Vishay Sfernice



Multi-Turn Surface Mount Miniature 1/4" Square Cermet Trimmers, Fully Sealed



The TS63 multiturn trimmer has been designed for use in PCB surface mounting applications.

Three variations are available according to the positioning of the control screw and contact positions.

The cermet track gives a high stability performance with an extended ohmic capacity of 10Ω to $2M\Omega$.

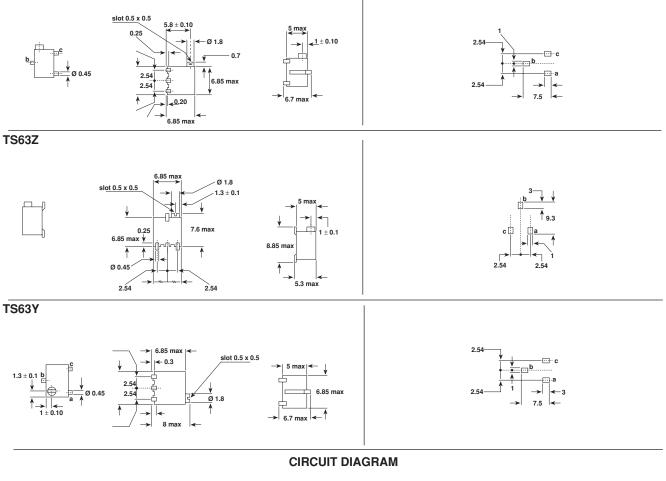
DIMENSIONS in millimeters

TS63X

FEATURES

- 0.25 Watt at 85°C
- GAM T1
- Industrial grade
- Multi-turn operation
- A low contact resistance variation
- Tight tolerances
- Low end contact resistance
- Full sealing

RECOMMENDED SOLDERING AREAS





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ELECTRICAL SPI	ECIFICATIONS	
Resistive Element		Cermet
Electrical Travel		13 turns ± 2
Resistance Range		10 Ω to 2M Ω
Standard Series		1 - 2 - 5
Tolerance	Standard	±10%
	On request	± 5%
Power Rating	Linear	0.25W at 85°C
	Logarithmic	not applicable
Temperature Coefficient		See Standard Resistance Element Data
Limiting Element Voltage (Linear Law)		250V
Contact Resistance Variation		2% Rn or 2Ω
End Resistance (Typical)		1Ω
Dielectric Strength (RMS)		1000V
Insulation Resistance		10 ⁶ ΜΩ

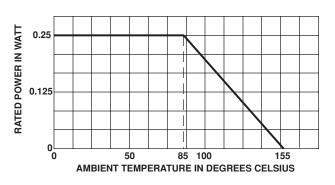
MECHANICAL SPECIFICATIONS

Mechanical Travel	15 turns ± 5
Operating Torque (max. Ncm)	1.5
End Stop Torque	clutch action
Unit Weight (max. g)	0.5

ENVIRONMENTAL SPECIFICATIONS

Temperature Range Climatic Category Sealing - 55°C to + 155°C 55 / 125 / 56 sealed container solder immersion IP67

POWER RATING CHART



PERFORMANCE							
CECC 41100					TYPICAL VALUES AND DRIFTS		
TESTS	CONDITIONS	$\frac{\Delta RT}{RT}$ (%) F	REQUIREMENTS	<u>∆R1-2</u> (%)	<u>∆RT</u> (%)	<u>∆</u> R1-2 R1-2	· (%)
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	± 2% Dielectric str	rength: 250 V RMS	± 3%	± 0.5% Dielectric str	enath: 100	± 1%
	00 00,0	Insulation resistance: > 100 M Ω			Dielectric strength: 1000 V RMS Insulation resistance: > $10^4 M\Omega$		
Rotational Life	200 cycles at rated power	±2%			±2%		
(Electrical, Mechanical)	200 cycles al faled power	Contact res. variat.: < 3% Rn		Contact res. variat.: < 1% Rn			
Load Life	1000 h at rated power	± 2%		± 4%	±1%		± 2%
Load Life	90'/30' - ambient temp. 85°C	Contact res. variat.: < 3% Rn			Contact res. variat.: < 1% Rn		
Thermal Shock	5 cycles – 55°C to + 125°C	± 1.5%	<u>ΔV1-2</u> V1-3	± 1%	± 0.5%	ΔV1-2 V1-3	<±1%
Shock	50 g at 11m secs 3 successive shocks in 3 directions	± 1%		± 2%	± 0.1%		± 0.2%
Vibration	10-55Hz 0.75mm or 10 g for 6 hours	± 1%	<u>ΔV1-2</u> V1-3	± 2%	± 0.1 %	ΔV1-2 V1-3	< ± 0.2%

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STANDARD RESISTANCE ELEMENT DATA						
STANDARD		LINEAR LAW				
RESISTANCE VALUES	MAX. POWER AT 85°C	MAX. WORKING VOLTAGE	MAX. CUR. THROUGH ELEMENT	T.C. –55°C +125°C		
Ω	W	V	mA	ppm/°C		
10 20 50	0.25	1.58 2.23 3.53	158 112 77	0 + 200		
100 200 500 1k 2k 5k 10k 20k 25k 50k 100k 250k 500k 1M 2M	0.25 0.25 0.13 0.06 0.03	5 7.07 11.2 15.8 22.3 35.3 50 70.7 79 112 158 224 250 250 250 250	50 35 22 15.8 11.2 7.1 5 3.5 3.2 2.2 1.6 1.1 1.1 0.50 0.25 0.125	± 100		

MARKING

Printed: VISHAY trademark, series, style, ohmic value (in Ω , $k\Omega$, $M\Omega$), tolerance (in %) only if non standard, manufacturing date, marking of terminal 3.

SOLDERING RECOMMENDATIONS

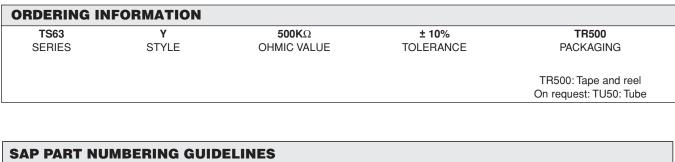
Soldering cycle: 2 mn at 215°C or 5 seconds at 260°C or with an IRON 40 W: 3 seconds at 350°C.

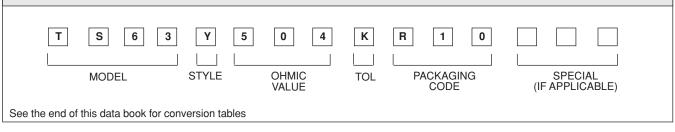
Soldering is recommended by reflow and vapor phase.

PACKAGING

– X, Y and Z types : on tape and reel (Dia. 330mm) of 500 pieces, code TR500.

- On request in magazine pack by 50 pieces (Tube) code TU.







Vishay

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