

3/8" Square Multi-Turn Cermet Trimmer



LINKS TO ADDITIONAL RESOURCES



FEATURES

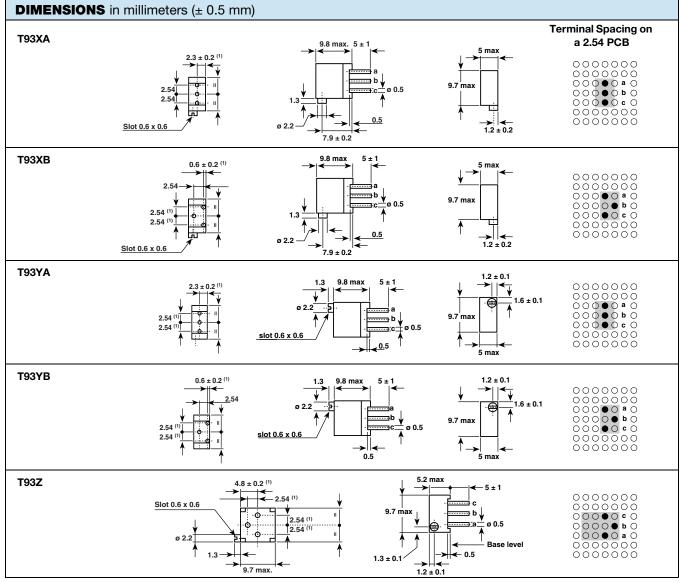
- Industrial grade
- 0.5 W at 70 °C



RoHS COMPLIANT

- Tests according to CECC 41000 or IEC 60393-1
- Contact resistance variation < 2 %
- Material categorization: for definitions of compliance please see www.vishav.com/doc?99912

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.



Note

(1) To be measured at base level

Vishay Sfernice

ELECTRICAL SPECIFICATIONS			
Resistive element	Cermet		
Electrical travel	21 turns ± 2		
Resistance range	10 Ω to 2.2 MΩ		
Standard series E3	1 - 2.2 - 4.7 and on request 1 - 2 - 5		
Tolerance Standard	10 %		
On request	5 %		
linear	0.5 W at +70 °C		
Power rating	0.5 N I U U U U U U U U U U U U U U U U U U		
Circuit diagram	$ \begin{array}{c} a \\ \bigcirc \longrightarrow \bigvee \bigvee \bigvee \bigvee \bigcirc \bigcirc \bigcirc \\ (1) \\ b \\ \bigcirc \longrightarrow \bigcirc \bigcirc \\ (3) \\ (2) \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 MΩ		

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 +125 °C
Climatic category	55/125/56
Sealing	Fully sealed - IP67



STANDARD		LINEAR LAW		
RESISTANCE VALUES	MAX. POWER AT 70 °C	MAX. WORKING VOLTAGE	MAX. CURRENT THROUGH WIPER	TCR -55 °C +125 °C
Ω	W	٧	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		
12515		$\Delta R_{T}/R_{T}$ (%)	$\Delta R_{1-2}/R_{1-2}$ (%)	
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	$\pm~0.5~\%$ Dielectric strength: 1000 V_{RMS} Insulation resistance: $>10^4~M\Omega$	± 1 %	
Rapid temperature change	5 cycles -55 °C to +125 °C	± 0.5 %	$\Delta V_{1-2}/V_{1-3} \le \pm 1 \%$	
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 %	$\Delta V_{1-2}/V_{1-3} \le \pm 0.2 \%$	
Rotational life	200 cycles	± 4 % Contact res. variation: < 1 % Rn	-	

Note

Nothing stated herein shall be construed as a guarantee of quality or durability

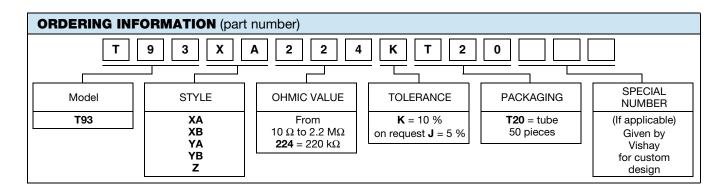
MARKING

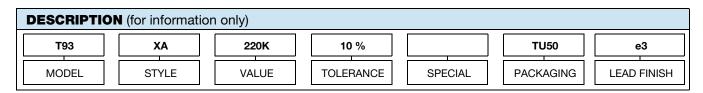
- Vishay trademark
- Model
- Style
- Ohmic value (in Ω , $k\Omega$, $M\Omega$)
- Tolerance (in %)
- Manufacturing date
- Marking of terminal 3

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PACKAGING

• In tube of 50 pieces code T20 (TU50)





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

ACCESSORIES	
Screwdrivers (to order separately)	www.vishay.com/doc?57015





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