



3/8" Square Multi-Turn Cermet Trimmer



The T93 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.

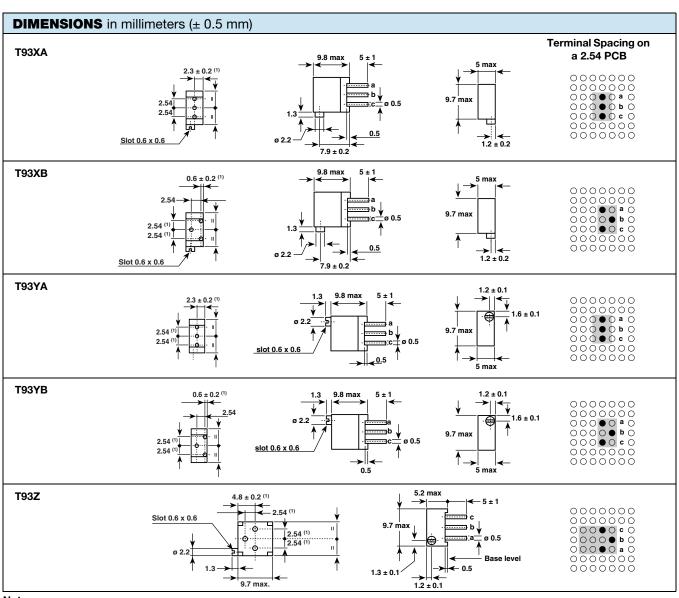
FEATURES

- Industrial grade
- 0.5 W at 70 °C



COMPLIANT

- Tests according to CECC 41000 or IEC 60393-1
- Contact resistance variation < 1 %
- Compliant to RoHS directive 2002/95/EC



Note

(1) To be measured at base level

Downloaded from Elcodis.com electronic components distributor

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ELECTRICAL SPECIFIC	CATIONS				
Resistive element		Cermet			
Electrical travel		21 turns ± 2			
Resistance range		10 Ω to 2.2 M Ω			
Standard series E3		1 - 2.2 - 4.7 and on request 1 - 2 - 5			
Tolerance	Standard	10 %			
loierance	On request	5 %			
linear		0.5 W at + 70 °C			
Power rating		0.5 NI WE WAR AND THE PRINCE OF THE PRINCE			
Circuit diagram		$ \begin{array}{c} a \\ \bigcirc \\ (1) \\ b \\ \downarrow \\ C \\ (3) \end{array} $ $ \begin{array}{c} c \\ (3) \\ (3) \end{array} $ $ \begin{array}{c} c \\ (3) \end{array} $			
Temperature coefficient		See Standard Resistance Element table			
Limiting element voltage (linear law)		250 V			
Contact resistance variation		2 % Rn or 2 Ω			
End resistance (typical)		1 Ω			
Dielectric strength (RMS)		1000 V			
Insulation resistance (500 V _{DC})		$10^6\mathrm{M}\Omega$			

MECHANICAL SPECIFICATIONS				
Mechanical travel	23 turns ± 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			



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STANDARD RESISTANCE VALUES		TYPICAL		
	MAX. POWER AT 70 °C	MAX. WORKING VOLTAGE	MAX. CURRENT THROUGH WIPER	TCR - 55 °C + 125 °C
Ω	W	V	mA	ppm/°C
10	0.5	2.2	224	
22	0.5	3.3	150	
47	0.5	4.8	103	
100	0.5	7	70	
220	0.5	10.5	47	
470	0.5	15.3	32	
1K	0.5	22.4	22	
2.2K	0.5	33.2	15	
4.7K	0.5	48.5	10	± 100
10K	0.5	70.7	7	
22K	0.5	105	4.8	
47K	0.5	153	3.2	
100K	0.5	224	2.2	
220K	0.28	250	1.1	
470K	0.13	250	0.53	
1M	0.06	250	0.25	
2.2M	0.028	250	0.11	

PERFORMANCES							
TESTS	CONDITIONS	TYPICAL VALUES AND DRIFTS					
	CONDITIONS	ΔR _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	$\pm~0.5~\%$ Dielectric strength: 1000 V_{RMS} Insulation resistance: $>10^4~M\Omega$	± 1 %				
Rapid temperature change	5 cycles - 55 °C at + 125 °C	± 0.5 %	$\Delta V_{1-2}/\Delta V_{1-3} \le \pm 1 \%$				
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 %	$\Delta V_{1-2}/\Delta V_{1-3} \le \pm \ 0.2 \%$				
Rotational life	200 cycles	± 4 % Contact res. variation: < 1 % Rn	-				

MARKING

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

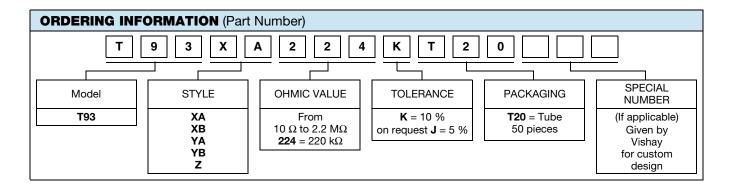
PACKAGING

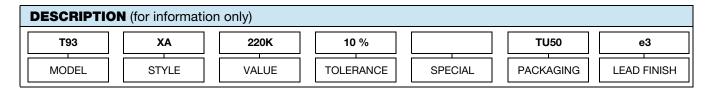
• In tube of 50 pieces code T20 (TU50)

Vishay Sfernice

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Vishay

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