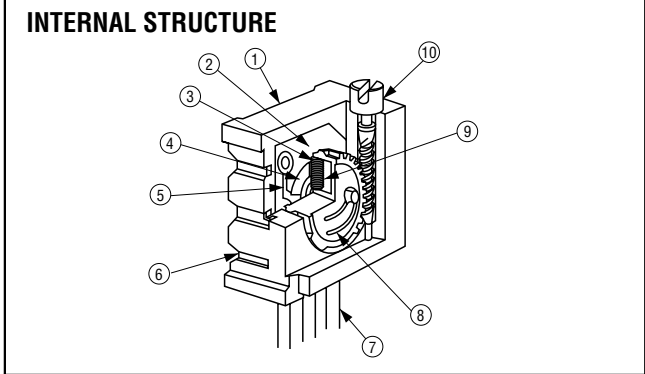




**FEATURES**

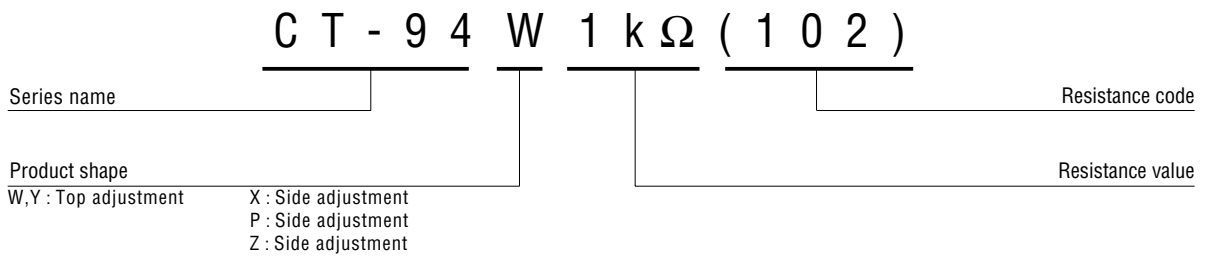
- Thin body design (4.8 mm thick)
- 18 turn, sealed, precision type



	Part name	Material	Flammability
①	Housing	PBT (Polybutyleneterephthalate)	UL-94V-0
②	Base element	Ceramic	—
③	Wiper	Multi metal alloy	
④	Resistive element	RuO <sub>2</sub> cermet	
⑤	Electrode	Ag-Pd cermet	UL-94V-0
⑥	Adhesive	Epoxy	
⑦	Terminal pin	Copper, Solder-plated	—
⑧	Rotor gear	PA (Polyamide)	UL-94HB
⑨	Rubber cushion	Silicone rubber	—
⑩	Shaft	Brass, Nickel-plated	

CFCs, Halon, Carbon tetrachloride and designated bromic flame retardant PBBOs and PBBs are not used in our products.

**PART NUMBER DESIGNATION**



\* Please refer to the LIST OF PART NUMBERS when placing orders.

# CT-94

## CERMET TRIMMERS

### LIST OF PART NUMBERS

Adjustment position	Shape of terminal (Top view)	Form of packaging	Pieces in package
		Bulk packaging	
Top adjustment		CT-94W	50 pcs./pack
		CT-94Y	
Side adjustment (↑ Adjustment direction)		CT-94X	
		CT-94P	
		CT-94Z	

### ELECTRICAL CHARACTERISTICS

Nominal resistance range	10 Ω ~ 2 MΩ
Total resistance tolerance	± 10 %
Power ratings	0.5 W (70 °C) 0 W (125 °C)
Resistance law	Linear law
Maximum input voltage	DC300 V or power rating, whichever is smaller
Maximum wiper current	100 mA or power rating, whichever is smaller
Effective electrical turn	15 turns
End resistance	1 % or 2 Ω, whichever is greater
C.R.V.	1 % or 3 Ω, whichever is greater
Operating temp. range	-55 ~ +125 °C
Temp. coefficient	10 Ω, 20 Ω ± 250 ppm/°C maximum 50 Ω ~ 2 MΩ ± 100 ppm/°C maximum
Insulation resistance	1000 MΩ minimum (DC500 V)
Dielectric strength	AC900 V, 60 s
Net weight	Approx. 0.88 g (CT-94P) Approx. 0.92 g (CT-94X, W, Y, Z)

### <Nominal resistance values>

10 Ω	20 Ω	50 Ω	100 Ω	200 Ω	500 Ω	1 kΩ	2 kΩ	5 kΩ	
10 kΩ	20 kΩ	25 kΩ	50 kΩ	100 kΩ	200 kΩ	250 kΩ	500 kΩ	1 MΩ	2 MΩ

Fig.1

- \* The above part numbers are all available with the respective combination of <Nominal resistance values> (Fig. 1).
- \* Verify the above part numbers when placing orders.

