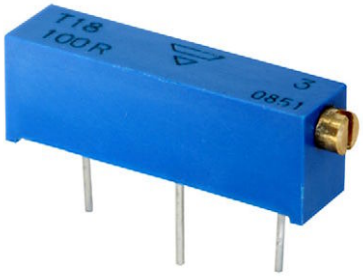
3/4" Rectangular Multi-Turn Cermet Trimmer



FEATURES

- 0.75 W at 70 °C
- Wide ohmic range (10 Ω to 5 MΩ)
- Multi-finger wiper for better CRV
- Tests according to CECC 41000 or IEC 60393-1
- Industrial grade
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

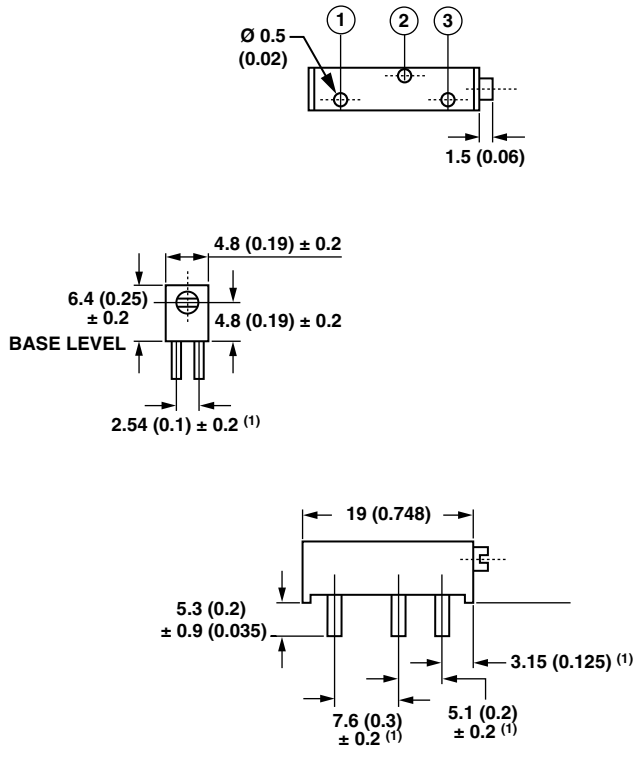
RoHS COMPLIANT

DESIGN SUPPORT TOOLS

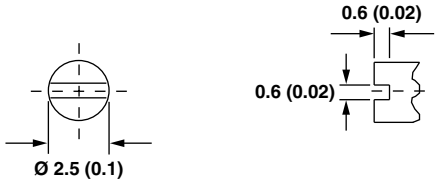
click logo to get started

3D Models Available

DIMENSIONS in millimeters (± 0.5 mm)

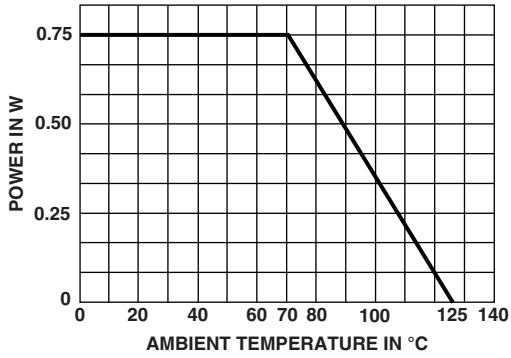
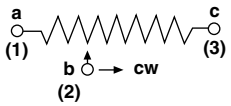


SHAFT



Note

(1) To be measured at base level

ELECTRICAL SPECIFICATIONS	
Resistive element	Cermet
Electrical travel	15 turns ± 1
Resistance range	10 Ω to 5 MΩ
Standard series E3	1 - 2.2 - 4.7 and 1 - 2 - 5
Tolerance **Standard**	± 10 %
Power rating **Linear**	0.75 W at +70 °C 
Circuit diagram	
Temperature coefficient	See Standard Resistance Element table
Limiting element voltage (linear law)	400 V
Contact resistance variation	1 % Rn or 1 Ω max.
End resistance	1 % or 2 Ω
Dielectric strength (RMS)	1000 V
Insulation resistance (500 V_{DC})	10^3 MΩ min.

