3D Models Available

Vishay Sfernice

3/8" Square Multi-Turn Cermet Trimmer



FEATURES Industrial grade

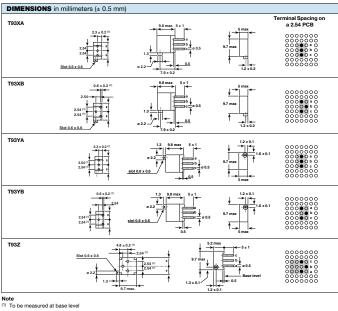


ROHS • 0.5 W at 70 °C

• Tests according to CECC 41000 or IEC 60393-1 Contact resistance variation < 2 %

· Material categorization: for definitions of compliance

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.



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For technical questions, contact: slergott/immers@vishay.com

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T93

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ANDARD RESISTANCE ELEMENT DATA					
STANDARD RESISTANCE VALUES		LINEAR LAW			
	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		
TESTS	CONDITIONS	$\Delta R_T/R_T$ (%)	$\Delta R_{1-2}/R_{1-2}$ (%)	
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 MΩ	± 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, kΩ, MΩ)
 Tolerance (in %)
 Manufacturing date
 Marking of terminal 3

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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 25 50 70 100 125 155 AMMENT TEMPERATURE N°C				
Circuit diagram	a O¬√√√√√ b b b → cw (2)				
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)	1Ω				
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		

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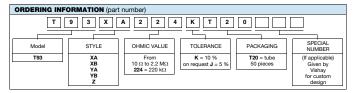
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T93





DESCRIPTION (for information only)						
Т93	XA	220K	10 %		TU50	e3
MODEL	STYLE	VALUE	TOLERANCE	SPECIAL	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		

VISHAY, www.vishay.com

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