

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



## 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

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.

DIMENSIONS in millimeters ( $\pm 0.5$ mm)			
<b>T63XA</b> 			<b>Terminal Spacing on a 2.54 PCB</b> 
<b>T63XB</b> 			
<b>T63YA</b> 			
<b>T63YB</b> 			
<b>T63ZA</b> 			
<b>T63ZB</b> 			

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	<p>Linear 0.25 W at + 70 °C</p> <table border="1"> <caption>Power Rating Data</caption> <thead> <tr> <th>Ambient Temperature (°C)</th> <th>Power (W)</th> </tr> </thead> <tbody> <tr><td>0</td><td>0.25</td></tr> <tr><td>25</td><td>0.25</td></tr> <tr><td>50</td><td>0.25</td></tr> <tr><td>70</td><td>0.25</td></tr> <tr><td>100</td><td>0.167</td></tr> <tr><td>125</td><td>0.083</td></tr> <tr><td>155</td><td>0</td></tr> </tbody> </table>	Ambient Temperature (°C)	Power (W)	0	0.25	25	0.25	50	0.25	70	0.25	100	0.167	125	0.083	155	0
Ambient Temperature (°C)	Power (W)																
0	0.25																
25	0.25																
50	0.25																
70	0.25																
100	0.167																
125	0.083																
155	0																
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



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

Vishay Sfernice

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

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.	
Ω	W	V	mA	ppm/°C
10	0.25	1.58	158	± 100
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	
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	

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 FINISH



## Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

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 in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and/or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

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

## Material Category Policy

**Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as RoHS-Compliant fulfill the definitions and restrictions defined under Directive 2011/65/EU of The European Parliament and of the Council of June 8, 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (EEE) - recast, unless otherwise specified as non-compliant.**

**Please note that some Vishay documentation may still make reference to RoHS Directive 2002/95/EC. We confirm that all the products identified as being compliant to Directive 2002/95/EC conform to Directive 2011/65/EU.**

**Vishay Intertechnology, Inc. hereby certifies that all its products that are identified as Halogen-Free follow Halogen-Free requirements as per JEDEC JS709A standards. Please note that some Vishay documentation may still make reference to the IEC 61249-2-21 definition. We confirm that all the products identified as being compliant to IEC 61249-2-21 conform to JEDEC JS709A standards.**



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

**Телефон:** 8 (812) 309 58 32 (многоканальный)

**Факс:** 8 (812) 320-02-42

**Электронная почта:** [org@eplast1.ru](mailto:org@eplast1.ru)

**Адрес:** 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.