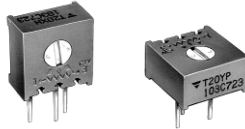


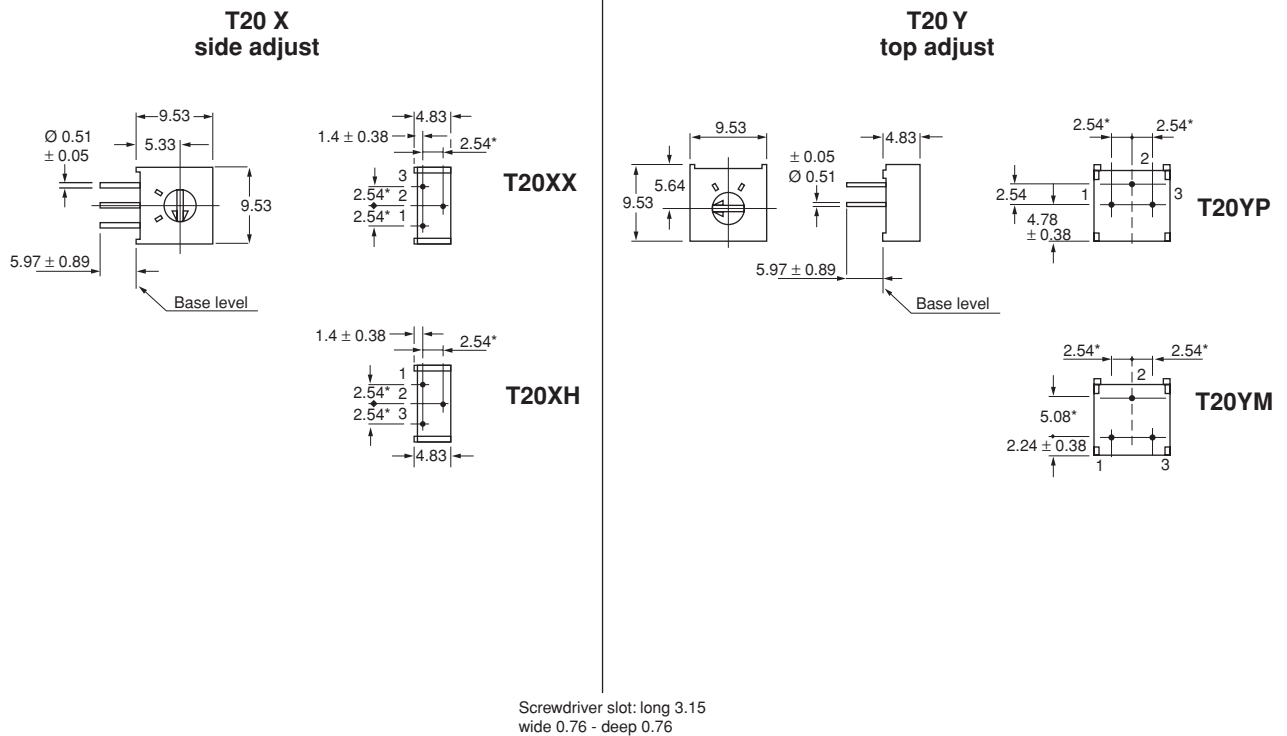
# 3/8" Square, Single Turn Sealed Cermet Trimmers



## FEATURES

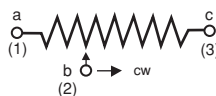
- Industrial grade
- 0.5 Watt at 85°C
- CECC 41100
- Full sealed
- 4 standard pin styles
- Easy to read scale

## DIMENSIONS in millimeters



## CIRCUIT DIAGRAM

- \*To be measured at base level.  
• Tolerances unless otherwise specified  $\pm 0.5$  mm.



**ELECTRICAL SPECIFICATIONS**

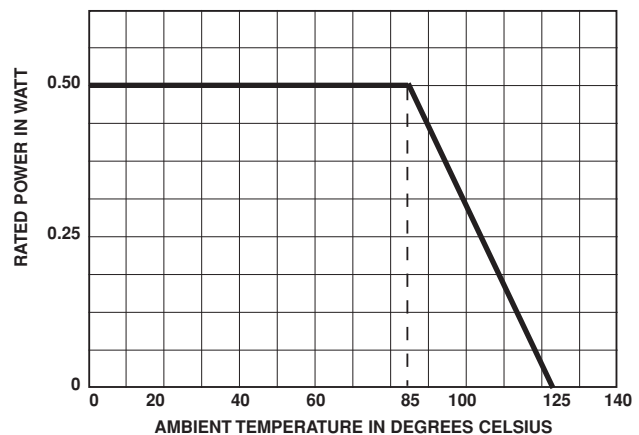
|                                       |                                      |
|---------------------------------------|--------------------------------------|
| Resistive Element                     | cermet                               |
| Electrical Travel                     | 280°                                 |
| Resistance Range                      | 10Ω to 2MΩ                           |
| Standard Series                       | 1 - 2 - 5..                          |
| Tolerance Standard                    | ± 10 %                               |
| Power Rating                          | Linear                               |
|                                       | Logarithmic                          |
| Temperature Coefficient               | See Standard Resistance Element Data |
| Limiting Element Voltage (linear law) | 300V                                 |
| Contact Resistance Variation          | 2% Rn or 3Ω                          |
| End Resistance (typical)              | 1Ω                                   |
| Dielectric Strength (RMS)             | 900V                                 |
| Insulation Resistance (500VDC)        | 10 <sup>3</sup> MΩ                   |

