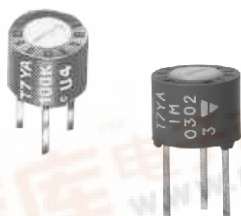




## Miniature Cermet Trimmers

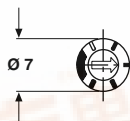
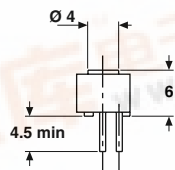
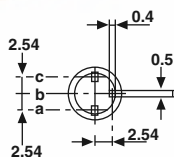


The T7 trimmer is only 7 mm (0.275") in diameter and fits almost anywhere.

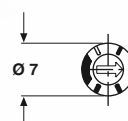
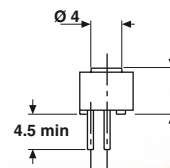
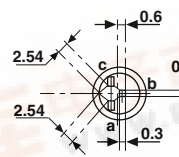
A dust sealed plastic case protecting a quality cermet track guarantees high performance and proven reliability. Adjustments are made easier by the clear scale readings. T7 is ideally suited to all industrial applications.

### DIMENSIONS in millimeters

T7 YA

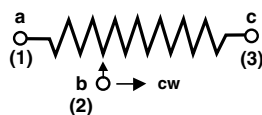


T7 YB



Tolerances unless otherwise specified  $\pm 0.5$  mm

### CIRCUIT DIAGRAM



### 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  $\Omega$  to 2.2 M $\Omega$ )
- Easy to read scale



RoHS  
COMPLIANT

**ELECTRICAL SPECIFICATIONS**

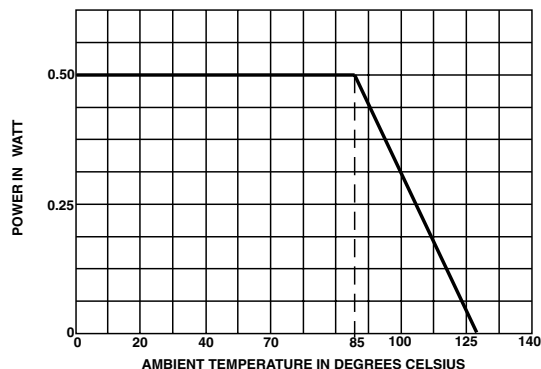
Resistive Element	Cermet
Electrical Travel	270° ± 15°
Resistance Range	10 Ω to 2.2 MΩ
Standard Series E3	1 - 2.2 - 4.7 and on request 1 - 2 - 5
Tolerance Standard	Standard
	On Request
	± 20 %
	± 10 %
Power Rating	Linear
	Logarithmic
	0.5 W at 85 °C
	not applicable
Temperature Coefficient	See Standard 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 <sup>6</sup> 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	
		$\frac{\Delta R T}{R T}$ (%)	$\frac{\Delta R_{1-2}}{R_{1-2}}$ (%)
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 <sup>4</sup> 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	

**T7**

## Miniature Cermet Trimmers

Vishay Sfernice

**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.	
$\Omega$	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	± 100
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	
47K		153	3.2	
100K		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  $\Omega$ , k $\Omega$ , M $\Omega$ )
- 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 k $\Omega$**   
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



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