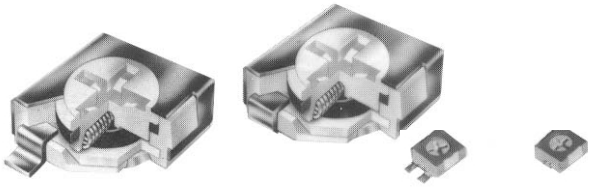
Surface Mount Miniature Trimmers
Single Turn Cermet Fully Sealed



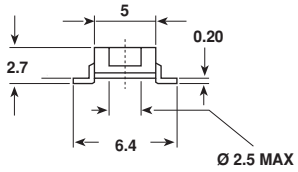
The TS5 trimming potentiometer has been designed for surface mount applications and offers volumetric efficiency (5 x 5 x 2.7 mm) with high performance and stability. The TS5 design is suitable for both manual or automatic operation, and can withstand wave, vapor phase and reflow soldering techniques.

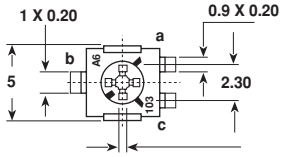
FEATURES

- 0.20 Watt at 85°C
- CECC 41100
- GAM T1
- Professional grade
- Excellent stability
- Wide ohmic range
- Full sealing
- Low temperature coefficient
- Low contact resistance variation
- Small size for optimum packing density
- Suitable for both manual or automatic operation

DIMENSIONS in millimeters

TS5YL

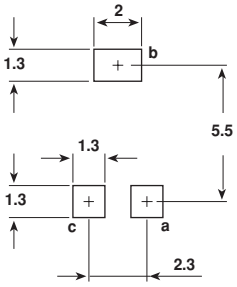




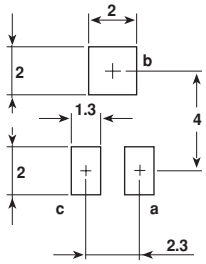
cruciform screwdriver slot
ø2.5, width 0.5
deep: 0.55
max deep (center): 0.7

RECOMMENDED SOLDERING AREAS

TS5YL

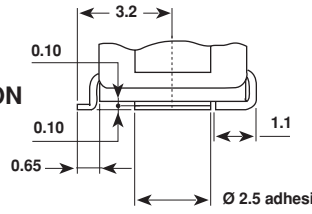


TS5YJ



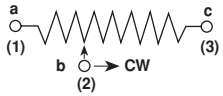
ADHESIVE PAD (detail)

L VERSION

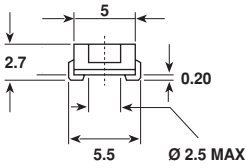


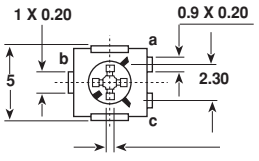
J VERSION

CIRCUIT DIAGRAM



TS5YJ





cruciform screwdriver slot
ø2.5, width 0.5
deep: 0.55
max deep (center): 0.7

ELECTRICAL SPECIFICATIONS		
Resistive Element		Cermet
Electrical Travel		220° ± 15°
Resistance Range		10Ω to 1MΩ
Standard Series		1 - 2 - 5
Tolerance Standard		±10%
Power Rating	**Linear**	0.25W at 70°C
	Logarithmic	not applicable
Temperature Coefficient		See Standard Resistance Element Data
Limiting Element Voltage (Linear Law)		200V
Contact Resistance Variation		1% or 3Ω
End Resistance (Typical)		0.1% or 3Ω
Dielectric Strength (RMS)		1000V
Insulation Resistance		10^6MΩ
Specification		in accordance with CECC 41100 and VRCI

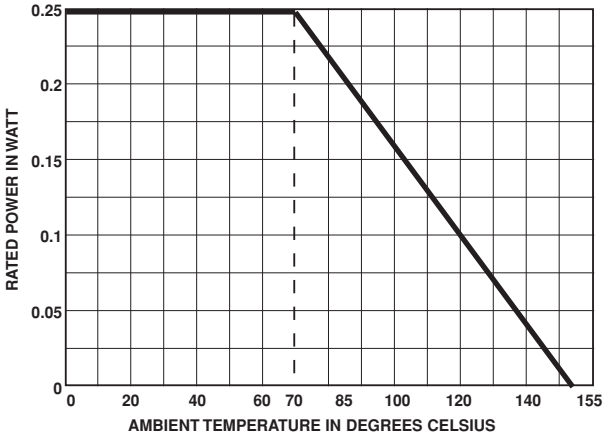
MECHANICAL SPECIFICATIONS

Mechanical Travel	270° ± 10°
Operating Torque (max. Ncm)	1.5
End Stop Torque (max. Ncm)	3.5
Unit Weight (max. g)	0.15

