

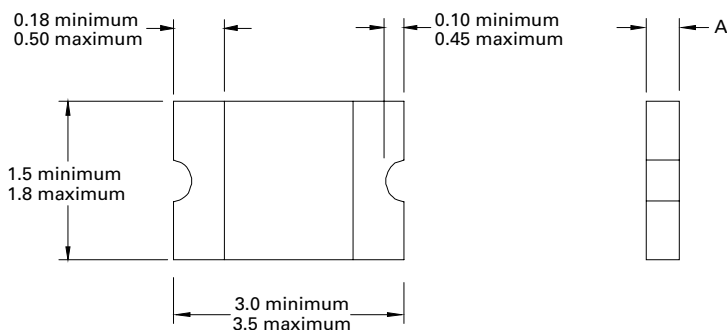
## Product specifications

| Part Number <sup>7</sup> | V <sub>max</sub> <sup>1</sup> | I <sub>max</sub> <sup>2</sup> | I <sub>hold</sub> <sup>3</sup> | I <sub>trip</sub> <sup>4</sup> | P <sub>d</sub> <sup>5</sup> | Time to trip (maximum) |           | Resistance <sup>6</sup>               |                                         | Agency information |       |     |
|--------------------------|-------------------------------|-------------------------------|--------------------------------|--------------------------------|-----------------------------|------------------------|-----------|---------------------------------------|-----------------------------------------|--------------------|-------|-----|
|                          | (V <sub>dc</sub> )            | (A)                           | (A)                            | (A)                            | typical (W)                 | (A)                    | (seconds) | Initial (R <sub>i</sub> ) minimum (Ω) | Post trip (R <sub>t</sub> ) maximum (Ω) | Part marking       | cURus | TUV |
| PTS120660V005            | 60                            | 100                           | 0.05                           | 0.15                           | 0.4                         | 0.25                   | 1.5       | 3.6                                   | 50                                      | TH                 | x     | x   |
| PTS120660V010            | 60                            | 100                           | 0.10                           | 0.25                           | 0.4                         | 0.5                    | 1.0       | 1.6                                   | 15                                      | TY                 | x     | x   |
| PTS120630V012            | 30                            | 100                           | 0.12                           | 0.29                           | 0.5                         | 1                      | 0.2       | 1.4                                   | 6                                       | TJ                 | x     | x   |
| PTS120630V016            | 30                            | 100                           | 0.16                           | 0.37                           | 0.5                         | 1                      | 0.3       | 1.1                                   | 4.5                                     | TK                 | x     | x   |
| PTS120624V020            | 24                            | 100                           | 0.20                           | 0.42                           | 0.6                         | 8                      | 0.1       | 0.65                                  | 2.6                                     | TL                 | x     | x   |
| PTS120616V025            | 16                            | 100                           | 0.25                           | 0.50                           | 0.6                         | 8                      | 0.08      | 0.55                                  | 2.3                                     | TN                 | x     | x   |
| PTS120616V035            | 16                            | 100                           | 0.35                           | 0.75                           | 0.6                         | 8                      | 0.1       | 0.3                                   | 1.2                                     | TP                 | x     | x   |
| PTS12066V050             | 6                             | 100                           | 0.50                           | 1.0                            | 0.6                         | 8                      | 0.1       | 0.15                                  | 0.7                                     | TQ                 | x     | x   |
| PTS120615V050            | 15                            | 100                           | 0.50                           | 1.0                            | 0.6                         | 8                      | 0.1       | 0.15                                  | 0.7                                     | TQ1                | x     | x   |
| PTS12066V075             | 6                             | 100                           | 0.75                           | 1.5                            | 0.6                         | 8                      | 0.2       | 0.1                                   | 0.29                                    | TR                 | x     | x   |
| PTS12066V100             | 6                             | 100                           | 1.0                            | 1.8                            | 0.8                         | 8                      | 0.3       | 0.065                                 | 0.21                                    | TS                 | x     | x   |
| PTS12066V110             | 6                             | 100                           | 1.1                            | 2.2                            | 0.8                         | 8                      | 0.3       | 0.07                                  | 0.2                                     | TU                 | x     | x   |
| PTS12066V150             | 6                             | 100                           | 1.5                            | 3.0                            | 0.8                         | 8                      | 1         | 0.04                                  | 0.12                                    | TV                 | x     | x   |
| PTS12066V200             | 6                             | 100                           | 2.0                            | 3.5                            | 1.0                         | 8                      | 1.5       | 0.02                                  | 0.08                                    | TX                 | x     | x   |

