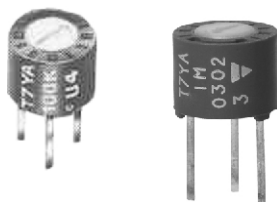


7 mm Diameter Miniature Cermet Trimmer



A dust sealed plastic case protecting a quality cermet track guarantees high performance and proven reliability. Adjustments are made easier by the clear scale readings. T7 is ideally suited to all industrial applications.

FEATURES

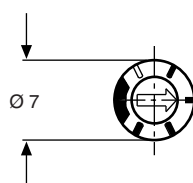
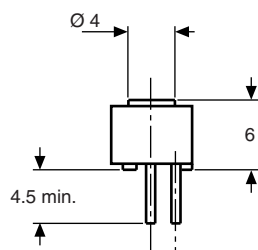
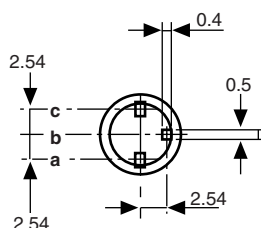
- Industrial grade
- 0.5 W at 70 °C
- Tests according to CECC 41100 or IEC 60393-1
- Low temperature coefficient (100 ppm/K typical)
- Wide resistance range (10 Ω to 2.2 M Ω)
- Easy to read scale
- 7 mm (0.275") diameter
- Compliant to RoHS Directive 2002/95/EC



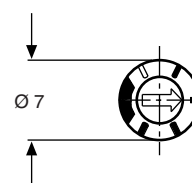
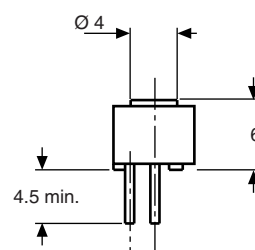
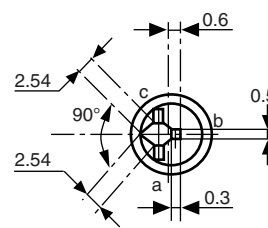
RoHS
COMPLIANT

DIMENSIONS in millimeters (± 0.5 mm)

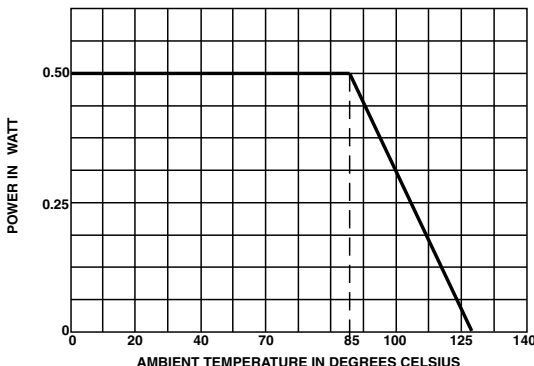
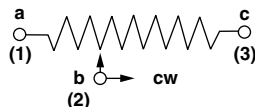
T7 YA



T7 YB



ELECTRICAL SPECIFICATIONS

| | | |
|---------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Resistive element | Cermet | |
| Electrical travel | 270° ± 15° | |
| Resistance range | 10 Ω to 2.2 MΩ | |
| Standard series E3 | 1 - 2.2 - 4.7 and on request 1 - 2 - 5 | |
| Tolerance standard | standard | ± 20 % |
| | on request | ± 10 % |
| Power rating | linear | <div>0.5 W at 85 °C</div>  |
| Circuit diagram |  | |
| Temperature coefficient | See Standard Resistance Element Data | |
| Limiting element voltage (linear law) | 250 V | |
| Contact resistance variation | 3 % or 3 Ω | |
| End resistance (typical) | 1 Ω | |
| Dielectric strength (RMS) | 1000 V | |
| Insulation resistance | 10 ⁶ MΩ | |

MECHANICAL SPECIFICATIONS

| | |
|-----------------------------|-------------------------|
| Mechanical travel | $300^\circ \pm 5^\circ$ |
| Operating torque (max. Ncm) | 2 |
| End stop torque (max. Ncm) | 4 |
| Unit weight (max. g) | 0.5 |
| Terminals | SnAg alloy (code e2) |

