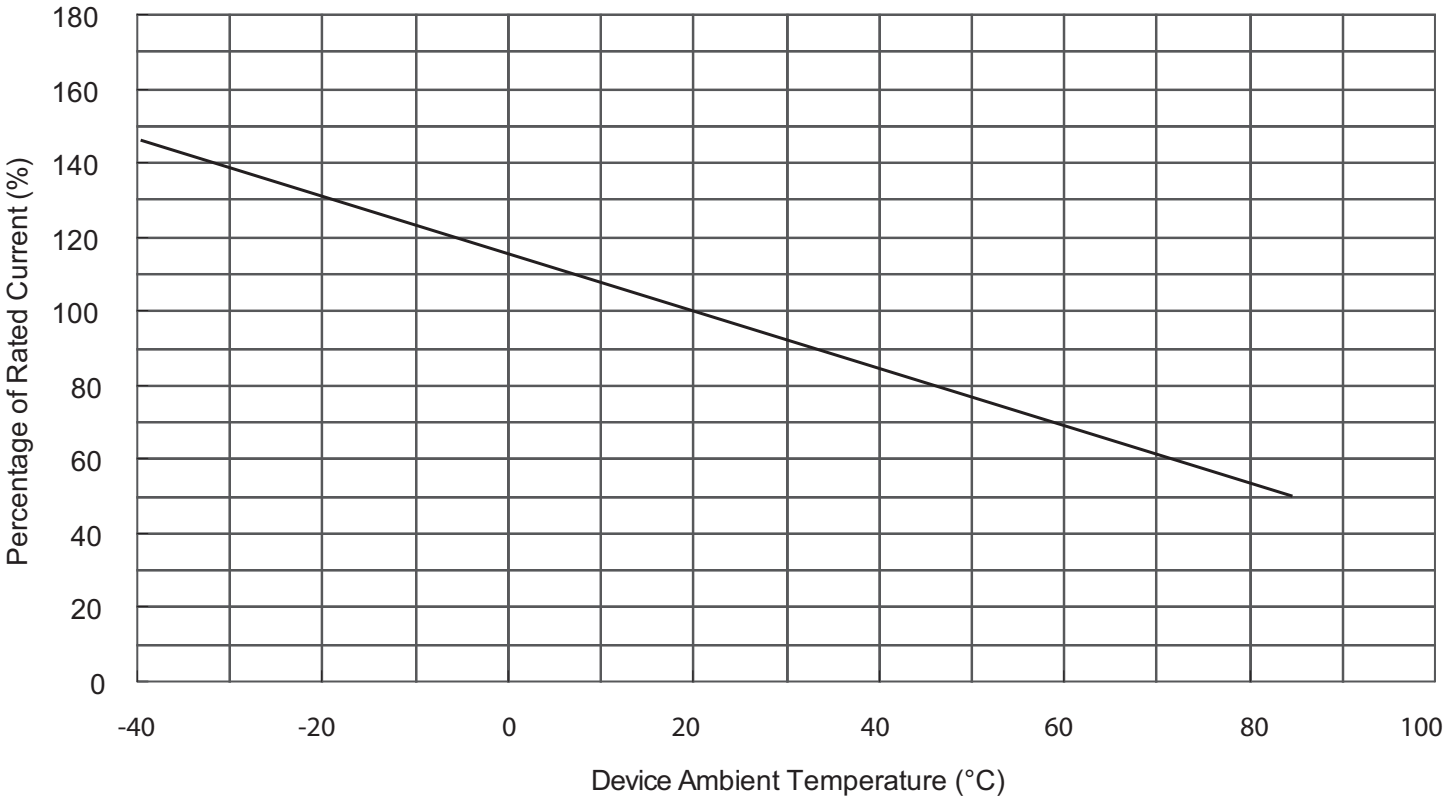
Terminal material:

- Nickel/tin-plated copper

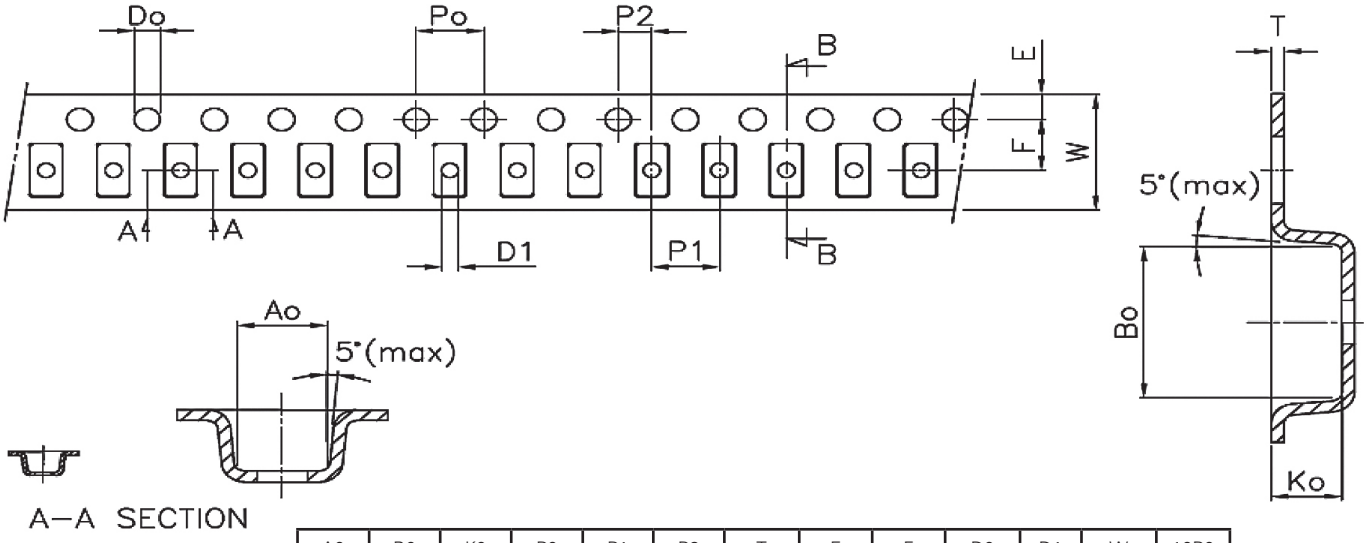
Time-to-trip curves at 23°C



Thermal derating curve



Packaging information - mm



A0 ±0.10	B0 ±0.10	K0 ±0.10	P0 ±0.10	P1 ±0.10	P2 ±0.05	T ±0.05	E ±0.10	F ±0.05	D0 ±0.10	D1 Min.	W ±0.10	10P0 ±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