- V<sub>max</sub>: Maximum continuous voltage the device can withstand without damage at current
- I<sub>max</sub>: Maximum fault current the device can withstand without damage at rated voltage
- I<sub>hold</sub>: Maximum current the device will pass without interruption at +23 °C still air
- I<sub>trip</sub>: Minimum current that will transition the device from low resistance to high resistance at +23 °C still air
- P<sub>d</sub>: Power dissipated from the device when in tripped state at +23 °C still air

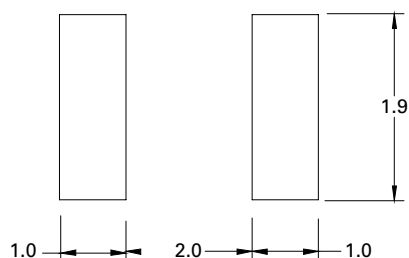
- R<sub>i</sub>: Minimum resistance of the device at +23 °C  
R<sub>t</sub>: Maximum resistance of the device when measured one hour post reflow at +23 °C
- Part Number Definition: PTS1206xVxxx  
PTS1206 = Product code and size  
xV = Voltage rating (V<sub>max</sub>)  
xxx = Ampere rating (I<sub>hold</sub>)

## Dimensions—mm

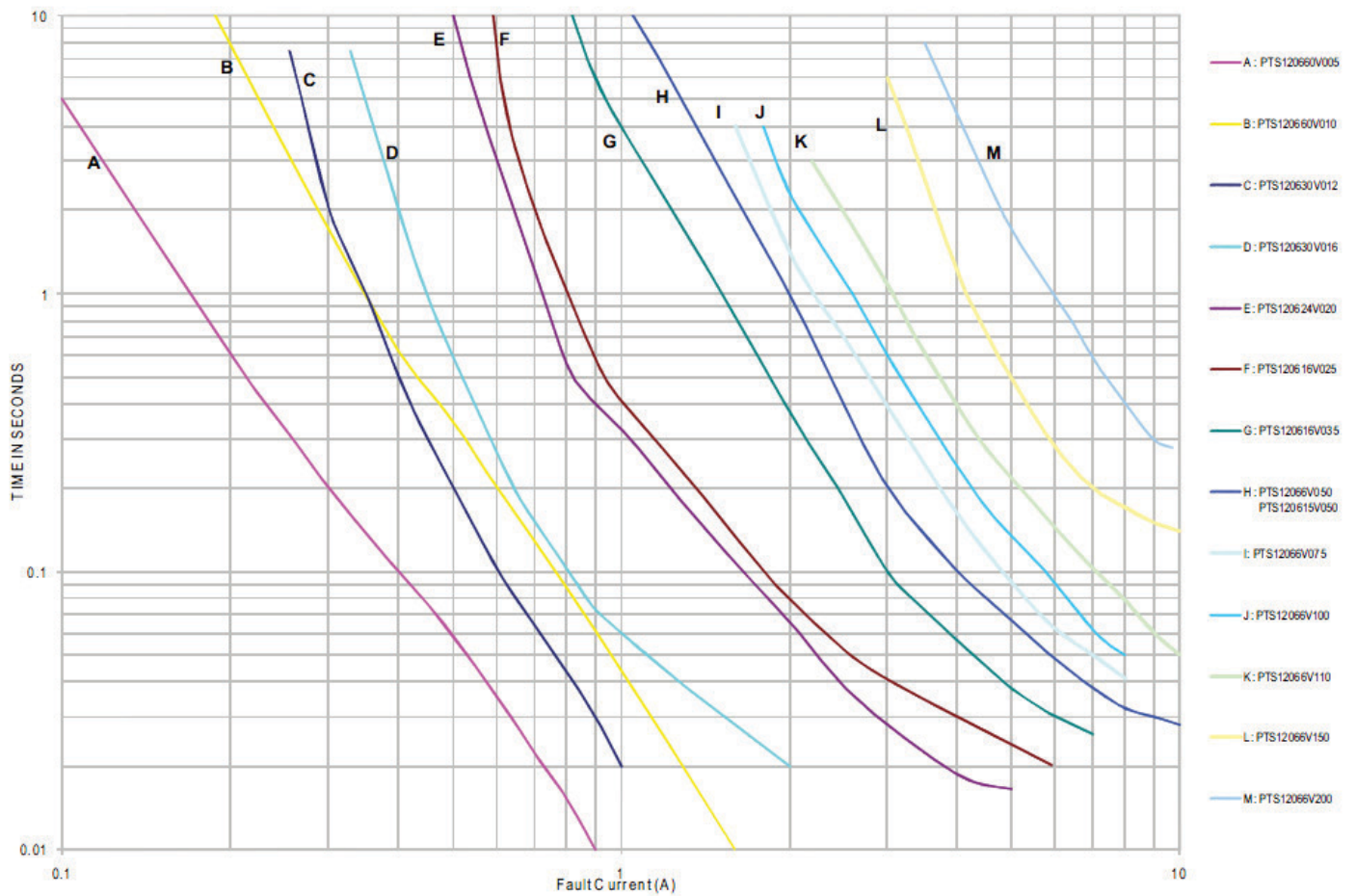


| Part number   | A minimum | A maximum |
|---------------|-----------|-----------|
