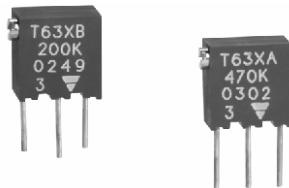


## 1/4" Multi-Turn Fully Sealed Container Cermet Trimmer



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.

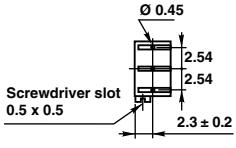
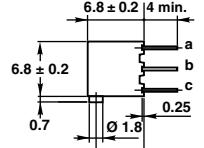
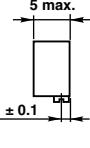
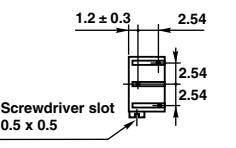
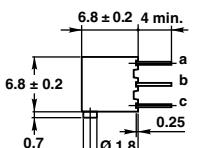
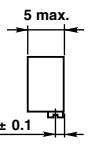
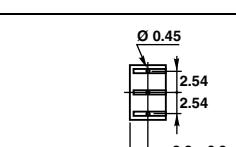
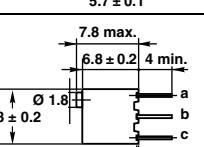
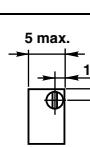
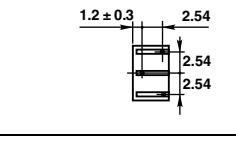
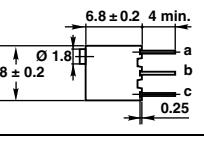
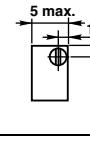
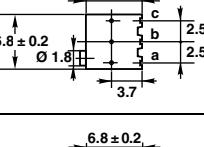
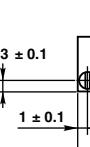
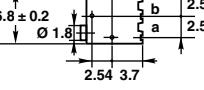
### FEATURES

- 0.25 W at 70 °C
- Industrial grade
- Tests according to CECC 41000 or IEC 60393-1
- Multi-turn operation
- Low contact resistance variation 1 % typical
- Compliant to RoHS directive 2002/95/EC

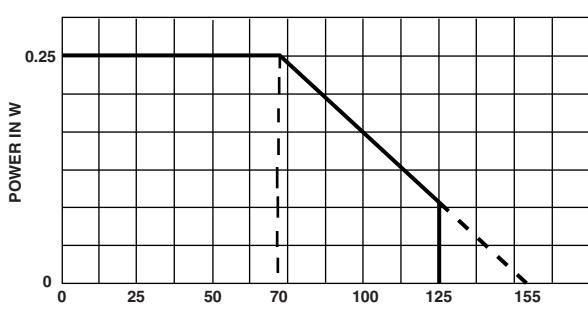
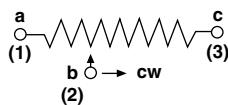


**RoHS**  
COMPLIANT

### DIMENSIONS in millimeters ( $\pm 0.5$ mm)

T63XA				Terminal Spacing on a 2.54 PCB		
				a	b	c
T63XB						
T63YA						
T63YB						
T63ZA						
T63ZB						

**ELECTRICAL SPECIFICATIONS**

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	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 V <sub>DC</sub> )	10 <sup>6</sup> M $\Omega$	

**MECHANICAL SPECIFICATIONS**

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)

**ENVIRONMENTAL SPECIFICATIONS**

Temperature range	- 55 °C to + 155 °C
Climatic category	55/125/56
Sealing	Fully sealed - IP67

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

<b>STANDARD RESISTANCE ELEMENT DATA</b>				
<b>STANDARD RESISTANCE VALUES</b>	<b>LINEAR LAW</b>			<b>TYPICAL TCR - 55 °C + 125 °C</b>
	<b>MAX. POWER AT 70 °C</b>	<b>MAX. WORKING VOLTAGE</b>	<b>MAX. WIPER CUR.</b>	
<b>Ω</b>	<b>W</b>	<b>V</b>	<b>mA</b>	<b>ppm/°C</b>
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	0.50	
1M	0.06	250	0.25	
2.2M	0.03	250	0.125	

<b>MARKING</b>	
• Vishay trademark	• Model
• Style	• Ohmic value (in Ω, kΩ, MΩ)
• Tolerance (in %) only if non standard	• Manufacturing date
• Manufacturing date	• Marking of terminal 3

<b>PACKAGING</b>	
• In tube of 50 pieces code T20 (TU50)	

**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 $\Omega$ to 2.2 M $\Omega$ <b>104</b> = 100 k $\Omega$	<b>K</b> = 10 % on request <b>J</b> = 5 %	<b>T20</b> = 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 FINISH

## Disclaimer

All product specifications and data are subject to change without notice.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product.

Vishay disclaims any and all liability arising out of the use or application of any product described herein or of any information provided herein to the maximum extent permitted by law. The product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein, which apply to these products.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications unless otherwise expressly indicated. Customers using or selling Vishay products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify Vishay for any damages arising or resulting from such use or sale. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.