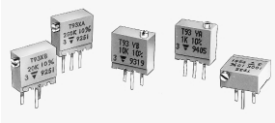
3/8” Square Multiturn Cermet Trimmers



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.

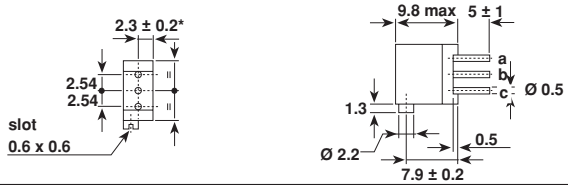
FEATURES

- Industrial Grade
- 0.5 Watt at 70°C
- CECC 41 100
- MIL-R-22097
- Good stability
- Contact resistance variation < 1% typical
- Meet MIL-R-22097 specifications

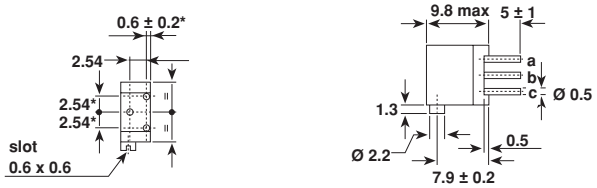
DIMENSIONS in millimeters

Terminal Spacing on a 2.54 PCB

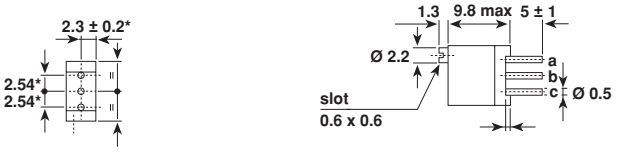
T93XA



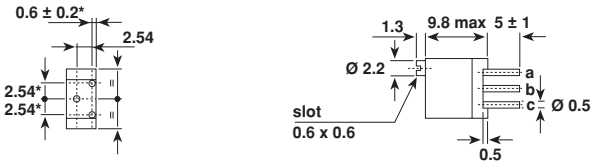
T93XB



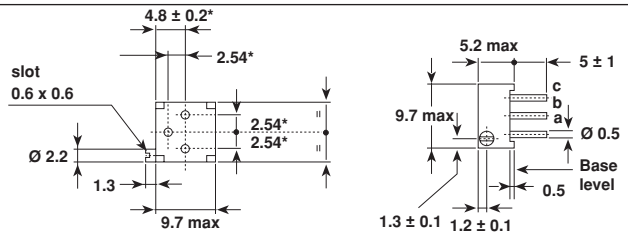
T93YA



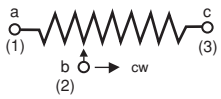
T93YB



T93Z



CIRCUIT DIAGRAM



*to be measured at base level

ELECTRICAL SPECIFICATIONS		
Resistive Element		cermet
Electrical Travel		19 turns ± 2
Resistance Range		10 to 2.2 MΩ
Standard Series E3		1 - 2.2 - 4.7 and 1 - 2 - 5
Tolerance	**Standard**	± 10%
	On Request	± 5%
Power Rating	**Linear**	0.5 W at + 85°C
	Logarithmic	not applicable
Temperature Coefficient		See Standard Resistance Element Data
Limiting Element Voltage (Linear Law)		250 V
Contact Resistance Variation		2% Rn or 2Ω
End Resistance (Typical)		1Ω
Dielectric Strength (RMS)		1000 V
Insulation Resistance (500 VDC)		10^6MΩ

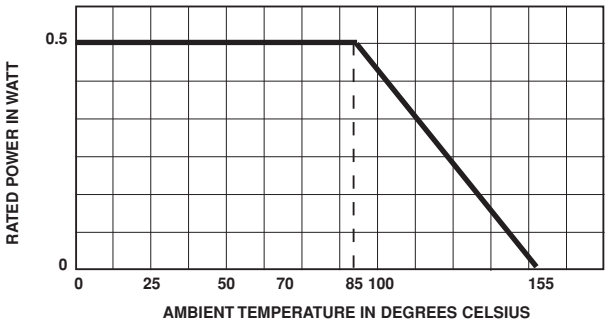
MECHANICAL SPECIFICATIONS

Mechanical Travel	22 turns ± 5
Operating Torque (max. Ncm)	1.5
End Stop Torque	clutch action
Unit Weight (max. g)	1.2

ENVIRONMENTAL SPECIFICATIONS

Temperature Range	– 55°C + 155°C
Climatic Category	55/125/56
Sealing	fully sealed container IP67

POWER RATING CHART



PERFORMANCE			
TESTS	**CONDITIONS**	**TYPICAL VALUES AND DRIFTS** $\frac{\Delta RT}{RT}$ (%)	$\frac{\Delta R_{1-2}}{R_{1-2}}$ (%)
Load Life	1000 hours at rated power 90'/30' - ambient temperature 85°C	± 1%	± 2% Contact resistance variation : < 1% Rn
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	± 0.5% Dielectric strength : 1000 V RMS Insulation resistance : > 10^4 MΩ	± 1%
Rapid Temperature Change	5 cycles – 55°C at + 125°C	± 0.5 %	$\frac{\Delta V_{1-2}}{V_{1-3}} \leq$ ± 1%
Shock	50 g 11 ms 3 successive shocks in 3 directions	± 0.1%	± 0.2%
Vibration	10 - 55 Hz 0.75 mm or 10 g during 6 hours	± 0.1%	$\frac{\Delta V_{1-2}}{V_{1-3}} \leq$ ± 0.2%
Rotational Life	200 cycles	± 2 % Contact resistance variation : < 1% Rn	

STANDARD RESISTANCE ELEMENT DATA

STANDARD RESISTANCE VALUES	LINEAR LAW			T.C. – 55°C + 125°C
	MAX. POWER AT + 85°C	MAX. WORKING VOLTAGE	MAX. CUR. THROUGH ELEMENT	
Ω	W	V	mA	ppm/°C
10	0.5	2.2	224	
22		3.3	150	0
47		4,8	103	+ 200
100		7	70	
220		10.5	47	
470		15.3	32	
1k		22.4	22	
2.2k		33.2	15	
4.7k		48.5	10	
10k		70.7	7	
22k		105	4.8	± 100
47k		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	

MARKING

Printed : VISHAY logo, series, style, rated ohmic value (in Ω, kΩ, MΩ), tolerance (in %), manufacturing date, marking of terminal 3.

PACKAGING

– In magazine pack by 50 pieces (tube) code “TU50”.

ORDERING INFORMATION

T93	XA	220kΩ	± 10 %	TU50
SERIES	VERSION	OHMIC VALUE	TOLERANCE	PACKAGING
				TU50: Tube