CUI Devices is now Same Sky! Learn More



# SERIES: PTN15 | DESCRIPTION: TRIMMER POTENTIOMETER

## FEATURES

- 15mm
- carbon element
- dust proof enclosure
- multiple rotor options
- linear, logarithmic, and reverse logarithmic tapers



RoHS

## SPECIFICATIONS

| parameter | conditions/description | min | typ | max | units |
|---|---|---|---|---|---|
| maximum operating voltage | | | | 300 | Vdc |
| power rating | at 70°C | | | 0.2 | W |
| taper | linear, logarithmic, and reverse logarithmic | | | | |
| standard resistance range | see Resistance Table | 1.0 | | 2,000 | kΩ |
| standard resistance tolerance | ±10% or ±20%, see Part Number Key | | | | |
| residual resistance | | | | 10 | Ω |
| sliding noise | | | | 68 | mV |
| operating temperature | | -10 | | 70 | °C |
| hand soldering | for 3 seconds max | | | 350 | °C |
| wave soldering | for 5±1 seconds | 255 | 260 | 265 | °C |
| RoHS | yes | | | | |

## MECHANICAL

| parameter | conditions/description | min | typ | max | units |
|---|---|---|---|---|---|
| mechanical angle | | 255 | 265 | 275 | ° |
| rotational torque | | 50 | | 200 | gf-cm |
| stop strength | | 1,000 | | | gf-cm |
| rotational life | | | | 10,000 | cycles |
| weight | | 1.29 | 1.32 | 1.35 | g |

## PART NUMBER KEY

**PTN15 - X XX X X XX - X**

Base Number

Terminal Configuration:
A = Horizontal, Straight Inward Terminals
C = Horizontal, Straight Outward Terminals
E = Vertical, Straight Terminals
F = Vertical, Straight Inward Terminals

Resistance:
01 = 1 kΩ
02 = 2 kΩ
05 = 5 kΩ
10 = 10 kΩ
20 = 20 kΩ
25 = 25 kΩ
50 = 50 kΩ
100 = 100 kΩ
200 = 200 kΩ
500 = 500 kΩ
11 = 1 MΩ
22 = 2 MΩ

Rotor Type:
S = Screwdriver
H = Hexagonal
D = D-Cut
N = Notch

Resistance Taper:
A = Logarithmic
B = Linear
C = Reverse Logarithmic

Tolerance:
10 = ±10%
20 = ±20%

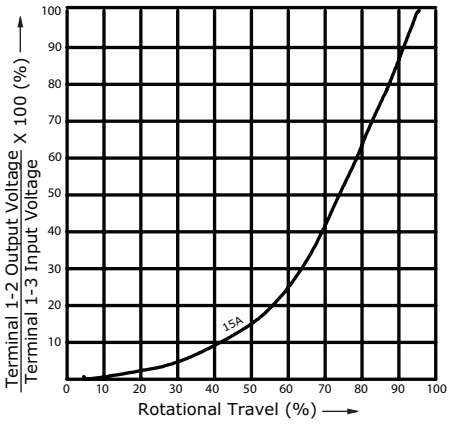
Wiper Position:
blank = initial
H = 50%

## SCHEMATIC/TAPERS

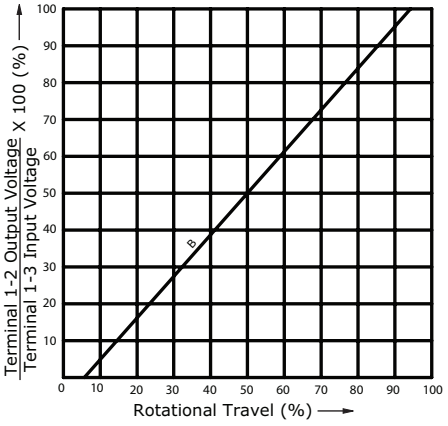



| Resistance Table | |
|---|---|
| Resistance (KΩ) | Code |
| 1 | 01 |
| 2 | 02 |
| 5 | 05 |
| 10 | 10 |
| 20 | 20 |
| 25 | 25 |
| 50 | 50 |
| 100 | 100 |
| 200 | 200 |
| 500 | 500 |
| 1,000 | 11 |
| 2,000 | 22 |

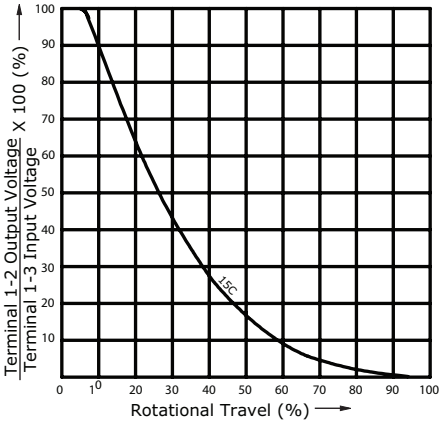
A (Logarithmic Tapers)




