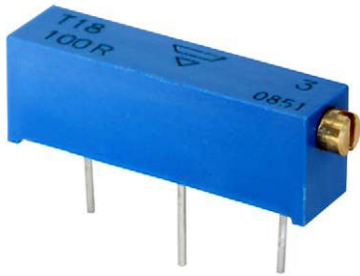


## 3/4" Rectangular Multi-Turn Cermet Trimmer

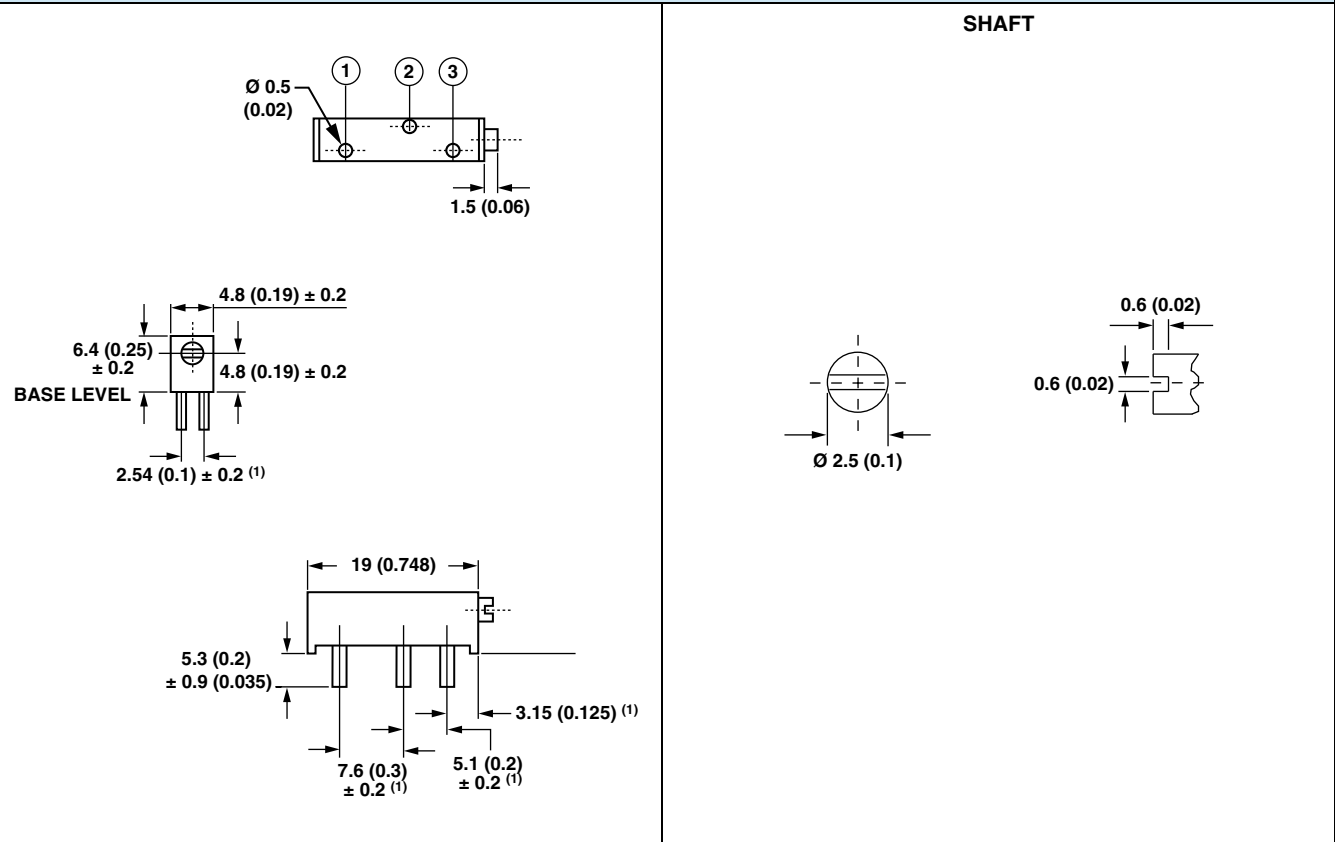


### FEATURES

- 0.75 W at 70 °C
- Wide ohmic range (10 Ω to 5 MΩ)
- Multi-finger wiper for better CRV
- Tests according to CECC 41000 or IEC 60393-1
- Industrial grade
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)


