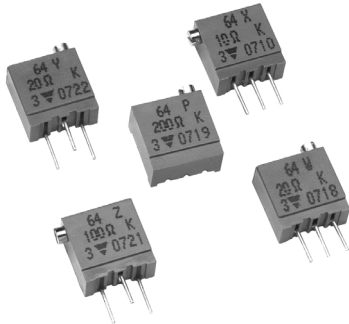


3/8" Square (10 mm) Multi-Turn Cermet Trimmer



FEATURES

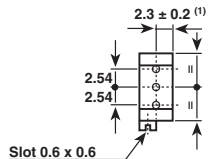
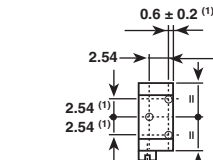
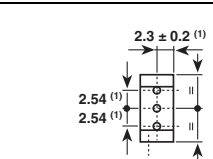
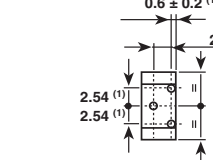
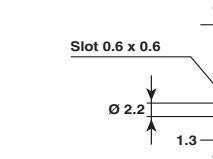
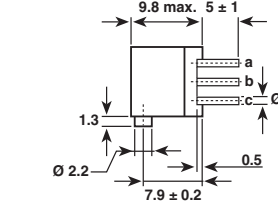
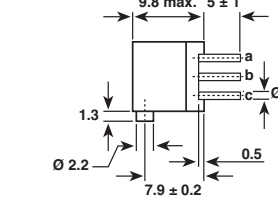
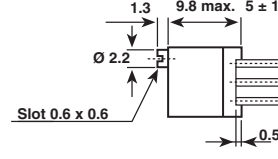
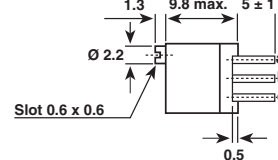
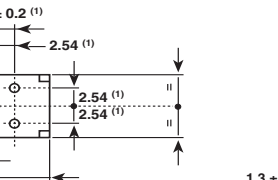
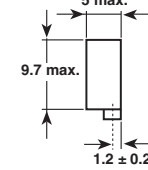
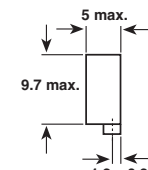
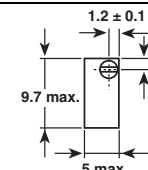
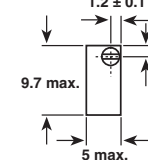
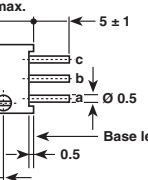
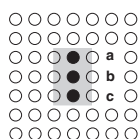
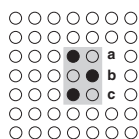
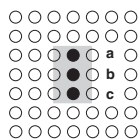
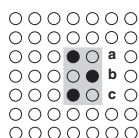
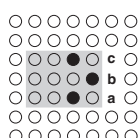
- Industrial grade
- 0.5 W at 70 °C
- Tests according to CECC 41000 or IEC 60393-1
- Contact resistance variation < 1 % typical
- Compliant to RoHS Directive 2002/95/EC



RoHS
COMPLIANT

The Model 64 is a small size trimmer - 3/8" x 3/8" x 3/16" - answering PC board mounting requirements. Five versions are available which differ by the position of the control screw in relation to the PC board plane and by the spacing of the terminals. Excellent operational stability is provided by the use of a cermet element.

DIMENSIONS in millimeters (± 0.5 mm)

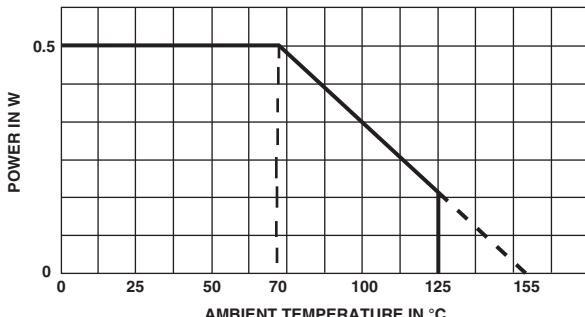
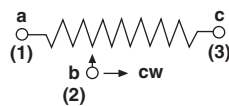
64X	64Z	64W	64Y	64P
 Slot 0.6 x 0.6	 Slot 0.6 x 0.6	 Slot 0.6 x 0.6	 Slot 0.6 x 0.6	 Slot 0.6 x 0.6
 9.8 max. 5 $\pm$ 1 1.3 $\varnothing$ 2.2 7.9 $\pm$ 0.2 0.5	 9.8 max. 5 $\pm$ 1 1.3 $\varnothing$ 2.2 7.9 $\pm$ 0.2 0.5	 9.8 max. 5 $\pm$ 1 1.3 $\varnothing$ 2.2 7.9 $\pm$ 0.2 0.5	 9.8 max. 5 $\pm$ 1 1.3 $\varnothing$ 2.2 7.9 $\pm$ 0.2 0.5	 9.8 max. 5 $\pm$ 1 1.3 $\varnothing$ 2.2 7.9 $\pm$ 0.2 0.5
 5 max. 9.7 max. 1.2 $\pm$ 0.2	 5 max. 9.7 max. 1.2 $\pm$ 0.2	 5 max. 9.7 max. 1.2 $\pm$ 0.1 1.6 $\pm$ 0.1	 5 max. 9.7 max. 1.2 $\pm$ 0.1 1.6 $\pm$ 0.1	 5.2 max. 5 $\pm$ 1 9.7 max. 1.3 $\pm$ 0.1 1.2 $\pm$ 0.1 Base level
 Terminal Spacing on a 2.54 PCB	 Terminal Spacing on a 2.54 PCB	 Terminal Spacing on a 2.54 PCB	 Terminal Spacing on a 2.54 PCB	 Terminal Spacing on a 2.54 PCB