B (Linear Tapers)

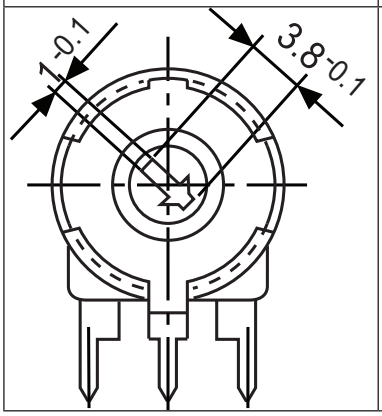
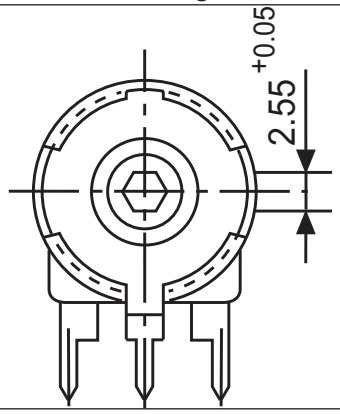
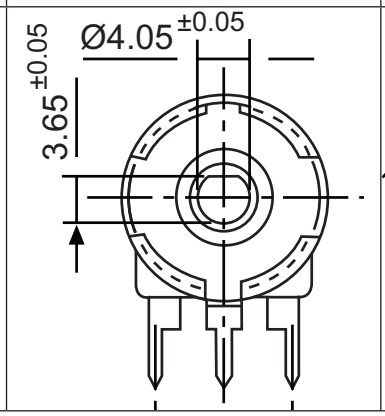
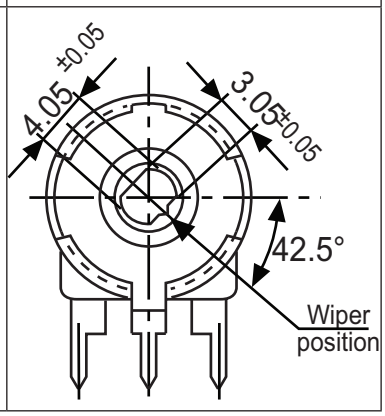



C (Reverse Logarithmic Tapers)



## ROTOR TYPE

units: mm
tolerance: ±0.3 mm
unless otherwise noted

| S = Screwdriver | H = Hexagonal | D = D-Cut | N = Notch |
|---|---|---|---|
|  |  |  |  |

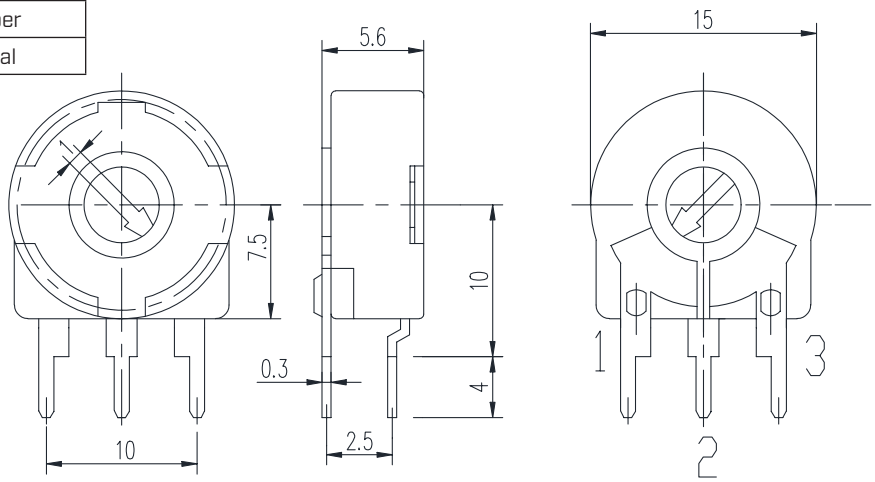


## MECHANICAL DRAWING (HORIZONTAL, STRAIGHT INWARD TERMINALS)

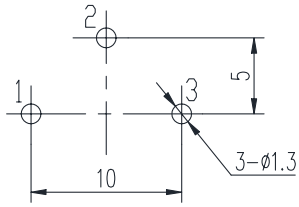
units: mm
tolerance:
X≤10: ±0.3 mm
10<X≤30: ±0.5 mm
30<X≤100: ±1.0 mm
unless otherwise noted

| ITEM | DESCRIPTION | MATERIAL | PLATING/COLOR |
|---|---|---|---|
| A | housing | PA6 (UL94HB) | black |
| B | terminals | steel | tin |
| C | reed | tin bronze | |

| TERMINAL CONNECTIONS | |
|---|---|
| TERMINAL | DESCRIPTION |
| 1 | Initial |
| 2 | Wiper |
| 3 | Final |









