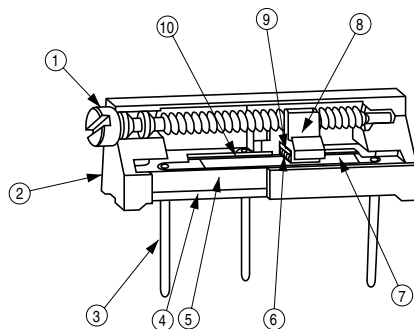




INTERNAL STRUCTURE



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

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

FEATURES

- General use type
- Wide resistance range from 10 Ω to 5 MΩ

PART NUMBER DESIGNATION

CT - 20 P 200 k Ω (204)

Series name

Resistance code

Product shape

Resistance value

P : Side adjustment
X : Side adjustment

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

LIST OF PART NUMBERS

Adjustment position	Shape of terminal (Top view)	Form of packaging	Pieces in package
		Bulk packaging	
Side adjustment (↑ Adjustment direction)		CT-20P	50 pcs./pack
		CT-20X	

<Nominal resistance values>

↻ 10 Ω	↻ 20 Ω	↻ 25 kΩ	50 kΩ	100 Ω	100 kΩ	200 Ω	200 kΩ	↻ 250 kΩ	500 Ω	500 kΩ	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	↻ 5 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

ELECTRICAL CHARACTERISTICS

Nominal resistance range	10 Ω ~ 5 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	12 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, 5 MΩ ± 250 ppm/°C maximum 50 Ω ~ 2 MΩ ± 100 ppm/°C maximum
Insulation resistance	1000 MΩ minimum (DC500 V)
Dielectric strength	AC600 V, 60 s
Net weight	Approx. 1.08 g

MECHANICAL CHARACTERISTICS

Mechanical turn	15 turns
Operating torque	35 mN·m {357 gf·cm} maximum
Mechanical stop	Clutch action
Rotational life	200 cycles 10 Ω ~ 200 Ω [$\Delta R/R \leq \pm (0.5 \Omega + 3 \%)$] 500 Ω ~ 5 MΩ [$\Delta R/R \leq \pm (0.5 \Omega + 2 \%)$]
Terminal strength	9 N {917 gf} minimum (Tensile strength)
Thrust to rotor	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	[$\Delta R/R \leq 1 \%$]
Shock	981 m/s ² , 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 ² , 10-2000 Hz, 3 directions, 12 times each	[$\Delta R/R \leq 2 \%$] [S.S. $\leq 1 \%$]
Load life	70 °C, 0.5 W, 1000 h	[$\Delta R/R \leq 2 \%$] [S.S. $\leq 1 \%$]
Low temp. operation	-55 °C, 2 h	[$\Delta R/R \leq 1 \%$] [S.S. $\leq 2 \%$]
High temp. exposure	125 °C, 250 h	[$\Delta R/R \leq 2 \%$] [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

CT-20

CERMET TRIMMERS

CERMET TRIMMERS

MAXIMUM INPUT RATINGS

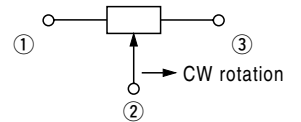
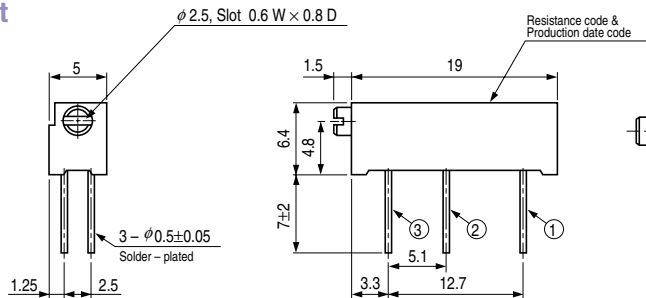
Nominal resistance values (Ω)	Resistance code	Maximum input voltage (V)	Maximum wiper current (mA)
<ul style="list-style-type: none"> ⊕ 10 ⊕ 20 ⊕ 50 100 200 500 	<ul style="list-style-type: none"> 100 200 500 101 201 501 	<ul style="list-style-type: none"> 1.00 2.00 5.00 7.07 10.0 15.8 	<ul style="list-style-type: none"> 100 100 100 70.7 50.0 31.6
<ul style="list-style-type: none"> 1 k 2 k 5 k 10 k ⊕ 20 k ⊕ 25 k 50 k 	<ul style="list-style-type: none"> 102 202 502 103 203 253 503 	<ul style="list-style-type: none"> 22.4 31.6 50.0 70.7 100 112 158 	<ul style="list-style-type: none"> 22.4 15.8 10.0 7.07 5.00 4.48 3.16
<ul style="list-style-type: none"> ⊕ 100 k ⊕ 200 k ⊕ 250 k 500 k 1 M 2 M ⊕ 5 M 	<ul style="list-style-type: none"> 104 204 254 504 105 205 505 	<ul style="list-style-type: none"> 224 300 300 300 300 300 300 	<ul style="list-style-type: none"> 2.24 1.50 1.20 0.60 0.30 0.15 0.06

⊕ : Semi-standard

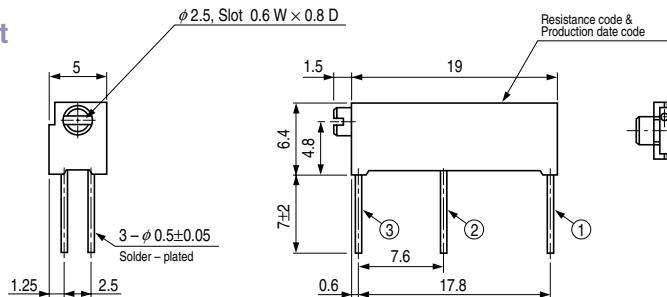
OUTLINE DIMENSIONS

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

● CT-20P Side adjustment



● CT-20X 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.