Note

(1) To be measured at base level

3/8" Square (10 mm) Multi-Turn Cermet Trimmer

Vishay Spectrol

ELECTRICAL SPECIFICATIONS	
Resistive element	Cermet
Electrical travel	21 turns $\pm$ 2
Resistance range	10 Ω to 2.2 M Ω
Standard series E3	1 - 2 - 2.5 - 5
Tolerance	Standard 10 %
	On request 5 %
Power rating	linear 0.5 W at + 70 °C 
Circuit diagram	
Temperature coefficient	See Standard Resistance Element table
Limiting element voltage (linear law)	250 V
Contact resistance variation	2 % R _n or 2 Ω
End resistance (typical)	1 Ω
Dielectric strength (RMS)	1000 V
Insulation resistance (500 V _{DC})	10 ⁶ M Ω

MECHANICAL SPECIFICATIONS	
Mechanical travel	23 turns $\pm$ 5
Operating torque (max. Ncm)	1.5
End stop torque	Clutch action
Net weight	Approx. 0.82 g
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

STANDARD RESISTANCE ELEMENT DATA

STANDARD RESISTANCE VALUES	LINEAR LAW			TYPICAL TCR - 55 °C + 125 °C ppm/°C
	MAX. POWER AT 70 °C	MAX. WORKING VOLTAGE	MAX. CURRENT THROUGH WIPER	
Ω	W	V	mA	
10	0.5	2.2	224	± 100
20	0.5	3.2	158	
50	0.5	5	100	
100	0.5	7.1	71	
200	0.5	10	50	
250	0.5	11.2	45	
500	0.5	15.8	32	
1K	0.5	22.4	22	
2K	0.5	31.6	16	
2.5K	0.5	35.4	14	
5K	0.5	50	10	
10K	0.5	70.7	7.1	
20K	0.5	100	5	
25K	0.5	112	4.5	
50K	0.5	158	3.2	
100K	0.5	224	2.2	
200K	0.31	250	1.3	
250K	0.25	250	1	
500K	0.125	250	0.5	
1M	0.063	250	0.25	
2M	0.031	250	0.13	

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 _{RMS} Insulation resistance: > 10 ⁴ M Ω	± 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	± 4 % Contact res. variation: < 1 % Rn	-

MARKING

- Vishay trademark
- Model
- Style
- Ohmic value (in Ω , k Ω , M Ω)
- Tolerance (in %)
- Manufacturing date
- Marking of terminal 3

3/8" Square (10 mm) Multi-Turn Cermet
Trimmer

Vishay Spectrol

PACKAGING

- In box of 200 pieces code B40 (BO200)
- On request:
- In box of 100 pieces code B30 (BO100)
 - In tube of 50 pieces code T20 (TU50)

ORDERING INFORMATION (Part Number)

M	6	4	P	2	2	4	K	B	4	0			
Model	STYLE			OHMIC VALUE			TOLERANCE		PACKAGING		SPECIAL NUMBER		
M64	P W X Y Z			From 10 Ω to 2.2 M Ω 224 = 220 k Ω			K = 10 % On request J = 5 %		B40 = Box 200 pieces On request: B30 = Box 100 pieces T20 = Tube 50 pieces		(If applicable) Given by Vishay for custom design		

DESCRIPTION (for information only)

64	P	220K	10 %		BO200	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 and agree to fully indemnify and hold Vishay and its distributors harmless from and against any and all claims, liabilities, expenses and damages arising or resulting in connection with such use or sale, including attorneys fees, even if such claim alleges that Vishay or its distributor was negligent regarding the design or manufacture of the part. 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.