MECHANICAL SPECIFICATIONS	
Mechanical travel	18 turns ± 5
Operating torque (max. Ncm)	3.5
End stop torque	Clutch action
Net weight (max. g)	1.2
Wiper (actual travel)	Positioned at approx. 50 %
Terminals	e3: Pure Sn

ENVIRONMENTAL SPECIFICATIONS	
Temperature range	-55 °C to +125 °C
Climatic category	55/125/4
Sealing	Fully sealed - IP67

PERFORMANCES

TESTS	CONDITIONS	TYPICAL VALUES AND DRIFTS		
		$\Delta R_T/R_T$ (%)	$\Delta V_{1\text{-}2}/V_{1\text{-}3}$ (%)	OTHER
Load life	1000 h at rated power 90'/30' - ambient temp. 70 °C	± 4 %	-	-
Damp heat steady state	4 days	± 3 %	-	Dielectric strength: 1000 V_{RMS} Insulation resistance: > 20 MΩ
Rapid temp. change	5 cycles -55 °C to +125 °C	± 0.5 %	± 2 %	-
Shock	50 g at 11 ms 3 successive shocks in 3 directions	± 2 %	± 2 %	-
Vibration	10 Hz to 55 Hz 0.75 mm or 10 g during 6 h	± 2 %	± 2 %	-
Rotational life	200 cycles	± (3 % + 1 Ω)	-	Contact res. variation: < 1 % 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 to +125 °C
	MAX. POWER AT 70 °C	MAX. WORKING VOLTAGE	MAX. WIPER CURRENT	
Ω	W	V	mA	ppm/°C
10	0.75	2.74	274	± 100
22	0.75	4.06	185	
47	0.75	5.94	126	
100	0.75	8.66	87	
220	0.75	12.8	58	
470	0.75	18.8	40	
1K	0.75	27.4	27	
2.2K	0.75	40.6	18	
4.7K	0.75	59.4	13	
10K	0.75	86.6	8.7	
22K	0.75	128	5.8	
47K	0.75	188	4	
100K	0.75	274	2.7	
220K	0.75	400	1.8	
470K	0.34	400	0.85	
1M	0.16	400	0.4	
2.2M	0.07	400	0.18	
4.7M	0.03	400	0.09	

MARKING

- Vishay trademark
- Vishay part number or model and ohmic value (in Ω, kΩ, MΩ)
- Manufacturing date
- Marking of terminal 3

PACKAGING

- In tube of 25 pieces code T10 (TU25)

ORDERING INFORMATION (Part Number)

T	1	8	2	2	4	K	T	1	0			

Model	OHMIC VALUE	TOLERANCE	PACKAGING	SPECIAL NUMBER
T18	From 10 Ω to 5 MΩ **224** = 220 kΩ	**K** = 10 %	**T10** = tube 25 pieces	(If applicable) Given by Vishay for custom design

DESCRIPTION (for information only)

T18	220K	± 10 %	TU25	e3
MODEL	VALUE	TOLERANCE	PACKAGING	LEAD FINISH

RELATED DOCUMENTS

APPLICATION NOTES	
Potentiometers and Trimmers	www.vishay.com/doc?51001
Guidelines for Vishay Sfernice Resistive and Inductive Components	www.vishay.com/doc?52029

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.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Vishay:
T18102KT10 T18501KT10 T18202KT10 T18503KT10 T18104KT10 T18103KT10 T18253KT10 T18105KT10 T18502KT10 T18223KT10 T18203KT10 T18101KT10 T18504KT10 T18201KT10 T18204KT10 T18205KT10 T18 20K 10%