**RoHS**  
COMPLIANT

### DIMENSIONS in millimeters (± 0.5 mm)


**Note**

(1) To be measured at base level

| <b>ELECTRICAL SPECIFICATIONS</b>             |                                       |
|--|---------------------------------------|
| Resistive element                            | Cermet                                |
| Electrical travel                            | 15 turns $\pm$ 1                      |
| Resistance range                             | 10 $\Omega$ to 5 M $\Omega$           |
| Standard series E3                           | 1 - 2.2 - 4.7 and 1 - 2 - 5           |
| Tolerance                                    | Standard<br>$\pm$ 10 %                |
| Power rating                                 | Linear<br>0.75 W at +70 °C<br>        |
| Circuit diagram                              |                                       |
| Temperature coefficient                      | See Standard Resistance Element table |
| Limiting element voltage (linear law)        | 400 V                                 |
| Contact resistance variation                 | 1 % R <sub>n</sub> or 1 $\Omega$ max. |
| End resistance                               | 1 % or 2 $\Omega$                     |
| Dielectric strength (RMS)                    | 1000 V                                |
| Insulation resistance (500 V <sub>DC</sub> ) | 10 <sup>3</sup> M $\Omega$ min.       |

| <b>MECHANICAL SPECIFICATIONS</b> |                            |
|----------------------------------|----------------------------|
| Mechanical travel                | 18 turns $\pm$ 5           |
| Operating torque (max. Ncm)      | 3.5                        |
| End stop torque                  | Clutch action              |
| Net weight (max. g)              | 1.2                        |
| Wiper (actual travel)            | Positioned at approx. 50 % |
| Terminals                        | e3: Pure Sn                |

| <b>ENVIRONMENTAL SPECIFICATIONS</b> |                     |
|-------------------------------------|---------------------|
| Temperature range                   | -55 °C to +125 °C   |
| Climatic category                   | 55/125/4            |
| Sealing                             | Fully sealed - IP67 |



| PERFORMANCES           |   |                           |                              |  |
|------------------------|---|---------------------------|------------------------------|--|
| TESTS                  | CONDITIONS  | TYPICAL VALUES AND DRIFTS |                              |  |
|                        |   | $\Delta R_T/R_T$ (%)      | $\Delta V_{1-2}/V_{1-3}$ (%) | OTHER  |
| Load life              | 1000 h at rated power<br>90°/30° - ambient temp. 70 °C  | ± 4 %                     | -                            | -  |
| Damp heat steady state | 4 days  | ± 3 %                     | -                            | Dielectric strength: 1000 V <sub>RMS</sub><br>Insulation resistance: > 20 MΩ |
| Rapid temp. change     | 5 cycles<br>-55 °C to +125 °C                           | ± 0.5 %                   | ± 2 %                        | -  |
| Shock                  | 50 g at 11 ms<br>3 successive shocks<br>in 3 directions | ± 2 %                     | ± 2 %                        | -  |
| Vibration              | 10 Hz to 55 Hz<br>0.75 mm or 10 g<br>during 6 h         | ± 2 %                     | ± 2 %                        | -  |
| Rotational life        | 200 cycles  | ± (3 % + 1 Ω)             | -                            | Contact res. variation: < 1 % R <sub>n</sub>                                 |

**Note**

- Nothing stated herein shall be construed as a guarantee of quality or durability.