ENVIRONMENTAL SPECIFICATIONS

Temperature Range	– 55°C + 125°C
Climatic Category	55 / 125 / 56
Sealing	fully sealed container solder immersion 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	± 2%	± 3 % Contact resistance variation : ΔR < 1% Rn
Moisture Resistance	MIL STD 202 Method 106 10 cycles of 24 hours constituted with damp heat - cold - vibrations	± 2 % Dielectric strength : 1000 V RMS Insulation resistance : > 10^4 MΩ	± 3 %
Long Term Damp Heat	Temperature 40°C - RH 93 % 56 days	± 2 % Dielectric strength : 1000 V RMS Insulation resistance : > 10^4 MΩ	± 3 %
Thermal Shock	55°C to + 125°C - 5 cycles	± 1 %	$\frac{\Delta V_{1-2}}{V_{1-3}} \leq \pm 2\%$
Rotational Life (Electrical and Mechanical)	100 cycles - rated power	± 3 %	
Shock	MIL STD 202 Method 213/1 100 g - 6 ms 3 successive shocks in 3 directions	± 1 %	$\frac{\Delta V_{1-2}}{V_{1-3}} \leq \pm 1\%$
Vibration	MIL STD 202 Method 204/D 20 g - 12 hours	± 1 %	$\frac{\Delta V_{1-2}}{V_{1-3}} \leq \pm 1\%$

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	0.20	1.41	141	
20		2	100	0
50		3.16	63	+ 200
100		4.47	45	
200		6.32	32	
500		10	20	
1k		14.1	14	
2k		20	10	
5k		31.6	6.3	
10k		44.7	4.5	
20k		63.2	3.2	± 100
50k	0.2	100	2	
100k	0.2	141	1.4	
200k	0.2	200	1	
500k	0.08	200	0.4	
1M	0.04	200	0.2	

MARKING (RED MARK)

VISHAY trademark, ohmic value, manufacturing date, red mark.

The ohmic value is indicated by a 3 figure code, the first two are significant figures, the third one is the multiplier.

Example: 100 = 10Ω
101 = 100Ω
102 = 1000Ω
503 = 50000Ω

SOLDERING RECOMMENDATIONS

Vapour phase: 215°C/20 to 40 seconds.

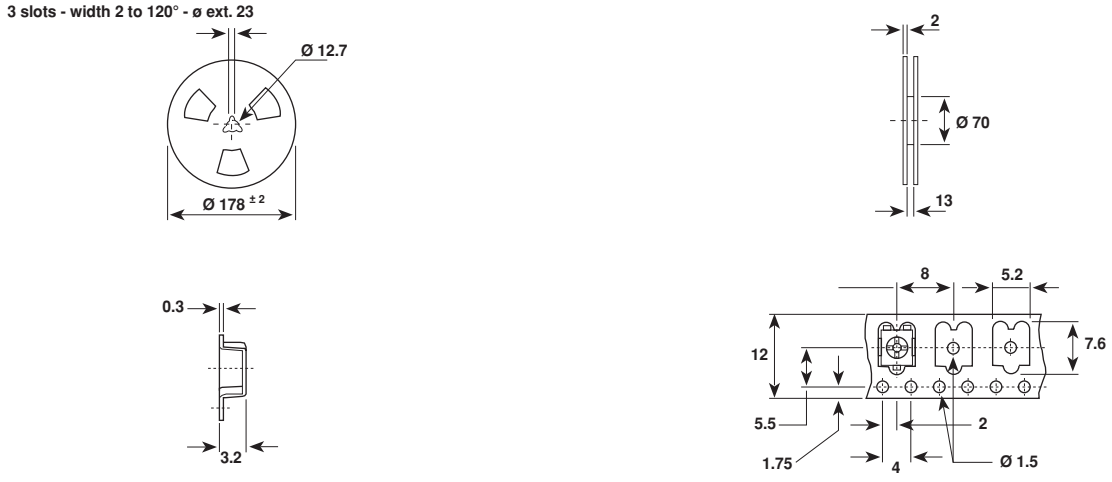
Reflow: 230°C/20 seconds.

Do not exceed peak 260°C or with an IRON 40W: 3 seconds at 350°C.

Soldering is possible by wave, reflow and vapor phase.

PACKAGING

On tape and reel of 500 pieces, code TR and 2000 pieces, code TR1



Cover tape panel strength specifications EIA 481 A and CEI 60286-3.

ORDERING INFORMATION

TS5	YL	500KΩ	± 10%	TR500
SERIES	STYLE	OHMIC VALUE	TOLERANCE	PACKAGING

TR500: Tape and reel 500 pcs.
TR2000: Tape and reel 2000 pcs.