COMPLIANT



3/8" Square Multi-Turn Fully Sealed Container Cermet Trimmer



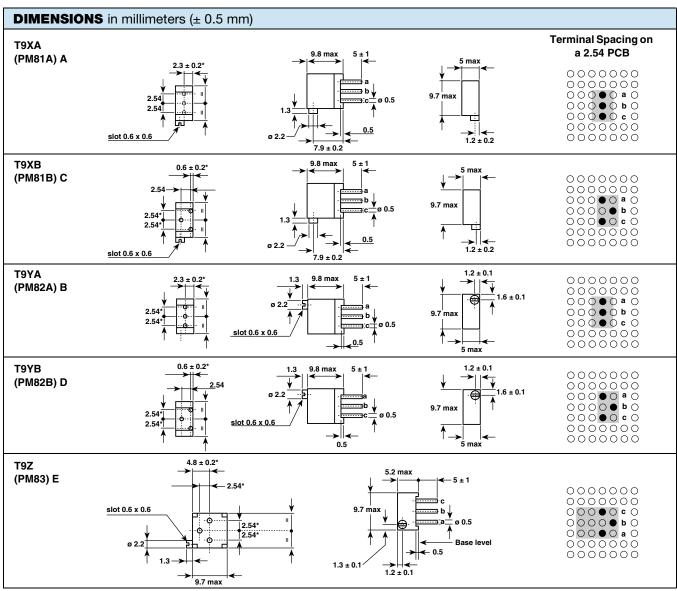
DESIGN SUPPORT TOOLS

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FEATURES

- · Military and professional grade
- 0.5 W at 70 °C
- Product qualification according to CECC 41101-004 (A, B, C, D, E)
- Tests according to CECC 41000 or IEC 60393-1
- GAM T1
- · Fully sealed
- Operating temperature range -55 °C to +155 °C
- Wide ohmic range from 10 Ω to 2.2 M Ω
- Material categorization: for definitions of compliance please see <u>www.vishay.com/doc?99912</u>



Note

(1) To be measured at base level

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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			
Circuit diagram	$ \begin{array}{c} \overset{\mathbf{a}}{\circ} - \checkmark \checkmark \checkmark \checkmark \checkmark \checkmark \checkmark - \overset{\mathbf{c}}{\circ} \\ \overset{\mathbf{(1)}}{\circ} & \overset{\mathbf{b}}{\circ} \to \mathbf{cw} \\ \overset{\mathbf{(2)}}{\circ} $		
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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PERFORM	PERFORMANCES				
	CECC 41100	REQUIREMENTS		TYPICAL VALUES AND DRIFTS	
TESTS	CONDITIONS	∆R _T /R _T (%)	∆R ₁₋₂ /R ₁₋₂ (%)	∆R _T /R _T (%)	∆R ₁₋₂ /R ₁₋₂ (%)
Climatic sequence	Phase A dry heat 125 °C Phase B damp heat Phase C cold -55 °C Phase D damp heat 5 cycles	± 2 %	± 3 %	± 0.5 %	± 1 %
Long term damp heat	56 days 40 °C, 93 % RH	± 2 % Dielectric strength: 700 V Insulation resistance: > 100 MΩ	± 3 %	\pm 0.5 % Dielectric strength: 1000 V Insulation resistance: > 10^4 M Ω	± 1 %
Rotational life	200 cycles	± 2 % Contact res. variation: < 3 % Rn	-	± 2 % Contact res. variation: < 1 % Rn	-
Load life	1000 h at rated power 90'/30' - ambient temp. 70 °C	± 2 % Contact res. variation: < 3 % Rn	± 3 %	± 1 % Contact res. variation: < 1 % Rn	± 2 %
Rapid temp. change	5 cycles -55 °C to +125 °C	± 1.5 %	ΔV ₁₋₂ /V ₁₋₃ ± 1 %	± 0.5 %	ΔV ₁₋₂ /V ₁₋₃ < ± 1 %
Shock	50 g at 11 ms 3 successive shocks in 3 directions	± 1 %	± 2 %	± 0.1 %	± 0.2 %
Vibration	10 Hz to 55 Hz 0.75 mm or 10 g during 6 h	± 1 %	ΔV ₁₋₂ /V ₁₋₃ ± 2 %	± 0.1 %	ΔV ₁₋₂ /V ₁₋₃ < ± 0.2 %

Note

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

STANDAR	STANDARD RESISTANCE ELEMENT DATA				
STANDARD	LINEAR LAW			TYPICAL	
RESISTANCE VALUES	MAX. POWER AT 70 °C	MAX. WORKING VOLTAGE	MAX. CUR. THROUGH WIPER	TCR -55 °C TO +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		

MARKING
Vishay trademark
Model
Style
• Ohmic value (in Ω , $k\Omega$, $M\Omega$)
Tolerance (in %)
Manufacturing date

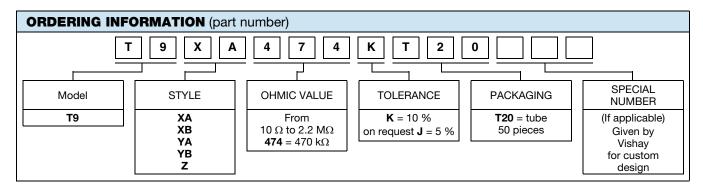
PACKAGING

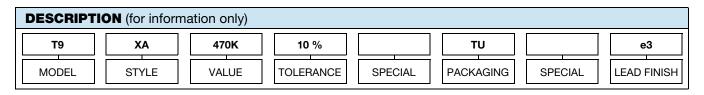
• Marking of terminal 3

In tube of 50 pieces code T20 (TU50)



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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



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