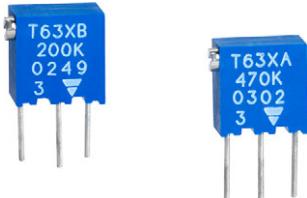


## 1/4" Multi-Turn Fully Sealed Container Cermet Trimmer



Due to their square shape and small size (6.8 mm x 6.8 mm x 5 mm), the multi-turn trimmers of the T63 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.

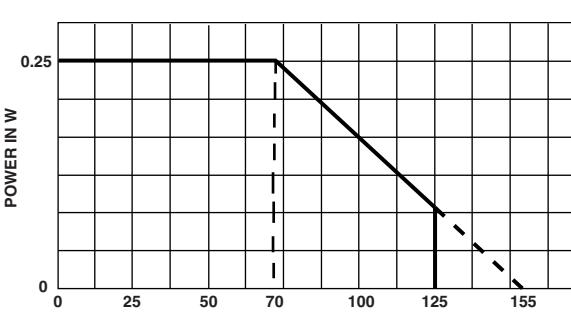
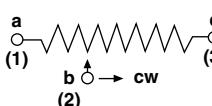
### FEATURES

- 0.25 W at 70 °C
- Tests according to CECC 41000 or IEC 60393-1
- Multi-turn operation
- Low contact resistance variation < 2 %
- Construction: fully sealed
- 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 ( $\pm 0.5$ mm)

T63XA	6.8 ± 0.2 4 min.	5 max.	Terminal Spacing on a 2.54 PCB
T63XB	6.8 ± 0.2 4 min.	5 max.	Terminal Spacing on a 2.54 PCB
T63YA	7.8 max.	5 max.	Terminal Spacing on a 2.54 PCB
T63YB	6.8 ± 0.2 4 min.	5 max.	Terminal Spacing on a 2.54 PCB
T63ZA	6.8 ± 0.2	1.3 ± 0.1	Terminal Spacing on a 2.54 PCB
T63ZB	6.8 ± 0.2	5 max. 4 min.	Terminal Spacing on a 2.54 PCB

<b>ELECTRICAL SPECIFICATIONS</b>	
Resistive element	Cermet
Electrical travel	14 turns $\pm$ 2
Resistance range	10 $\Omega$ to 2.2 M $\Omega$
Standard series and on request series E3	1 - 2 - 5 (1 - 2.2 - 4.7)
Tolerance	Standard $\pm$ 10 % On request $\pm$ 5 %
Power rating	Linear 0.25 W at 70 °C    
Circuit diagram	
Temperature coefficient	$\pm$ 100 ppm/°C
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 V <sub>DC</sub> )	10 <sup>6</sup> M $\Omega$

<b>MECHANICAL SPECIFICATIONS</b>	
Mechanical travel	15 turns $\pm$ 5
Operating torque (max. Ncm)	1.5
End stop torque	Clutch action
Unit weight (max. g)	0.5
Wiper (actual travel)	Positioned at approx. 50 %
Terminals	Pure Sn (code e3)

<b>ENVIRONMENTAL SPECIFICATIONS</b>	
Temperature range	-55 °C to +125 °C
Climatic category	55/125/56
Sealing	Fully sealed - IP67

PERFORMANCES		CONDITIONS	TYPICAL VALUES AND DRIFTS		
TESTS			$\Delta R_T/R_T$	$\Delta R_{1-2}/R_{1-2}$	OTHER
Electrical endurance		1000 h at rated power 90'/30' - ambient temperature 70 °C	± 1 %	± 2 %	Contact res. variation: < 2 % Rn
Climatic sequence		Phase A dry heat 125 °C - 30 % Pr Phase B damp heat Phase C cold -55 °C Phase D damp heat 5 cycles	± 0.5 %	± 1 %	-
Damp heat, steady state		56 days 40 °C, 93 % RH	± 0.5 %	± 1 %	Dielectric strength: 1000 V <sub>RMS</sub> Insulation resistance: > 10 <sup>4</sup> MΩ
Rapid temperature change		5 cycles -55 °C to +125 °C	± 0.5 %	-	$\Delta V_{1-2}/V_{1-3} \leq \pm 1 \%$
Shock		50 g at 11 ms 3 successive shocks in 3 directions	± 0.1 %	± 0.2 %	-
Vibration		10 Hz to 55 Hz 0.75 mm or 10 g during 6 h	± 0.1 %	-	$\Delta V_{1-2}/V_{1-3} \leq \pm 0.2 \%$
Mechanical endurance		200 cycles	± (2 % + 3 Ω)	-	Contact res. variation: < 2 % Rn

**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 -55 °C +125 °C
	MAX. POWER AT 70 °C	MAX. WORKING VOLTAGE	MAX. WIPER CURRENT	
Ω	W	V	mA	ppm/°C
10	0.25	1.58	158	
20	0.25	2.23	112	
50	0.25	3.5	77	
100	0.25	35	50	
200	0.25	7.07	35	
500	0.25	11.2	22	
1K	0.25	15.8	15.8	
2K	0.25	22.3	11.2	
5K	0.25	35.3	7.1	
10K	0.25	50	5	± 100
20K	0.25	70.7	3.5	
25K	0.25	79	3.2	
50K	0.25	112	2.2	
100K	0.25	158	1.6	
200K	0.25	224	1.1	
250K	0.25	250	1.1	
500K	0.13	250	0.5	
1M	0.06	250	0.25	
2.2M	0.03	250	0.125	

MARKING
<ul style="list-style-type: none"> <li>Vishay trademark</li> <li>Model</li> <li>Style</li> <li>Ohmic value (in Ω, kΩ, MΩ)</li> <li>Tolerance (in %) only if non standard</li> <li>Manufacturing date</li> <li>Marking of terminal 3</li> </ul>

PACKAGING
<ul style="list-style-type: none"> <li>In tube of 50 pieces code T20 (TU50)</li> </ul>

ORDERING INFORMATION (part number)													
T	6	3	X	A	1	0	4	K	T	2	0		
MODEL	STYLE	OHMIC VALUE	TOLERANCE	PACKAGING	SPECIAL NUMBER								
T63	XA XB YA YB ZA ZB	From 10 Ω to 2.2 MΩ 104 = 100 kΩ	K = 10 % on request J = 5 %	T20 = tube 50 pieces	(If applicable) Given by Vishay for custom design								

DESCRIPTION (for information only)						
T63	XA	100K	10 %		TU	e3
MODEL	STYLE	VALUE	TOLERANCE	SPECIAL	PACKAGING	LEAD (Pb)-FREE

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>					
Selector guide	<a href="http://www.vishay.com/doc?49286">www.vishay.com/doc?49286</a>					

ACCESSORIES						
Screwdrivers (to order separately)	<a href="http://www.vishay.com/doc?57015">www.vishay.com/doc?57015</a>					

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