

## 1/4" Multi-Turn Fully Sealed Container Cermet Trimmers



Due to their square shape and small size (6.8 x 6.8 x 5 mm), the multi-turn trimmers of the T6 series are ideally suited for PCB use, enabling high density board mounting with reduced space requirement between cards.

Six versions are available differing by the top or side position of the adjustment screw and by PC pins configuration.

The use of cermet for the resistive track ensures an excellent stability of nominal specifications throughout life.

### FEATURES

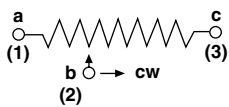
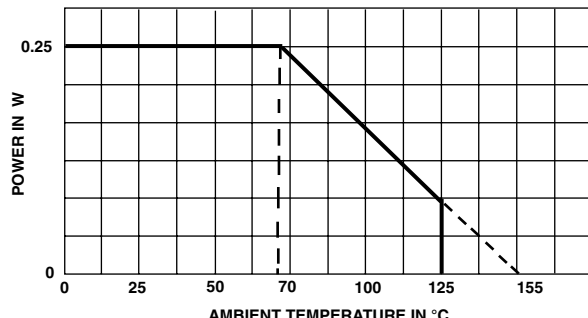
- Military and professional grade
- 0.25 W at 70 °C
- CECC 41 100-005 (A, B, C, D)
- Equivalent to MIL-R-22097 (RJ26)
- GAM T1
- Space saving
- Low contact resistance variation 1 % typical
- Fully sealed
- Wide range of ohmic values from 10 Ω to 2.2 MΩ
- Tests according to CECC 41 100



RoHS  
COMPLIANT

DIMENSIONS in millimeters ( $\pm 0.5$ mm)			
<b>T6XA</b> (PM 84) C			<b>Terminal Spacing on a 2.54 PCB</b> 
<b>T6XB</b> (PM 84) A			
<b>T6YA</b> (PM 84) D			
<b>T6YB</b> (PM 84) B			
<b>T6ZA</b>			
<b>T6ZB</b>			

Undergoes European Quality Assurance System (CECC)

<b>ELECTRICAL SPECIFICATIONS</b>	
Resistive Element	Cermet
Electrical Travel	13 turns $\pm$ 2
Resistance Range	10 $\Omega$ to 2.2 M $\Omega$
Standard Series E3	1 - 2.2 - 4.7 and on request 1 - 2 - 5
Tolerance	standard 10 %
	on request 5 %
Power Rating	linear 0.25 W at + 70 °C
	<p><b>CIRCUIT DIAGRAM</b></p>   <p>POWER IN W</p> <p>AMBIENT TEMPERATURE IN °C</p>
Temperature Coefficient	see Standard Resistance Element Table
Limiting Element Voltage (Linear Law)	250 V
Contact Resistance Variation	2 % Rn or 2 $\Omega$
End Resistance (Typical)	1 $\Omega$
Dielectric Strength (RMS)	1000 V
Insulation Resistance (500 VDC)	10 <sup>6</sup> M $\Omega$

<b>MECHANICAL SPECIFICATIONS</b>	
Mechanical Travel	15 turns
Operating Torque (Max. Ncm)	1
End Stop Torque	Clutch action
Unit Weight (Max. g)	0.5
Wiper (Actual Travel)	Positioned at approx. 50 %

<b>ENVIRONMENTAL SPECIFICATIONS</b>	
Temperature Range	- 55 °C to + 155 °C
Climatic Category	55/125/56
Sealing	Fully sealed - Container IP67

**STANDARD RESISTANCE ELEMENT DATA**

STANDARD RESISTANCE VALUES	LINEAR LAW			TYPICAL TCR - 55 °C + 125 °C	
	MAX. POWER AT 70 °C	MAX. WORKING VOLTAGE	MAX. WIPER CUR.		
$\Omega$	W	V	mA	ppm/°C	
10	0.25	1.58	158	± 100	
22	↓	2.34	107		
47		3.53	73		
100		5	50		
220		7.42	34		
470		10.8	23		
1K		15.8	15.8		
2.2K		23.4	10.7		
4.7K		34.3	7.3		
10K		50	5		
22K		74.2	3.37		
47K		108.4	2.31		
100K		158	1.58		
220K		0.25	235		1.07
470K		0.13	250		0.53
1M		0.063	250		0.25
2.2M	0.028	250	0.11		

**MARKING**

Printed:

- VISHAY trademark
- Model
- Style
- Ohmic value (in  $\Omega$ , k $\Omega$ , M $\Omega$ )
- Tolerance (in %)
- Manufacturing date
- Marking of terminal C

**PACKAGING**

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



1/4" Multi-Turn Fully Sealed Container  
Cermet Trimmers

Vishay Sfernice

PERFORMANCES					
CECC 41100		REQUIREMENTS		TYPICAL VALUES AND DRIFTS	
TESTS	CONDITIONS	$\Delta R_T/R_T$ (%)	$\Delta R_{1-2}/R_{1-2}$ (%)	$\Delta R_T/R_T$ (%)	$\Delta R_{1-2}/R_{1-2}$ (%)
<b>Climatic Sequence</b>	Phase A dry heat 125 °C Phase B damp heat Phase C cold - 55 °C Phase D damp heat 5 cycles	± 2 %	± 3 %	± 0.5 %	± 1 %
<b>Long Term Damp Heat</b>	56 days 40 °C, 93 % RH	± 2 % Dielectric strength: 250 V Insulation resistance: > 100 MΩ	± 3 %	± 0.5 % Dielectric strength: 1000 V Insulation resistance: > 10 <sup>4</sup> MΩ	± 1 %
<b>Rotational Life</b>	200 cycles	± 2 % Contact res. variation: < 3 % Rn	-	± (2 % ± 3 Ω) Contact res. variation: < 1 % Rn	-
<b>Load Life</b>	1000 h at rated power 90°/30° - ambient temp. 70 °C	± 2 % Contact res. variation: < 3 % Rn	± 4 %	± 1 % Contact res. variation: < 1 % Rn	± 2 %
<b>Rapid Temperature Change</b>	5 cycles - 55 °C to + 125 °C	± 1.5 %	$\Delta V_{1-2}/\Delta V_{1-3}$ ± 1 %	± 0.5 %	$\Delta V_{1-2}/\Delta V_{1-3}$ < ± 1 %
<b>Shocks</b>	50 g at 11 ms 3 successive shocks in 3 directions	± 1 %	± 2 %	± 0.1 %	± 0.2 %
<b>Vibrations</b>	10 to 55 Hz 0.75 mm or 10 g during 6 h	± 1 %	$\Delta V_{1-2}/\Delta V_{1-3}$ ± 2 %	± 0.1 %	$\Delta V_{1-2}/\Delta V_{1-3}$ < ± 0.2 %

SAP ORDERING INFORMATION (Part Number 15 digits)													
T	6	X	A	4	7	4	K	T	2	0			
MODEL	STYLE		OHMIC VALUE		TOLERANCE		PACKAGING		SPECIAL NUMBER				
	XA XB YA YB ZA ZB		From 10 Ω to 2.2 MΩ 474 = 470 kΩ		K = 10 % on request J = 5 %		T20 = Tube 50 pieces		(if applicable) Given by VISHAY for custom design				

PART NUMBER DESCRIPTION (for information only)						
T6	XA	470K	10 %		TU	e3
MODEL	STYLE	VALUE	TOLERANCE	SPECIAL	PACKAGING	LEAD (Pb)-FREE



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