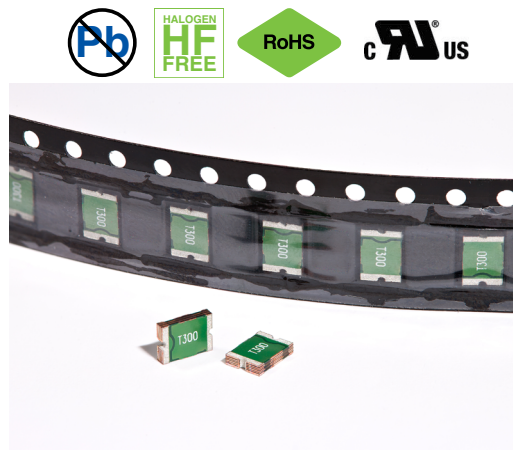


PTS1812

6-60 Volt DC surface mount resettable PTC fuse



Applications

- USB peripherals
- Plug and play protection for motherboards and peripherals
- Power tools
- Battery and port protection for mobile/smart phones
- Game console port protection
- Set-top-boxes
- Tablets, notebooks, netbooks, laptops and desktops
- Rechargeable battery packs
- Digital cameras
- Appliances and white goods
- Consumer electronics

Product features

- Positive temperature coefficient (PTC)
- SMT resettable fuse
- Low resistance
- Fast time-to-trip
- Current range from 0.1 A to 3.0 A
- 1812 (4532 metric) compact footprint

Agency information

- cURus Recognition file number: E343021
- TUV: R50192872

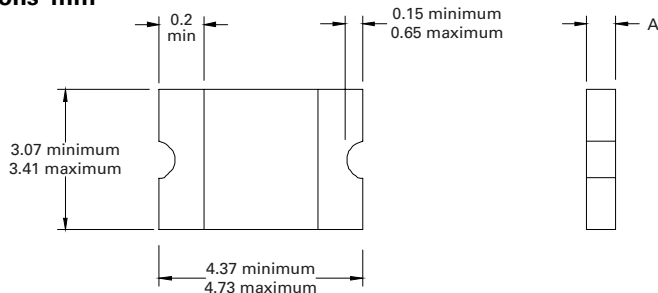
Product specifications

| Part number ⁷ | V _{max} ¹ | I _{max} ² | I _{hold} ³ | I _{trip} ⁴ | P _d ⁵ | Time to trip (maximum) | | Resistance ⁶ | | Agency information | | |
|--------------------------|-------------------------------|-------------------------------|--------------------------------|--------------------------------|-----------------------------|------------------------|-----------|---------------------------------------|---|--------------------|-------|-----|
| | (V _{dc}) | (A) | (A) | (A) | typical (W) | (A) | (seconds) | Initial (R _i) minimum (Ω) | Post trip (R _i) maximum (Ω) | Part marking | cURus | TUV |
| PTS181230V010 | 30 | 100 | 0.10 | 0.30 | 0.8 | 0.5 | 1.5 | 1.6 | 15 | T010 | x | x |
| PTS181260V014 | 60 | 10 | 0.14 | 0.34 | 0.8 | 1.5 | 0.2 | 1.5 | 6 | T014 | x | x |
| PTS181230V020 | 30 | 100 | 0.20 | 0.40 | 0.8 | 8 | 0.02 | 0.8 | 5 | T020 | x | x |
| PTS181216V035 | 16 | 100 | 0.35 | 0.70 | 0.8 | 8 | 0.1 | 0.32 | 1.5 | T035 | x | x |
| PTS181216V050 | 16 | 100 | 0.50 | 1.0 | 0.8 | 8 | 0.15 | 0.15 | 1 | T050 | x | x |
| PTS181213V075 | 13.2 | 100 | 0.75 | 1.5 | 0.8 | 8 | 0.2 | 0.11 | 0.45 | T075 | x | x |
| PTS181224V075 | 24 | 100 | 0.75 | 1.5 | 1.0 | 8 | 0.2 | 0.1 | 0.4 | T075 24 | x | x |
| PTS181233V075 | 33 | 20 | 0.75 | 1.5 | 1.2 | 8 | 0.2 | 0.11 | 0.4 | T075 33 | x | x |
| PTS18128V110 | 8 | 100 | 1.1 | 2.2 | 0.8 | 8 | 0.3 | 0.04 | 0.21 | T110 | x | x |
| PTS181216V110 | 16 | 100 | 1.1 | 2.2 | 1.0 | 8 | 0.5 | 0.1 | 0.18 | T110 16 | x | x |
| PTS181224V110 | 24 | 20 | 1.1 | 2.2 | 1.2 | 8 | 0.5 | 0.06 | 0.2 | T110 24 | x | x |
| PTS18126V125 | 6 | 100 | 1.25 | 2.5 | 1.0 | 8 | 0.4 | 0.05 | 0.14 | T125 | x | x |
| PTS181216V125 | 16 | 100 | 1.25 | 2.5 | 0.8 | 8 | 0.4 | 0.05 | 0.14 | T125 16 | x | x |
| PTS18128V150 | 8 | 100 | 1.5 | 3.0 | 0.9 | 8 | 0.3 | 0.04 | 0.11 | T150 | x | x |
| PTS181212V150 | 12 | 100 | 1.5 | 3.0 | 1.0 | 8 | 0.5 | 0.04 | 0.11 | T150 12 | x | x |
| PTS181224V150 | 24 | 20 | 1.5 | 3.0 | 1.2 | 8 | 1.5 | 0.04 | 0.12 | T150 24 | x | x |
| PTS18128V160 | 8 | 100 | 1.6 | 3.2 | 0.8 | 8 | 1 | 0.03 | 0.1 | T160 | x | x |
| PTS18128V200 | 8 | 100 | 2.0 | 3.5 | 1.2 | 8 | 2 | 0.02 | 0.06 | T200 | x | x |
| PTS18126V260 | 6 | 100 | 2.6 | 5.0 | 1.2 | 8 | 2.5 | 0.015 | 0.047 | T260 | x | x |
| PTS18126V300 | 6 | 100 | 3.0 | 5.0 | 1.2 | 8 | 4 | 0.012 | 0.04 | T300 | x | x |

