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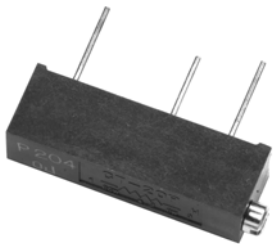
Cermet Trimmers, 15 Turns



FEATURES

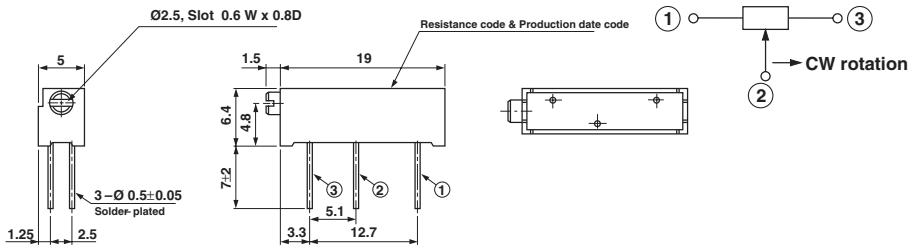
- General use type
- Wide resistance range from 10Ω to 5MΩ

Pb-free

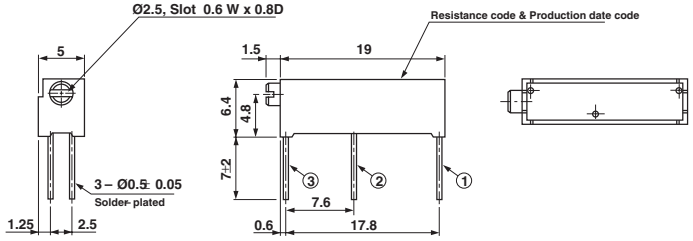
DIMENSIONS in millimeters

Unless otherwise specified, tolerance: ± 0.3

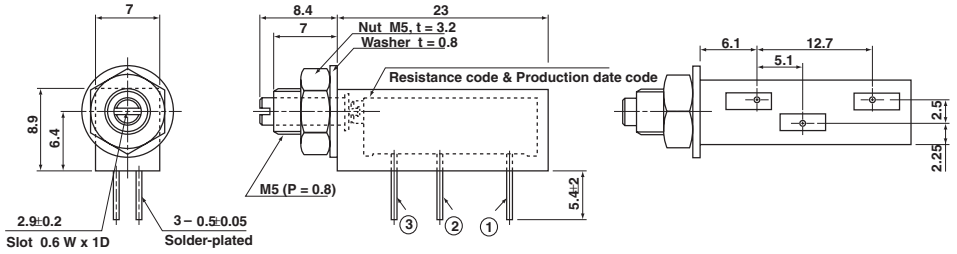
CT-20P
Side Adjustment



CT-20X
Side Adjustment



CT-20PB



ELECTRICAL SPECIFICATIONS	
Nominal Resistance Range	10Ω ~ 5MΩ
Nominal Resistance Tolerance	± 10 %
Power Ratings	0.5 W (70 °C) 0 W (120 °C)
Resistance Law	Linear law (B)
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 Temperature Range	- 55 ~ + 120 °C
Temperature Coefficient	10 Ω, 20 Ω, 5 MΩ: ± 250 10^{-6}/°C maximum 50 Ω ~ 2 MΩ: ± 100 10^{-6}/°C maximum
Insulation Resistance	1000 MΩ minimum (DC500 V)
Dielectric Strength	AC600 V, 60 s
Net Weight	Approx. 1.08 g (CT-20P, X) Approx. 3.7 g (CT-20PB)

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MECHANICAL SPECIFICATIONS

Mechanical Turn	15 turns
Operating Torque	35 mN·m {357 gf·cm} maximum
Mechanical Stop	Clutch action
Rotational Life	200 cycles 10Ω ~ 200Ω [ΔR/R ≤ ± (0.5 Ω + 3 %)] 500 Ω ~ 5 MΩ [ΔR/R ≤ ± (0.5 Ω + 2 %)]
Terminal Strength	9 N {917 gf} minimum (Tensile strength)
Thrust To Rotor	10 N {1.02 kgf} minimum
Solderability	235 °C, 2 s