| PTS120660V005 | 0.50      | 0.90      |
| PTS120660V010 | 0.50      | 0.90      |
| PTS120630V012 | 0.35      | 0.90      |
| PTS120630V016 | 0.28      | 0.68      |
| PTS120624V020 | 0.28      | 0.68      |
| PTS120616V025 | 0.28      | 0.68      |
| PTS120616V035 | 0.28      | 0.68      |
| PTS12066V050  | 0.28      | 0.68      |
| PTS120615V050 | 0.28      | 1.06      |
| PTS12066V075  | 0.28      | 0.85      |
| PTS12066V100  | 0.40      | 0.88      |
| PTS12066V110  | 0.40      | 0.88      |
| PTS12066V150  | 0.55      | 1.15      |
| PTS12066V200  | 0.55      | 1.15      |

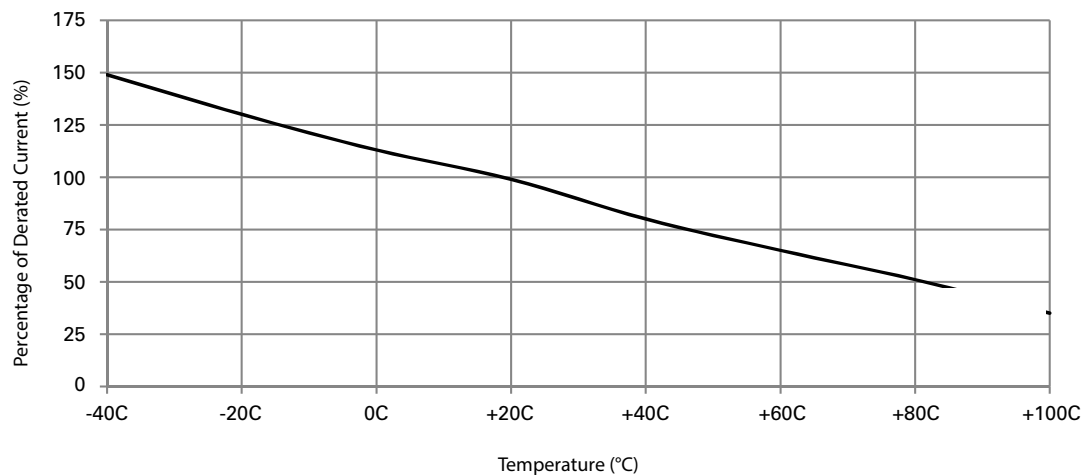
## Recommended pad layout—mm



### Time to trip curves at +23°C



### Temperature derating curve



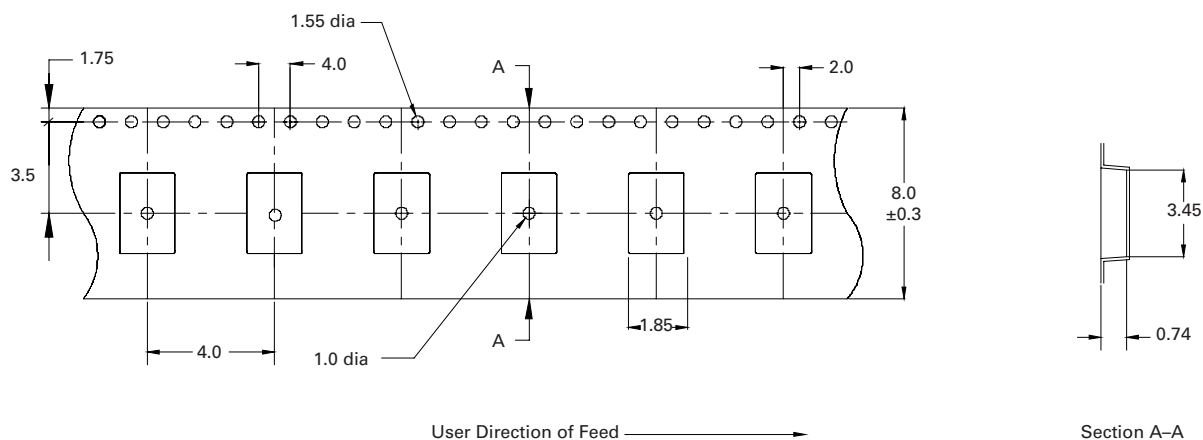
## General specifications

|                                                                                   |
|-----------------------------------------------------------------------------------|
| 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