| STANDARD RESISTANCE ELEMENT DATA |                     |                      |                    |  |
|----------------------------------|---------------------|----------------------|--------------------|--|
| STANDARD RESISTANCE VALUES       | LINEAR LAW          |                      |                    | TYPICAL TCR<br>-55 °C to +125 °C<br>ppm/°C |
|                                  | MAX. POWER AT 70 °C | MAX. WORKING VOLTAGE | MAX. WIPER CURRENT |  |
| Ω                                | W                   | V                    | mA                 |  |
| 10                               | 0.75                | 2.74                 | 274                | ± 100                                      |
| 22                               | 0.75                | 4.06                 | 185                |  |
| 47                               | 0.75                | 5.94                 | 126                |  |
| 100                              | 0.75                | 8.66                 | 87                 |  |
| 220                              | 0.75                | 12.8                 | 58                 |  |
| 470                              | 0.75                | 18.8                 | 40                 |  |
| 1K                               | 0.75                | 27.4                 | 27                 |  |
| 2.2K                             | 0.75                | 40.6                 | 18                 |  |
| 4.7K                             | 0.75                | 59.4                 | 13                 |  |
| 10K                              | 0.75                | 86.6                 | 8.7                |  |
| 22K                              | 0.75                | 128                  | 5.8                |  |
| 47K                              | 0.75                | 188                  | 4                  |  |
| 100K                             | 0.75                | 274                  | 2.7                |  |
| 220K                             | 0.75                | 400                  | 1.8                |  |
| 470K                             | 0.34                | 400                  | 0.85               |  |
| 1M                               | 0.16                | 400                  | 0.4                |  |
| 2.2M                             | 0.07                | 400                  | 0.18               |  |
| 4.7M                             | 0.03                | 400                  | 0.09               |  |

**MARKING**

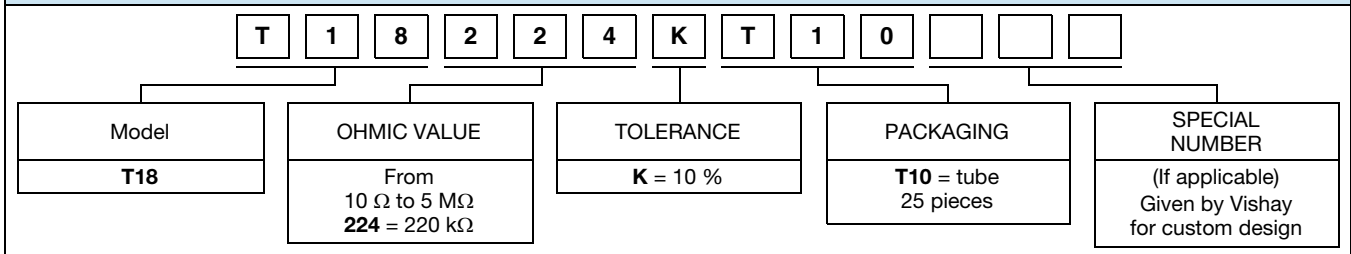
- Vishay trademark
- Vishay part number or model and ohmic value (in Ω, kΩ, MΩ)
- Manufacturing date
- Marking of terminal 3

**PACKAGING**

- In tube of 25 pieces code T10 (TU25)



**ORDERING INFORMATION** (Part Number)



**DESCRIPTION** (for information only)

|       |       |           |           |             |
|-------|-------|-----------|-----------|-------------|
| T18   | 220K  | ± 10 %    | TU25      | e3          |
| MODEL | VALUE | TOLERANCE | PACKAGING | LEAD FINISH |

**RELATED DOCUMENTS**

| APPLICATION NOTES   |  |
|---|--|
| Potentiometers and Trimmers                                       | <a href="http://www.vishay.com/doc?51001">www.vishay.com/doc?51001</a> |
| Guidelines for Vishay Sfernice Resistive and Inductive Components | <a href="http://www.vishay.com/doc?52029">www.vishay.com/doc?52029</a> |



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