STANDARD RESISTANCE TABLE

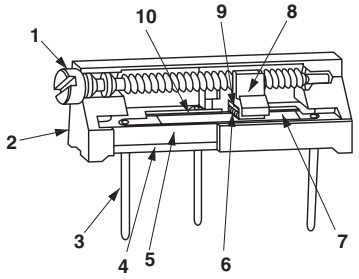
NOMINAL RESISTANCE VALUES (Ω)	RESISTANCE CODE	MAXIMUM INPUT VOLTAGE (V)	MAXIMUM WIPER CURRENT (mA)
10*	100	1.00	100
20*	200	2.00	100
50	500	5.00	100
100	101	7.07	70.7
200	201	10.0	50.0
500	501	15.8	31.6
1 k	102	22.4	22.4
2 k	202	31.6	15.8
5 k	502	50.0	10.0
10 k	103	70.7	7.07
20 k	203	100	5.00
50 k	503	158	3.16
100 k	104	224	2.24
200 k	204	300	1.50
500 k	504	300	0.60
1 M	105	300	0.30
2 M	205	300	0.15
5 M*	505	300	0.06

*Manufactured upon receipt of order basis.

ENVIRONMENTAL SPECIFICATIONS

Thermal Shock	-65 ~ 125 °C (0.5 h), 5 cycles	[ΔR/R ≤ 1 %] [S.S. ≤ 1 %]
Humidity	-10 ~ 65 °C (Relative humidity 80 ~ 98 %), 10 cycles, 240 h	[ΔR/R ≤ 1 %]
Shock	981 m/s2, 6 ms 6 directions for 3 times each	
Vibration	Amplitude 1.52 mm or Acceleration 196 m/s², 10 ~ 2000Hz, 3 directions, 12 times each	[ΔR/R ≤ 1 %] [S.S. ≤ 1 %]
Load Life	70 °C, 0.5 W, 1000 h	[ΔR/R ≤ 2 %] [S.S. ≤ 1 %]
Low Temperature Operation	-55 °C, 2 h	[ΔR/R ≤ 1 %] [S.S. ≤ 2 %]
High Temperature Exposure	120 °C, 250 h	[ΔR/R ≤ 2 %] [S.S. ≤ 2 %]
Immersion Seal	85 °C, 60 s	No leaks (No continuous bubbles)
Soldering Heat	350 °C, 3 s	[ΔR/R ≤ 1 %]

ΔR/R: Change in total resistance
S.S.: Setting stability



CONSTRUCTION

	PART NAME	MATERIAL	FLAMMABILITY
1	Shaft	Brass, Nickel-plated	-
2	Housing	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	
8	Slider block	Polybutyleneterephthalate	UL-94HB
9	Rubber cushion	Silicone rubber	-
10	Electrode	Ag-Pd cermet	

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

PACKAGING SPECIFICATIONS

Vinyl bag packaging specifications

- Unit of bulk in vinyl bag packaging is 50 pcs. (CT-20PB is 25 pcs.) per pack.
- Boxing of bulk in vinyl bags is performed with 100 pcs. (CT-20PB is 50 pcs.) per box.

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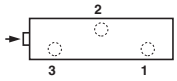
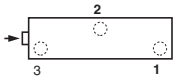
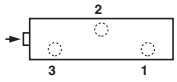
LIST OF PART NUMBERS

ADJUSTMENT POSITION	SHAPE OF TERMINAL (TOP VIEW)	FORM OF PACKAGING	PIECES IN PACKAGE
		VINYL BAG	
Side adjustment (Adjustment direction)		CT-20P	50 pcs./pack
		CT-20X	
		CT-20PB	25 pcs./pack

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	50 kΩ	100 kΩ	200 kΩ	500 kΩ	1 MΩ	2 MΩ	5 MΩ*

• The above part numbers are all available with the respective combination of <Nominal resistance values>.
• Verify the above part numbers when placing orders.
*Manufactured upon receipt of order basis.

ORDERING INFORMATION

CT20		P	204
SERIES	TERMINAL PIN	PRODUCT SHAPE	RESISTANCE CODE
	Blank: Sn-Pb E: Sn (Lead-free)	P: Side adjustment X: Side adjustment PB: Panel mount	

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