

**SERIES:** PTN10 | **DESCRIPTION:** TRIMMER POTENTIOMETER**FEATURES**

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

**SPECIFICATIONS**

parameter	conditions/description	min	typ	max	units
maximum operating voltage				200	Vdc
power rating	at 70°C			0.15	W
taper	linear, logarithmic, and reverse logarithmic				
standard resistance range	see Resistance Table	1.0		2,000	k Ω
standard resistance tolerance	$\pm 10\%$ or $\pm 20\%$, 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 $\pm$ 1 seconds	255	260	265	°C
RoHS	yes				

MECHANICAL

parameter	conditions/description	min	typ	max	units
mechanical angle		225	235	245	°
rotational torque		10		80	gf-cm
stop strength		400			gf-cm
rotational life				10,000	cycles
weight	varies by model	0.5		0.7	g

PART NUMBER KEY

PTN10 - X XX X X XX

Base Number

Terminal Configuration:
A = Horizontal, Straight Inward Terminals
B = Horizontal, Crimped Terminals
C = Horizontal, Straight Outward Terminals
D = Vertical, Crimped Terminals
E = Vertical, Straight 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

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

Rotor Type:
S = Screwdriver
H = Hexagonal
C = Cross Slot
D = D-Cut

Tolerance:
10 = ±10%
20 = ±20%

SCHEMATIC/TAPERS

A schematic diagram of a trimmer potentiometer. It consists of a zigzag line representing the resistive track. Terminal 1 is at the left end, terminal 3 is at the right end, and terminal 2 is connected to a wiper that can move along the track.

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)

Graph A shows a logarithmic taper. The y-axis is 'Terminal 1-2 Output Voltage / Terminal 1-3 Input Voltage x 100 (%)' from 0 to 100. The x-axis is 'Rotational Travel (%)' from 0 to 100. The curve starts at (0,0) and rises slowly at first, then more steeply towards (100,100). A point is marked at approximately (45, 15) labeled '15A'.

B (Linear Tapers)

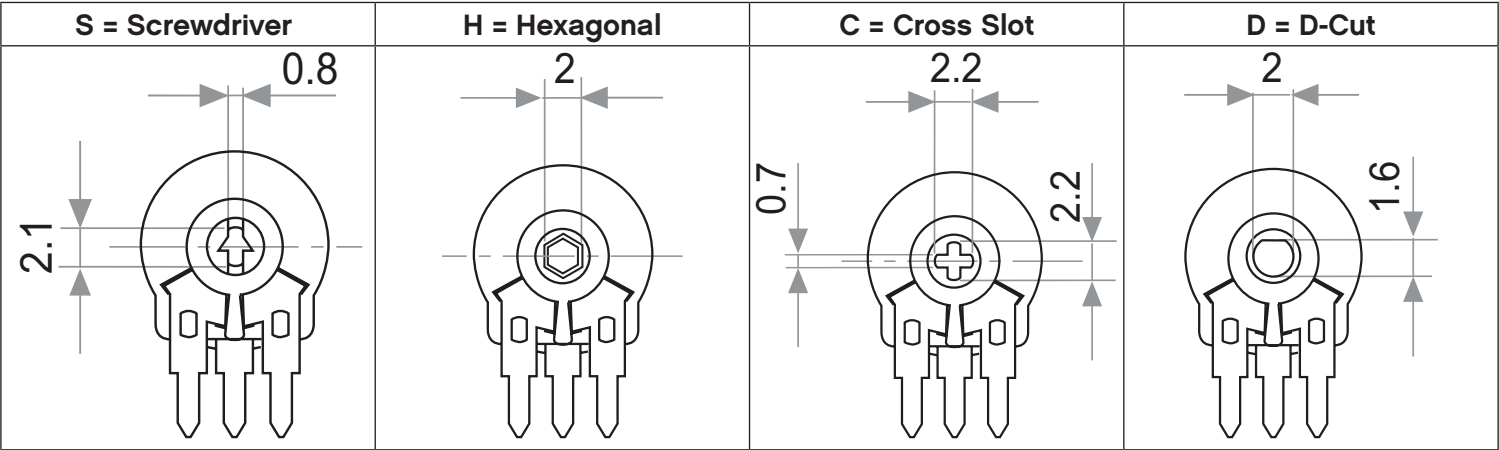
Graph B shows a linear taper. The axes are the same as Graph A. The curve is a straight line from (0,0) to (100,100). A point is marked at (40, 40) labeled '40B'.

C (Reverse Logarithmic Tapers)

Graph C shows a reverse logarithmic taper. The axes are the same as Graph A. The curve starts at (0,100) and falls slowly at first, then more steeply towards (100,0). A point is marked at approximately (45, 85) labeled '15C'.