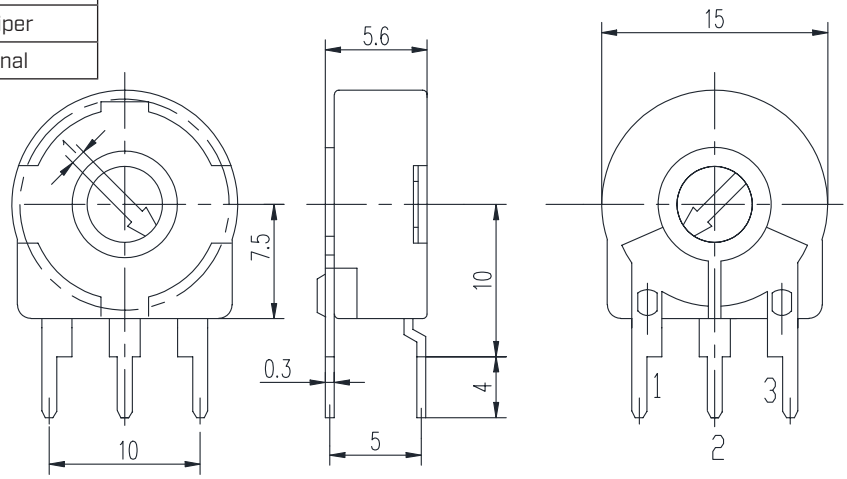
Recommended PCB Layout
Top View

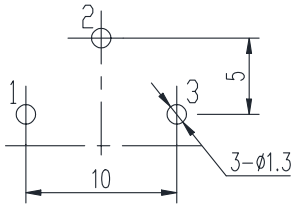
## MECHANICAL DRAWING (HORIZONTAL, STRAIGHT OUTWARD TERMINALS)

units: mm
tolerance:
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10<X≤30: ±0.5 mm
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| TERMINAL CONNECTIONS | |
|---|---|
| TERMINAL | DESCRIPTION |
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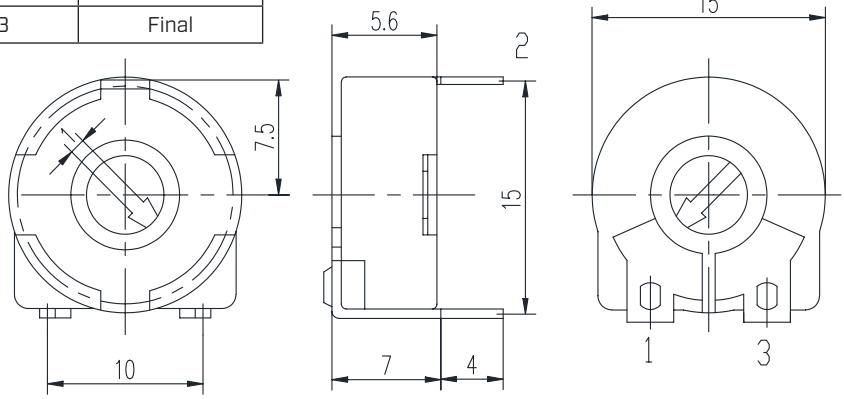

Recommended PCB Layout
Top View

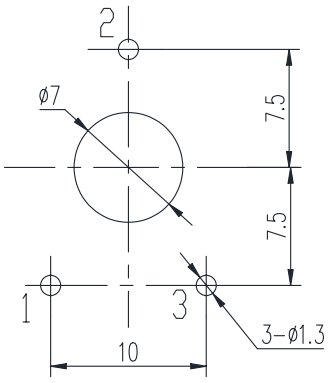
## MECHANICAL DRAWING (VERTICAL, STRAIGHT TERMINALS)

units: mm
tolerance:
X≤10: ±0.3 mm
10<X≤30: ±0.5 mm
30<X≤100: ±1.0 mm
unless otherwise noted

| ITEM | DESCRIPTION | MATERIAL | PLATING/COLOR |
|---|---|---|---|
| A | housing | PA6 (UL94HB) | black |
| B | terminals | steel | tin |
| C | reed | tin bronze | |

| TERMINAL CONNECTIONS | |
|---|---|
| TERMINAL | DESCRIPTION |
| 1 | Initial |
| 2 | Wiper |
| 3 | Final |