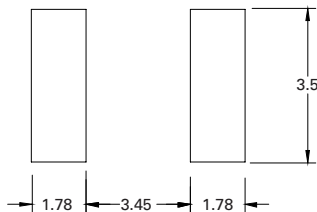
- V_{max}: Maximum continuous voltage the device can withstand without damage at current
- I_{max}: Maximum fault current the device can withstand without damage at rated voltage
- I_{hold}: Maximum current the device will pass without interruption at +23 °C still air
- I_{trip}: Minimum current that will transition the device from low resistance to high resistance at +23 °C still air
- P_d: Power dissipated from the device when in tripped state at +23 °C still air

- R_i: Minimum resistance of the device at +23 °C
- R_i: Maximum resistance of the device when measured one hour post reflow at +23 °C
- Part Number Definition: PTS1206xVxxx
PTS1206 = Product code and size
xV = Voltage rating (V_{max})
xxx = Ampere rating (I_{hold})

Dimensions—mm

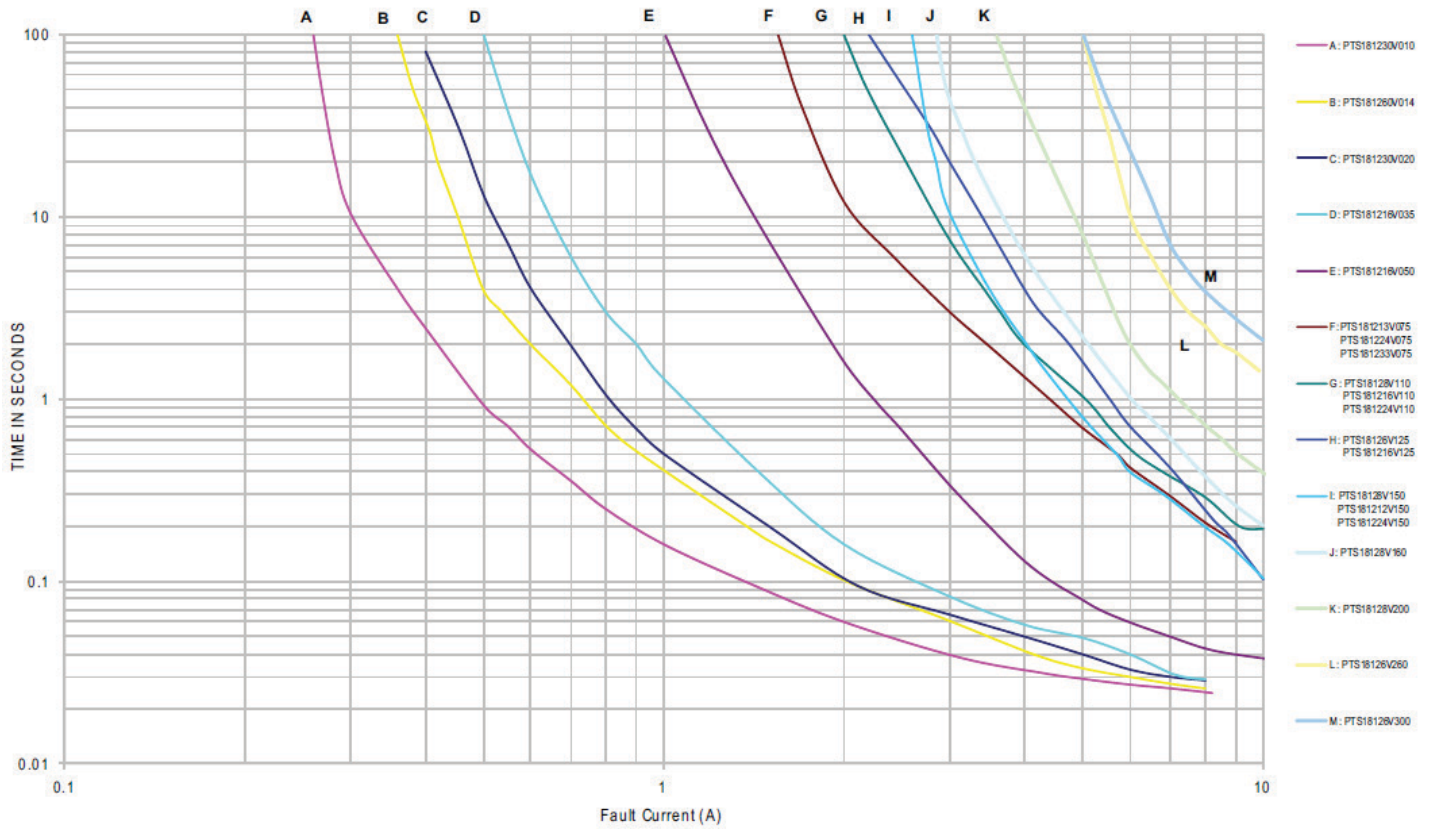


Recommended pad layout—mm

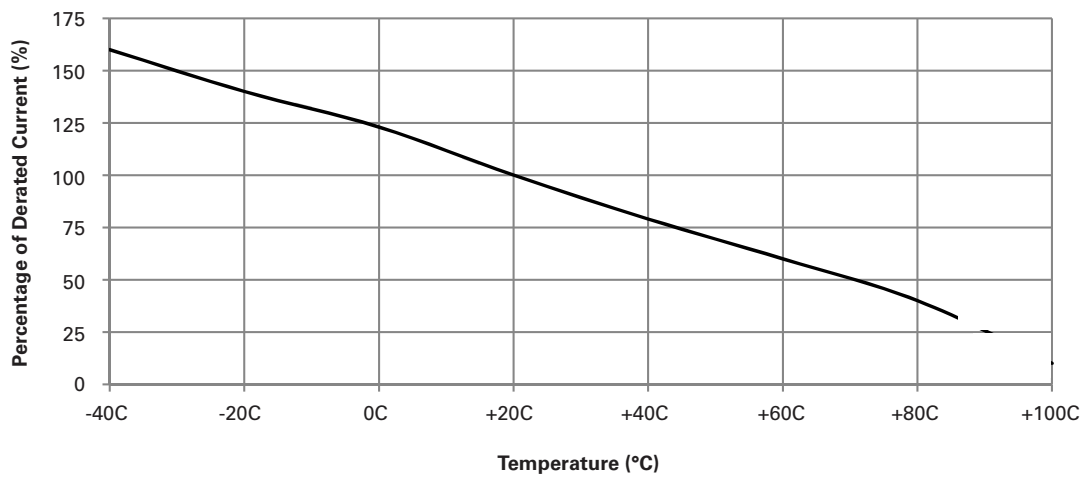