ENVIRONMENTAL SPECIFICATIONS

| | |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Temperature range | - 55 °C to + 125 °C |
| Climatic category | 55/100/56 |
| Sealing | IP64 For board cleaning, Vishay recommends testing before usage. Water immersion is forbidden. Ultrasonic may cause component damage or failure. |

| PERFORMANCES | | | |
|--------------------------|----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|------------------------------------------------|
| TESTS | CONDITIONS | TYPICAL VALUES AND DRIFTS | |
| | | $\Delta R_T/R_T$ (%) | $\Delta R_{1-2}/R_{1-2}$ (%) |
| Load life | 1000 h at rated power 90'/30' - ambient temperature 70 °C | ± 3 % Contact resistance variation: < 3 % R _n | ± 4 % |
| Climatic sequence | Phase A dry heat 100 °C Phase B damp heat Phase C cold - 55 °C Phase D damp heat 5 cycles | ± 2 % | ± 3 % |
| Long term damp heat | 56 days | ± 2 % Dielectric strength: 1000 V _{RMS} Insulation resistance: > 10 ⁴ MΩ | ± 3 % |
| Rapid temperature change | 5 cycles - 55 °C at + 125 °C | ± 1 % | $\Delta V_{1-2}/\Delta V_{1-3}$ ≤ ± 2 % |
| Shock | 50 g - 11 ms 3 successive shocks in 3 directions | ± 0.5 % | ± 1 % |
| Vibration | 10 Hz to 55 Hz 0.75 mm or 10 g during 6 h | ± 0.5 % | $\Delta V_{1-2}/\Delta V_{1-3}$ ≤ ± 1 % |
| Rotational life | 200 cycles | ± 3 % Contact resistance variation: < 3 % R _n | |

| STANDARD RESISTANCE ELEMENT DATA | | | | |
|----------------------------------|---------------------|----------------------|--------------------|------------------------------------|
| STANDARD RESISTANCE VALUES | LINEAR LAW | | | TYPICAL TCR - 55 °C to + 125 °C |
| | MAX. POWER AT 85 °C | MAX. WORKING VOLTAGE | MAX. WIPER CURRENT | |
| Ω | W | V | mA | ppm/°C |
| 10 | 0.5 | 2.2 | 224 | ± 100 |
| 22 | 0.5 | 3.3 | 150 | |
| 47 | 0.5 | 4.8 | 103 | |
| 100 | 0.5 | 7.0 | 70 | |
| 220 | 0.5 | 10.5 | 47 | |
| 470 | 0.5 | 15.3 | 32 | |
| 1K | 0.5 | 22.4 | 22 | |
| 2.2K | 0.5 | 33.2 | 15 | |
| 4.7K | 0.5 | 48.5 | 10 | |
| 10K | 0.5 | 70.7 | 7.0 | |
| 22K | 0.5 | 105 | 4.8 | |
| 47K | 0.5 | 153 | 3.2 | |
| 100K | 0.5 | 224 | 2.2 | |
| 220K | 0.28 | 250 | 1.1 | |
| 470K | 0.13 | 250 | 1.53 | |
| 1M | 0.06 | 250 | 0.25 | |
| 2.2M | 0.028 | 250 | 0.11 | |

MARKING

- Vishay trademark
- Model
- YA or YB style
- Ohmic value (in Ω , $k\Omega$, $M\Omega$)
- Manufacturing date
- Marking of terminal: 3

PACKAGING

- In box of 200 pieces, code B40
- On request: In tube of 50 pieces, code T20 (TU50)

ORDERING INFORMATION (part number)

| | | | | | | | | | | | | | | |
|-------|---------------|---------------------------------------------------|---|-------------------------------------|---|-------------------------------------------------------------|---|---------------------------------------------------------|---|---|--|--|--|--|
| T | 7 | Y | A | 4 | 7 | 4 | M | B | 4 | 0 | | | | |
| MODEL | STYLE | OHMIC VALUE | | TOLERANCE | | PACKAGING CODE | | SPECIAL NUMBER | | | | | | |
| T7 | YA YB X | From 10 Ω to 2.2 $M\Omega$ 103 = 10K | | M = 20 % On request: K = 10 % | | B40 = Box 200 pieces On request: T20 = Tube 50 pieces | | (If applicable) Given by Vishay for custom design | | | | | | |

DESCRIPTION (for information only)

| | | | | | | |
|-------|-------|-------|-----------|---------|-----------|-------------|
| T7 | YA | 470K | 20 % | | BO | e2 |
| MODEL | STYLE | VALUE | TOLERANCE | SPECIAL | PACKAGING | LEAD FINISH |



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