⊕ : Semi-standard

### MECHANICAL CHARACTERISTICS

Mechanical turn	18 turns
Operating torque	35 mN·m {357 gf·cm} maximum
Mechanical stop	Clutch action
Rotational life	200 cycles [ $\Delta R/R \leq \pm (2 \Omega + 3 \%)$ ]
Terminal strength	10 N {1.02 kgf} minimum (Tensile strength)
Thrust to shaft	10 N {1.02 kgf} minimum
Solderability	235 °C, 2 s

{ } : Reference only

### ENVIRONMENTAL CHARACTERISTICS

Test item	Test conditions	Specifications
Thermal shock	-65 ~ +125 °C (0.5 h), 5 cycles	[ $\Delta R/R \leq 1 \%$ ] [S.S. $\leq 1 \%$ ]
Humidity	-10 ~ +65 °C (80 ~ 98 %RH), 10 cycles, 240 h	[ $\Delta R/R \leq 2 \%$ ]
Shock	981 m/s <sup>2</sup> , 6 ms 6 directions for 3 times each	[ $\Delta R/R \leq 1 \%$ ] [S.S. $\leq 1 \%$ ]
Vibration	Amplitude of 1.52 mm or Acceleration of 196 m/s <sup>2</sup> , 10~2000 Hz, 3 directions, 12 times each	[ $\Delta R/R \leq 3 \%$ ] [S.S. $\leq 1 \%$ ]
Load life	70 °C, 0.5 W, 1000 h	[ $\Delta R/R \leq 3 \%$ ] [S.S. $\leq 1 \%$ ]
Low temp. operation	-55 °C, 2 h	[ $\Delta R/R \leq 2 \%$ ] [S.S. $\leq 2 \%$ ]
High temp. exposure	125 °C, 250 h	[ $\Delta R/R \leq 3 \%$ ] [S.S. $\leq 2 \%$ ]
Immersion seal	85 °C, 60 s	No leaks (No continuous bubbles)
Soldering heat	350 °C, 3 s	[ $\Delta R/R \leq 1 \%$ ]

$\Delta R/R$  : Change in total resistance  
S.S. : Setting stability

**MAXIMUM INPUT RATINGS**

Nominal resistance values (Ω)	Resistance code	Maximum input voltage (V)	Maximum wiper current (mA)
↻ 10	100	1.00	100
↻ 20	200	2.00	100
↻ 50	500	5.00	100
↻ 100	101	7.07	70.7
↻ 200	201	10.0	50.0
↻ 500	501	15.8	31.6
↻ 1 k	102	22.4	22.4
↻ 2 k	202	31.6	15.8
↻ 5 k	502	50.0	10.0
↻ 10 k	103	70.7	7.07
↻ 20 k	203	100	5.00
↻ 25 k	253	112	4.48
↻ 50 k	503	158	3.16
↻ 100 k	104	224	2.24
↻ 200 k	204	300	1.50
↻ 250 k	254	300	1.20
↻ 500 k	504	300	0.60
↻ 1 M	105	300	0.30
↻ 2 M	205	300	0.15