Soldering methods

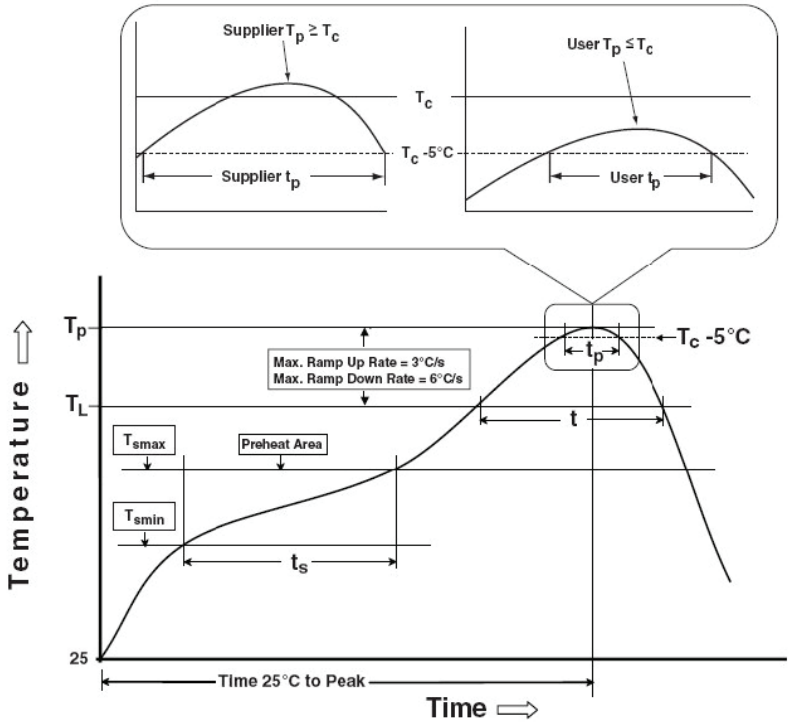
Wave solder

- Reservoir temperature: 260°C (500°F)
- Recommended time in reservoir: ≤ 5 seconds.

Infrared reflow

- Temperature: 260°C
- Time: 10 seconds maximum at peak temperature.

Recommended reflow solder profile



Profile Feature	Sn-Pb Eutectic Assembly	Pb-Free Assembly
Preheat and soak temperature min (T_{smin}) Temperature max (T_{smax}) Time (T_{smin} to T_{smax}) (ts)	100°C 150°C 60-120 seconds	150°C 200°C 60-120 seconds
Average ramp-up rate (T_{smax} to T_p)	3°C/second max.	3°C/second max.
Liquidous temperature (T_L) Time at liquidous (t_L)	183°C 60-150 seconds	217°C 60-150 seconds
Peak package body temperature (T_p)*	See classification temp in Table 1	See classification temp in Table 2
Time (t_p)** within 5°C of the specified classification temperature (T_c)	20** seconds	30** seconds
Average ramp-down rate (T_p to T_{smax})	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. ** Tolerance for time at peak profile temperature (t_p) is defined as a supplier minimum and a user maximum.		

Table 1 – Standard SnPb solder (T_c)

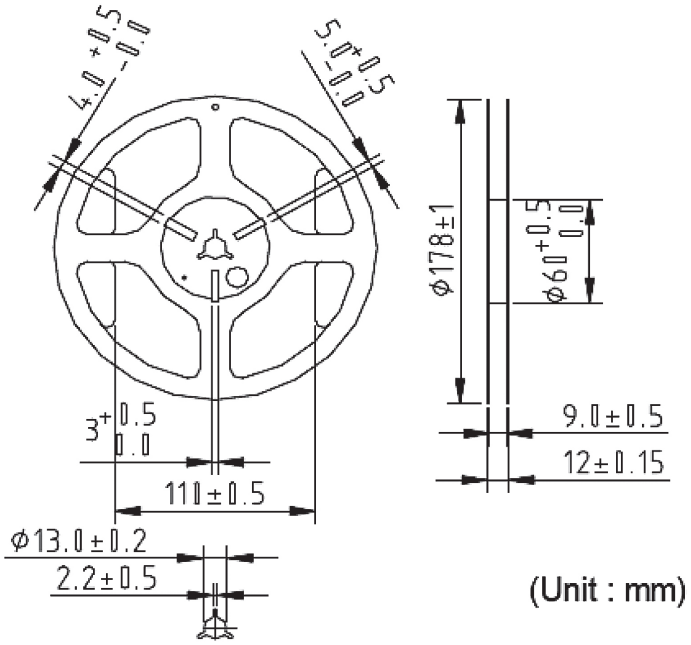
Package Thickness	Volume mm³	
	<350	350
<2.5mm	235°C	220°C
≥2.5mm	220°C	220°C

Table 2 – Lead (Pb) free solder (T_c)

Package Thickness	Volume mm³		
	<350	350-2000	≥2000
<1.6mm	260°C	260°C	260°C
1.6-2.5mm	260°C	250°C	245°C
>2.5mm	250°C	245°C	245°C

Reel specifications

4000 devices per 178mm diameter reel



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Powering Business Worldwide

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