ROTOR TYPE

units: mm
tolerance: ±0.3 mm
unless otherwise noted



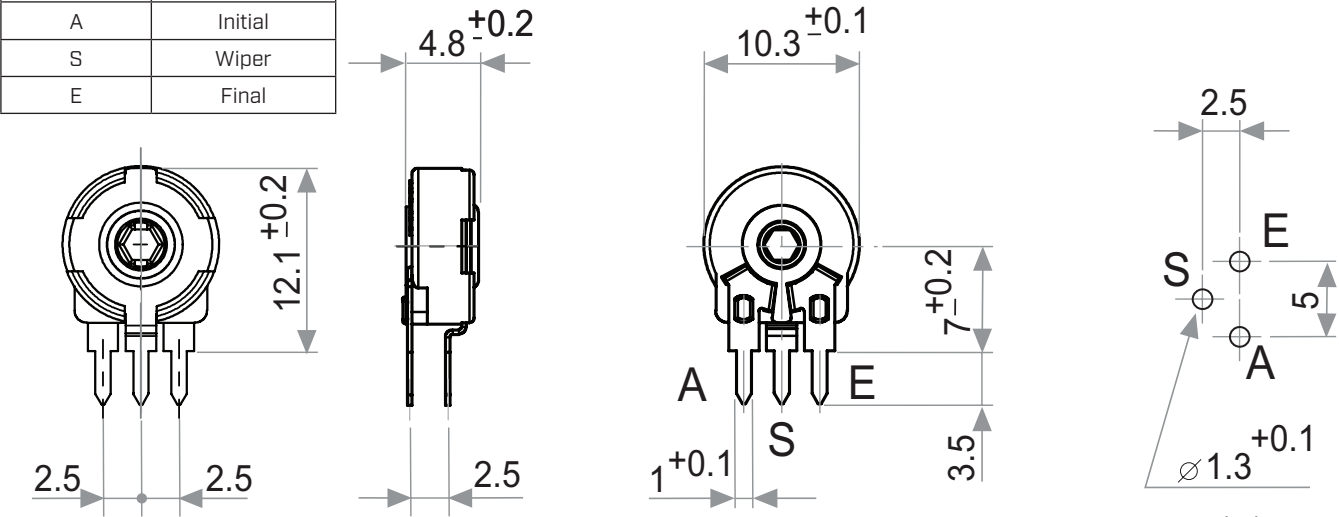
Note: Default delivery is at initial position of wiper.

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
A	Initial
S	Wiper
E	Final



Recommended PCB Layout
Top View

MECHANICAL DRAWING (VERTICAL, CRIMPED TERMINALS)

units: mm

tolerance:

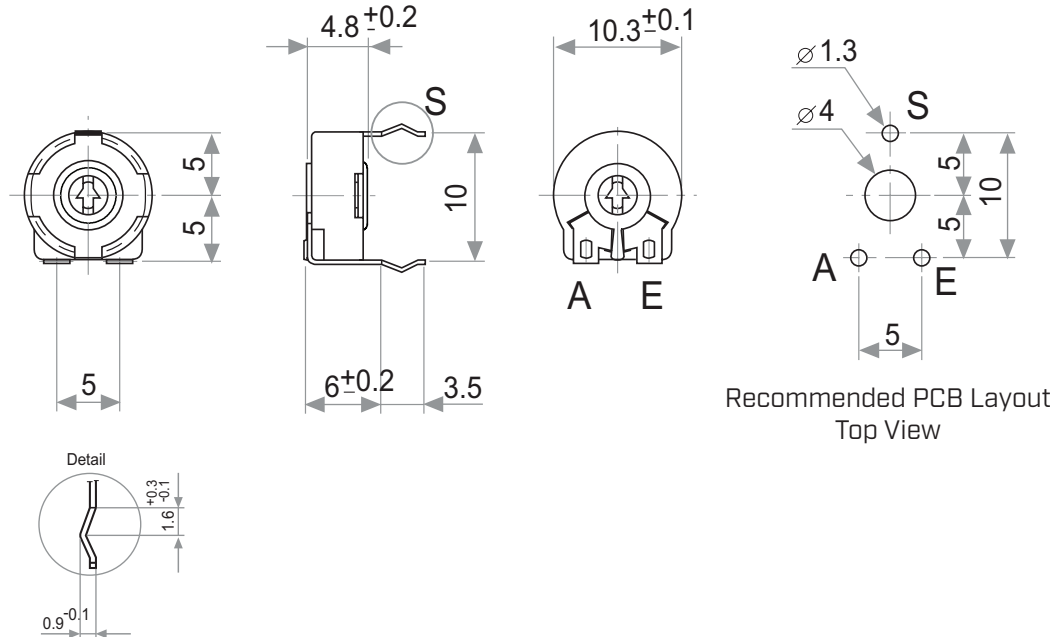
$X \leq 10$: ± 0.3 mm

 $10 < X \leq 30: \pm 0.5 \text{ mm}$

30<X≤100: ±1.0 mm

unless otherwise noted

TERMINAL CONNECTIONS	
TERMINAL	DESCRIPTION
A	Initial
S	Wiper
E	Final



MECHANICAL DRAWING (VERTICAL, STRAIGHT TERMINALS)

units: mm

tolerance:

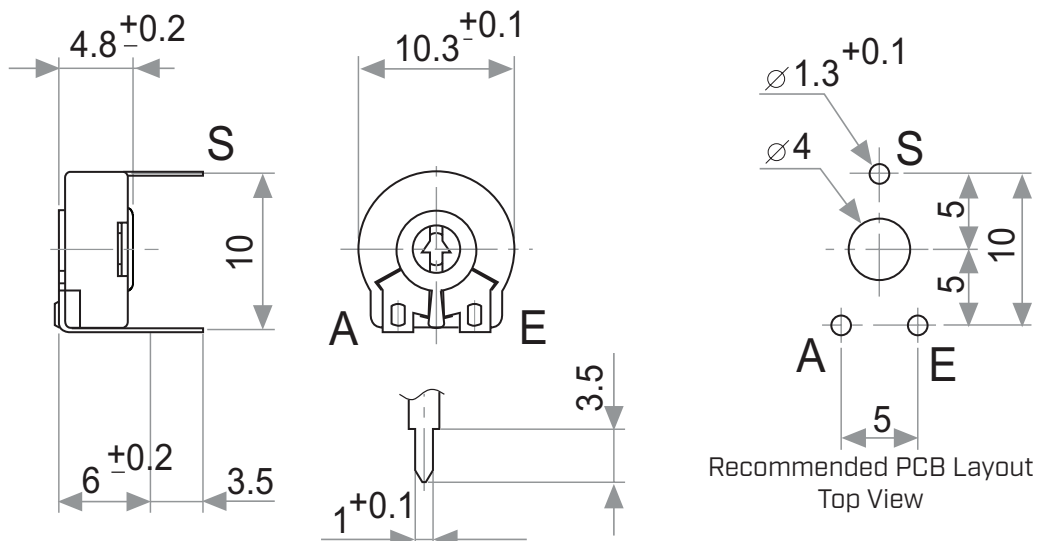
$X \leq 10$: ± 0.3 mm

10<X≤30: ±0.5 mm

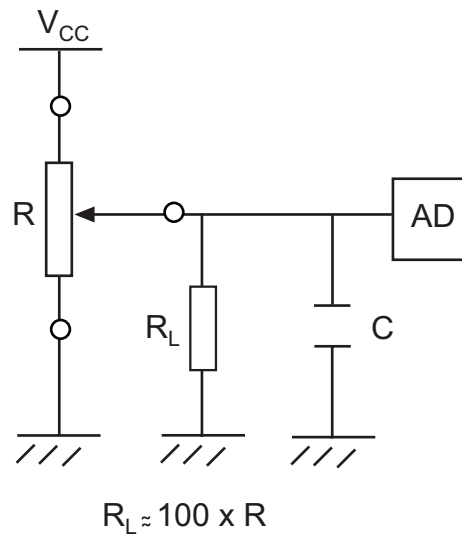
30<X≤100: ±1.0 mm

unless otherwise noted

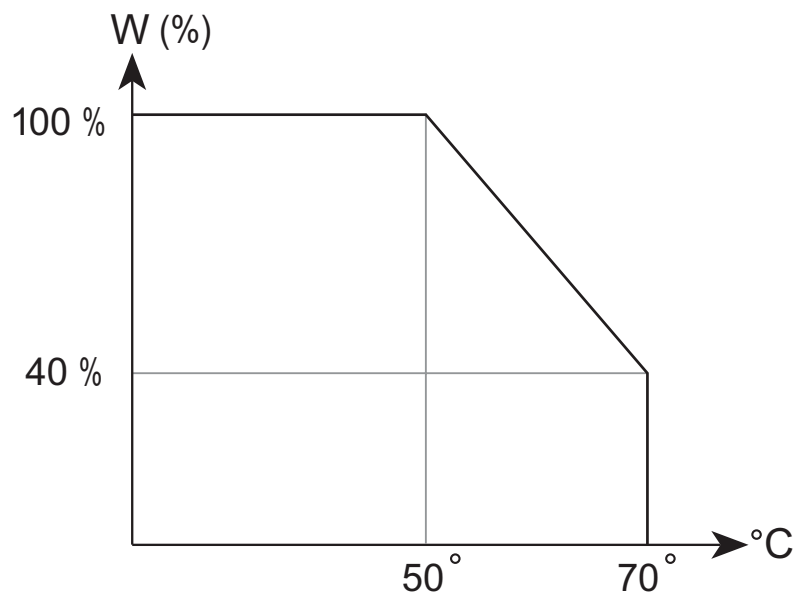
TERMINAL CONNECTIONS	
TERMINAL	DESCRIPTION
A	Initial
S	Wiper
E	Final



RECOMMENDED CIRCUIT



POWER DERATING CURVE



REVISION HISTORY

rev.	description	date
1.0	initial release	06/22/2022
1.01	logo, datasheet style update	08/05/2022
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 offers a one (1) year limited warranty. Complete warranty information is listed on our website.

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