| Part number | A minimum | A maximum |
|---------------|-----------|-----------|
| PTS181230V010 | 0.50 | 0.90 |
| PTS181260V014 | 0.50 | 0.90 |
| PTS181230V020 | 0.50 | 0.90 |
| PTS181216V035 | 0.28 | 0.68 |
| PTS181216V050 | 0.28 | 0.68 |
| PTS181213V075 | 0.28 | 0.68 |
| PTS181224V075 | 0.60 | 1.2 |
| PTS181233V075 | 0.60 | 1.2 |
| PTS18128V110 | 0.28 | 0.68 |
| PTS181216V110 | 0.60 | 1.0 |
| PTS181224V110 | 0.60 | 1.0 |
| PTS18126V125 | 0.28 | 0.68 |
| PTS181216V125 | 0.30 | 0.90 |
| PTS18128V150 | 0.28 | 0.68 |
| PTS181212V150 | 0.60 | 1.0 |
| PTS181224V150 | 0.70 | 1.5 |
| PTS18128V160 | 0.28 | 0.68 |
| PTS18128V200 | 0.35 | 0.90 |
| PTS18126V260 | 0.35 | 0.90 |
| PTS18126V300 | 0.60 | 1.2 |

Time to trip curves at +23 °C



Temperature derating curve



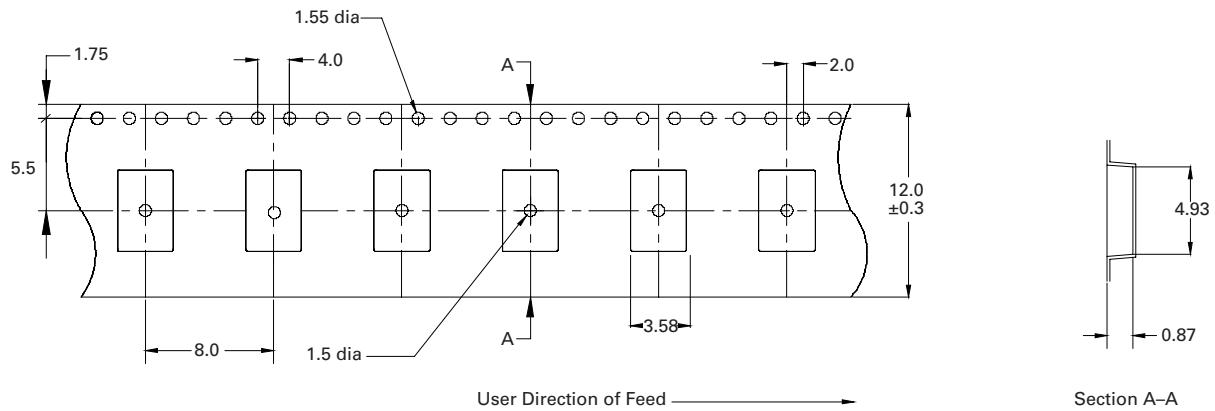
General specifications

| |
|---|
| Operating temperature: -40 °C to + 85 °C (with derating) |
| Storage temperature: -10 °C to + 40 °C |
| Storage relative humidity: ≤75% |
| Storage condition: Keep away from corrosive atmosphere and sunlight |
| Storage duration: 1 year |
| Thermal shock: (20 cycles - 40 °C to + 85 °C) -33% typical resistance change |
| Humidity: +85 °C, 85% relative humidity, 1000 hours ±5% typical resistance change |
| Resistance to solvents: MIL-STD- 202 Method 215 |

Packaging information-mm

Supplied in tape and reel packaging , 2000 parts per 7.0" diameter reel

PTS181216V035, PTS181216V050, PTS181213V075, PTS18128V110, PTS18126V125, PTS18128V150, PTS18128V160, PTS18128V200, PTS181224V110, PTS181230V010, PTS181230V020, PTS181260V014



Supplied in tape and reel packaging , 1000 parts per 7.0" diameter reel

PTS181224V075, PTS181233V075, PTS181216V110, PTS181216V125, PTS181212V150, PTS181224V150, PTS18126V260, PTS18126V300