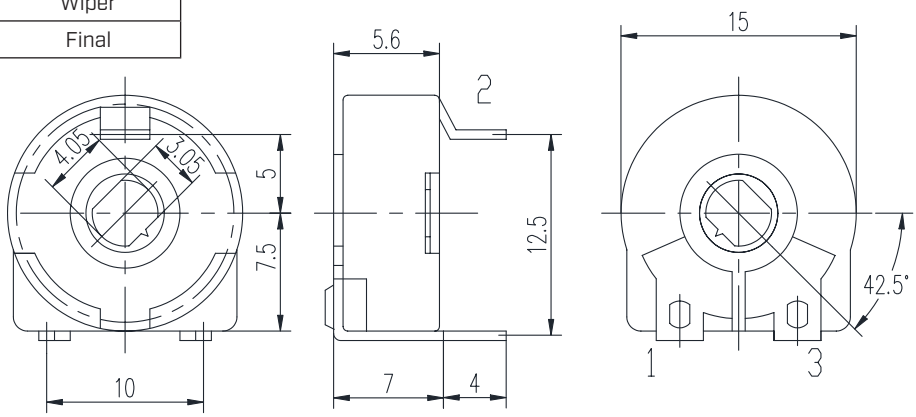

Recommended PCB Layout
Top View

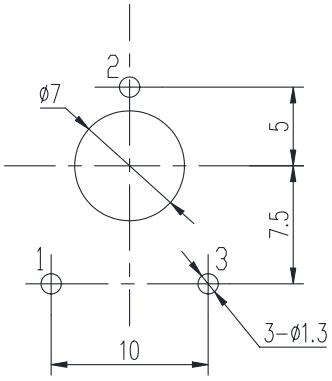
## MECHANICAL DRAWING (VERTICAL, STRAIGHT INWARD TERMALS)

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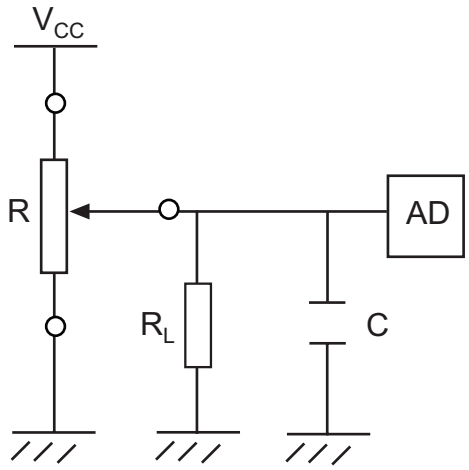
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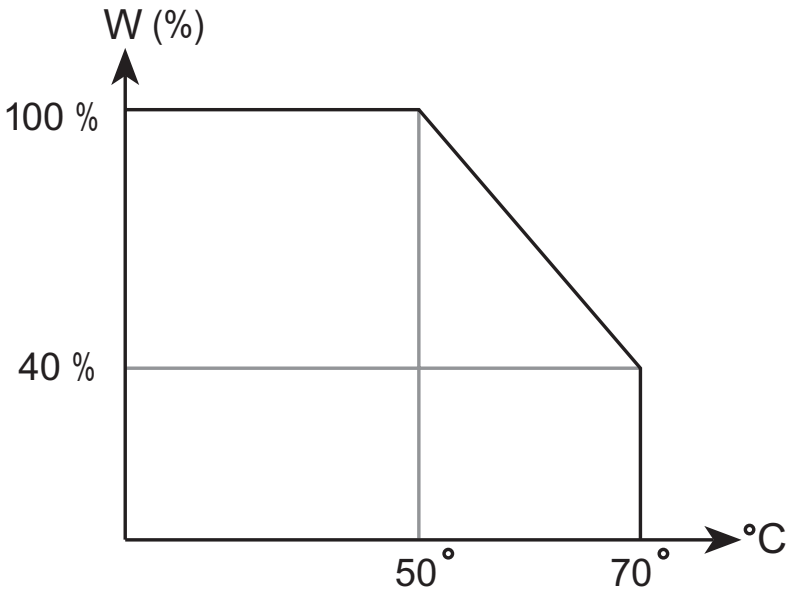

Recommended PCB Layout
Top View

## RECOMMENDED CIRCUIT




$R_L \approx 100 \times R$

## POWER DERATING CURVE



## REVISION HISTORY

| rev. | description | date |
|---|---|---|
| 1.0 | initial release | 10/27/2022 |
| 1.01 | updated datasheet | 02/28/2023 |
| 1.02 | updated taper detail | 01/15/2024 |
| 1.03 | updated datasheet | 04/16/2024 |
| 1.04 | CUI Devices rebranded to Same Sky | 09/12/2024 |

The revision history provided is for informational purposes only and is believed to be accurate.

same sky

Same Sky offers a one (1) year limited warranty. Complete warranty information is listed on our website.

Same Sky reserves the right to make changes to the product at any time without notice. Information provided by Same Sky is believed to be accurate and reliable. However, no responsibility is assumed by Same Sky for its use, nor for any infringements of patents or other rights of third parties which may result from its use.

Same Sky products are not authorized or warranted for use as critical components in equipment that requires an extremely high level of reliability. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

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