**MECHANICAL SPECIFICATIONS**

|                             |      |
|-----------------------------|------|
| Mechanical Travel           | 310° |
| Operating Torque (max. Ncm) | 3.5  |
| End Stop Torque (min. Ncm)  | 10.5 |
| Unit Weight (max. g)        | 0.5  |

**ENVIRONMENTAL SPECIFICATIONS**

|                   |                                |
|-------------------|--------------------------------|
| Temperature Range | – 55°C + 125°C                 |
| Climatic Category | 55/100/56                      |
| Sealing           | fully sealed<br>container IP67 |

**POWER RATING CHART****PERFORMANCE**

| TESTS                    | CONDITIONS                                                                                       | TYPICAL VALUES AND DRIFTS                                                               |                                       |
|--------------------------|--------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|---------------------------------------|
|                          |                                                                                                  | $\Delta \frac{R_{ac}}{R_{ac}}$ (%)                                                      | $\Delta \frac{R_{ab}}{R_{ab}}$ (%)    |
| Load Life                | 1000h at rated power<br>90°/30' - ambient temperature 85°C                                       | ± 1%<br>Contact resistance<br>variation : < 1% Rn                                       | ± 2%                                  |
| Climatic Sequence        | Phase A dry heat 100°C<br>Phase B damp heat<br>Phase C cold – 55°C<br>Phase D damp heat 5 cycles | ± 1%                                                                                    | ± 2%                                  |
| Long Term Damp Heat      | 56 days                                                                                          | ± 1%<br>Dielectric strength : 1000 VRMS<br>Insulation resistance : > 10 <sup>4</sup> MΩ | ± 2%                                  |
| Rapid Temperature Change | 5 cycles – 55°C at + 125°C                                                                       | ± 1%                                                                                    | $\Delta \frac{V_{ab}}{V_{ac}}$ : ± 2% |
| Shock                    | 50g 11ms<br>3 successive shocks<br>in 3 directions                                               | ± 0.5%                                                                                  | ± 1%                                  |
| Vibration                | 10 - 55Hz<br>0.75mm or 10g<br>during 6 hours                                                     | ± 0.5 %                                                                                 | $\Delta \frac{V_{ab}}{V_{ac}}$ : ± 1% |
| Rotational Life          | 200 cycles                                                                                       | ± 3%<br>Contact resistance<br>variation : < 2% Rn                                       |                                       |

**STANDARD RESISTANCE ELEMENT DATA**

| STANDARD<br>RESISTANCE<br>VALUES | LINEAR LAW               |                            |                                 | T.C.<br>-55°C<br>+125°C |
|----------------------------------|--------------------------|----------------------------|---------------------------------|-------------------------|
|                                  | MAX.<br>POWER<br>AT 85°C | MAX.<br>WORKING<br>VOLTAGE | MAX. CUR.<br>THROUGH<br>ELEMENT |                         |
| Ω                                | W                        | V                          | mA                              | ppm/°C                  |
| 10                               | 0.5                      | 2.2                        | 224                             | + 200                   |
| 20                               |                          | 3.2                        | 160                             |                         |
| 50                               |                          | 5                          | 100                             |                         |
| 100                              | ↓                        | 7                          | 70                              | ±100                    |
| 200                              |                          | 10                         | 50                              |                         |
| 500                              |                          | 15.8                       | 32                              |                         |
| 1k                               |                          | 22.4                       | 22                              |                         |
| 2k                               |                          | 31.8                       | 16                              |                         |
| 5k                               |                          | 50                         | 10                              |                         |
| 10k                              |                          | 70.7                       | 7                               |                         |
| 20k                              |                          | 100                        | 5                               |                         |
| 50k                              |                          | 158                        | 3.2                             |                         |
| 100k                             |                          | 224                        | 2.2                             |                         |
| 200k                             | 0.5                      | 300                        | 1.5                             |                         |
| 500k                             | 0.45                     | 300                        | 0.6                             |                         |
| 1M                               | 0.18                     | 300                        | 0.3                             |                         |
| 2M                               | 0.09                     | 300                        | 0.15                            |                         |
|                                  | 0.05                     |                            |                                 |                         |

**MARKING**

VISHAY logo, style, ohmic value, manufacturing date, pin '3'.

The ohmic value is indicated by a 3 figure code: the first two are significant figures, the third one is the multiplier.

Example : 100 = 10Ω

101 = 100Ω

102 = 1000Ω

503 = 50000Ω

The manufacturing date is indicated by a 3 figure code.

The first digit is the year, the last two are the week number.

**PACKAGING**

In magazine pack by 50 pieces (tube), code TU50

**ORDERING INFORMATION**

**T20**  
SERIES

**XH**  
STYLE  
XX YP  
XH YM

**500kΩ**  
OHMIC VALUE

**± 10%**  
TOLERANCE

**TU50**  
PACKAGING  
TU50: tube