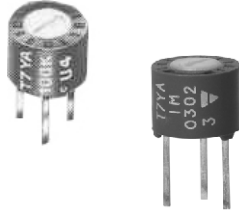


Miniature Cermet Trimmers



The T7 trimmer is only 7 mm (0.275") in diameter and fits almost anywhere.

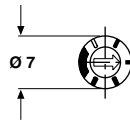
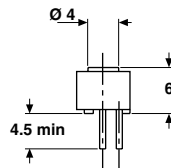
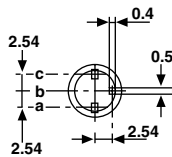
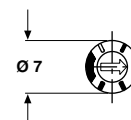
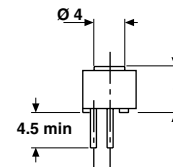
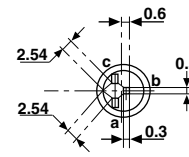
A dust sealed plastic case protecting a quality cermet track guarantees high performance and proven reliability. Adjustments are made easier by the clear scale readings. T7 is ideally suited to all industrial applications.

FEATURES

- Industrial grade
- 0.5 Watt at 85 °C
- Test according to CECC 41100
- Low temperature coefficient (100 ppm/K typical)
- Wide resistance range (10 Ω to 2.2 MΩ)
- Easy to read scale

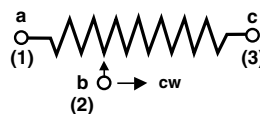


DIMENSIONS in millimeters

T7 YA

T7 YB


Tolerances unless otherwise specified ± 0.5 mm

CIRCUIT DIAGRAM



| 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 | 0.5 W at 85 °C |
| | Logarithmic | not applicable |
| 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 |

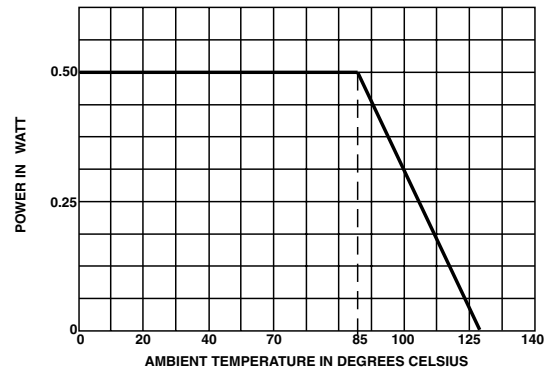
MECHANICAL SPECIFICATIONS

| | |
|-----------------------------|-----------|
| Mechanical Travel | 300° ± 5° |
| Operating Torque (max. Ncm) | 2 |
| End Stop Torque (max. Ncm) | 4 |
| Unit Weight (max. g) | 0.5 |

ENVIRONMENTAL SPECIFICATIONS

| | |
|-------------------|---------------------|
| Temperature Range | - 55 °C to + 125 °C |
| Climatic Category | 55/100/56 |
| Sealing | IP64 |

POWER RATING CHART



| PERFORMANCE | | | |
|--------------------------|--|---|--|
| TESTS | CONDITIONS | TYPICAL VALUES AND DRIFTS | |
| | | $\frac{\Delta RT}{RT}$ (%) | $\frac{\Delta R_{1-2}}{R_{1-2}}$ (%) |
| Load Life | 1000 hours at rated power 90/30' - ambient temperature 70 °C | ± 3 % Contact resistance variation: < 3 % Rn | ± 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 % | $\frac{\Delta V_{1-2}}{V_{1-3}} \leq \pm 2 \%$ |
| Shock | 50 g 11 ms 3 successive shocks in 3 directions | ± 0.5 % | ± 1 % |
| Vibration | 10 - 55 Hz 0.75 mm or 10 g during 6 hours | ± 0.5 % | $\frac{\Delta V_{1-2}}{V_{1-3}} \leq \pm 1 \%$ |
| Rotational Life | 200 cycles | ± 3 % Contact resistance variation: < 3 % Rn | |



| STANDARD RESISTANCE ELEMENT DATA | | | | |
|----------------------------------|---------------------|----------------------|-----------------|----------------------------|
| STANDARD RESISTANCE VALUES | LINEAR LAW | | | TCR - 55 °C + 125 °C |
| | MAX. POWER AT 85 °C | MAX. WORKING VOLTAGE | MAX. WIPER CUR. | |
| Ω | W | V | mA | ppm/°C |
| 10 | 0.5 | 2.2 | 224 | 0 + 200 |
| 22 | ↓ | 3.3 | 150 | |
| 47 | | 4.8 | 103 | |
| 100 | | 7.0 | 70 | |
| 220 | | 10.5 | 47 | |
| 470 | | 15.3 | 32 | |
| 1K | | 22.4 | 22 | |
| 2.2K | | 33.2 | 15 | |
| 4.7K | | 48.5 | 10 | |
| 10K | | 70.7 | 7 | |
| 22K | | 105 | 4.8 | ± 100 |
| 47K | 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

- Printed:
- VISHAY trademark
 - series
 - YA or YB style
 - ohmic value (in Ω, kΩ, MΩ)
 - manufacturing date
 - marking of terminal: 3.

SEALING

T7 is sealed against dust (IP64).
 For board cleaning, Vishay recommends testing before usage. Water immersion is forbidden. Ultrasonic may cause component damage or failure.

| PACKAGING |
|---|
| - In bulk (box of 200 pieces), code BO200 |
| - On request in Tube, code TU50 |

| ORDERING INFORMATION | | | | | |
|----------------------|-------------|-----------------------|---------------------|---------------------------|-------------------|
| T7 SERIES | YA STYLE | 470 kΩ OHMIC VALUE | ± 20 % TOLERANCE | BO200 PACKAGING | e2 LEAD FINISH |
| | YA - YB | | | BO200 On request: TU50 | e2: SnAg alloy |

| SAP PART NUMBERING GUIDELINES | | | | | | | | | | | | | |
|---|---|-------|---|-------------|---|---|-----|----------------|---|---|-------------------------|---|---|
| T | 7 | Y | A | 4 | 7 | 4 | M | B | 4 | 0 | □ | □ | □ |
| MODEL | | STYLE | | OHMIC VALUE | | | TOL | PACKAGING CODE | | | SPECIAL (IF APPLICABLE) | | |
| See the end of this data book for conversion tables | | | | | | | | | | | | | |



Disclaimer

All product specifications and data are subject to change without notice.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product.

Vishay disclaims any and all liability arising out of the use or application of any product described herein or of any information provided herein to the maximum extent permitted by law. The product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein, which apply to these products.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications unless otherwise expressly indicated. Customers using or selling Vishay products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify Vishay for any damages arising or resulting from such use or sale. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.