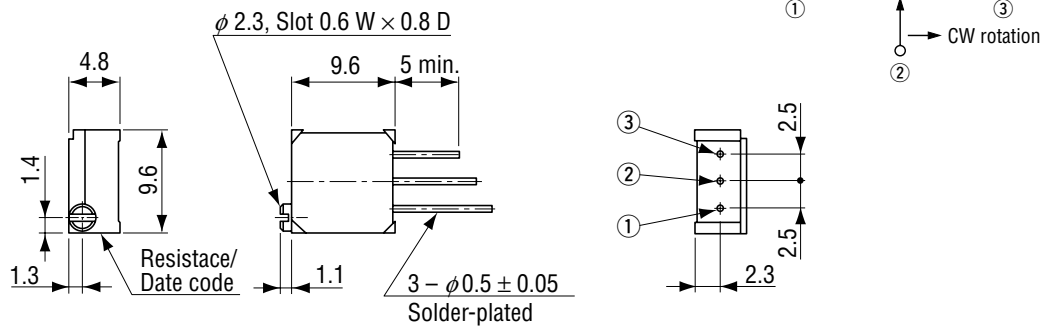
↻ : Semi-standard

CERMET TRIMMERS

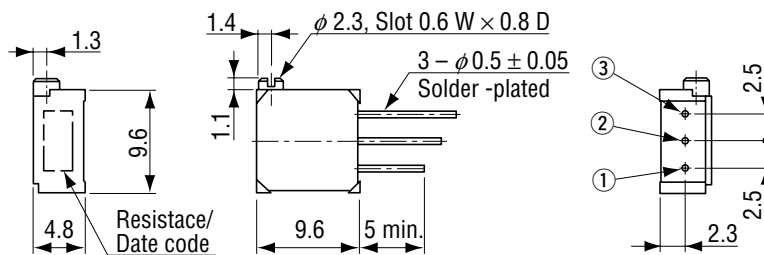
**OUTLINE DIMENSIONS**

Unless otherwise specified, tolerance: ± 0.3 (Unit: mm)

● **CT-94W**  
**Top adjustment**



● **CT-94X**  
**Side adjustment**



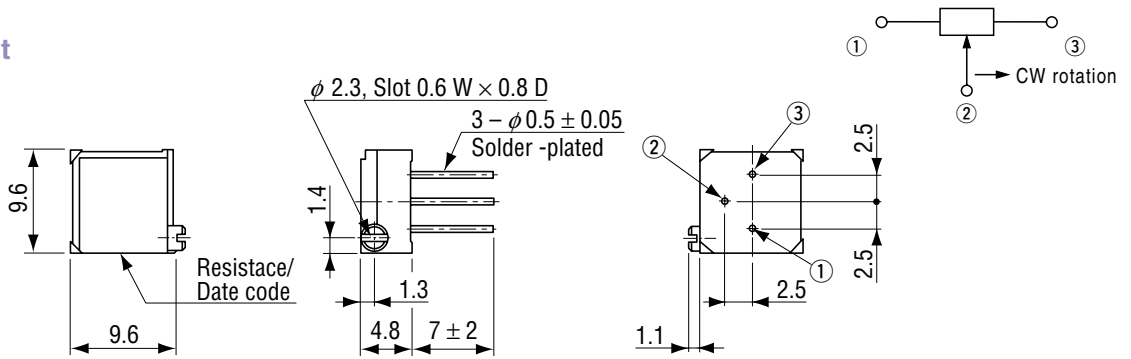
# CT-94

## CERMET TRIMMERS

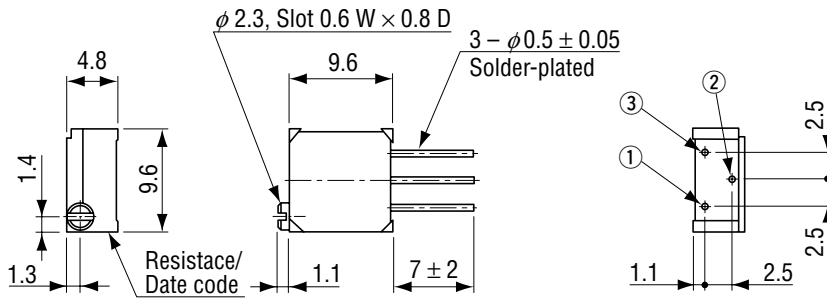
### OUTLINE DIMENSIONS

Unless otherwise specified, tolerance:  $\pm 0.3$  (Unit: mm)

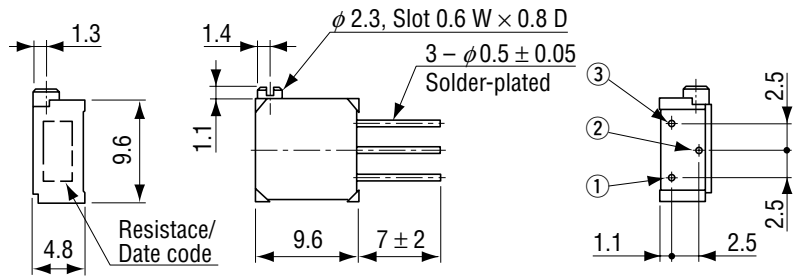
● **CT-94P**  
Side adjustment



● **CT-94Y**  
TOP adjustment



● **CT-94Z**  
Side adjustment



### PACKAGING SPECIFICATIONS

<Bulk packaging specifications>

- Unit of bulk in vinyl bag packaging is 50 pcs. per pack.
- Boxing of bulk in vinyl bags is performed with 100 pcs. per box.