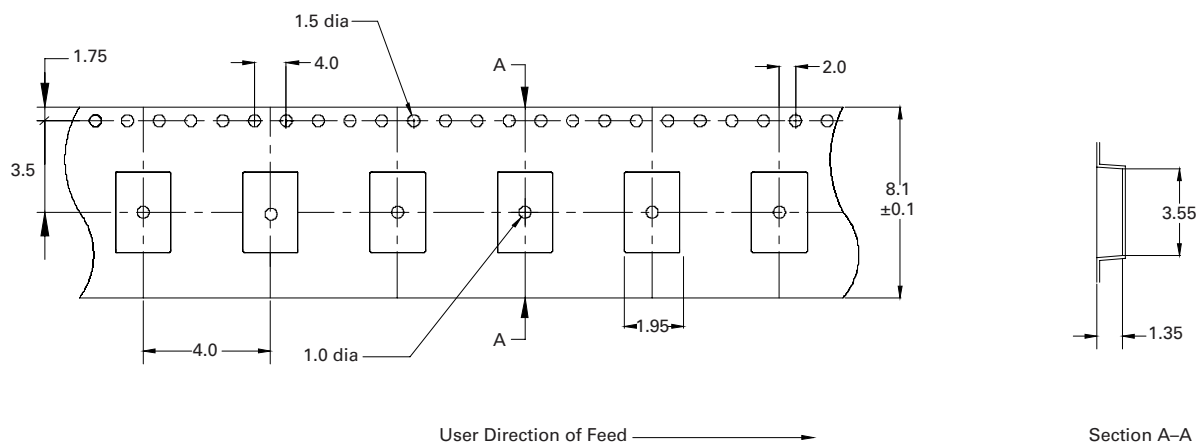
Supplied in tape and reel packaging, 5000 parts per 7.0" diameter reel (EIA-481 compliant)

PTS120630V012, PTS120630V016, PTS120624V020, PTS120616V025, PTS120616V035, PTS12066V050, PTS12066V075, PTS120660V005, PTS120660V010, PTS12066V100, PTS12066V110



Supplied in tape and reel packaging, 2500 parts per 7.0" diameter reel (EIA-481 compliant)

PTS120615V050, PTS12066V150, PTS12066V200



## Solder reflow profile

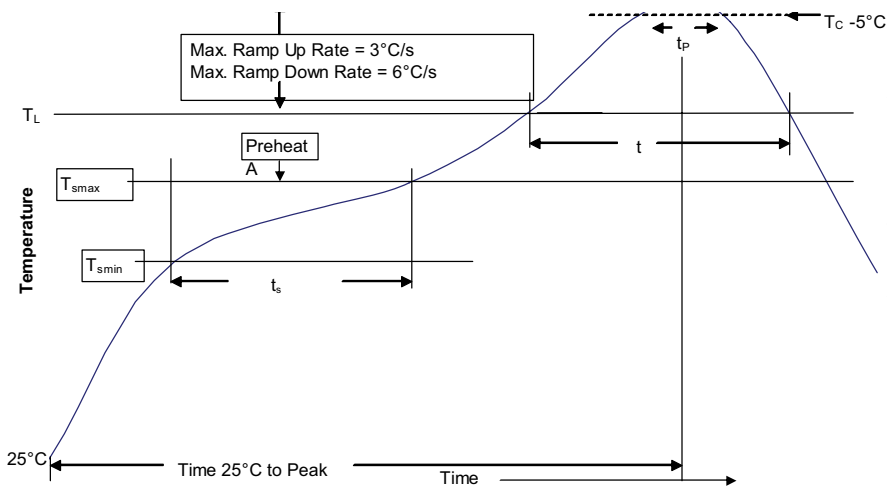


Table 1 - Standard SnPb solder ( $T_C$ )

| Package thickness | Volume mm <sup>3</sup> <350 | Volume mm <sup>3</sup> ≥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 <sup>3</sup> <350 | Volume mm <sup>3</sup> 350 - 2000 | Volume mm <sup>3</sup> >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.

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