



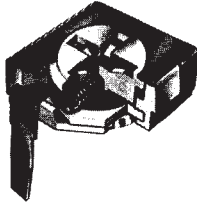
T53Y

miniature trimmer

single turn cermet

– professional grade

for SMD version see TS53Y series



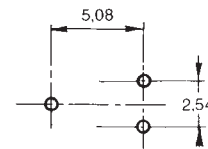
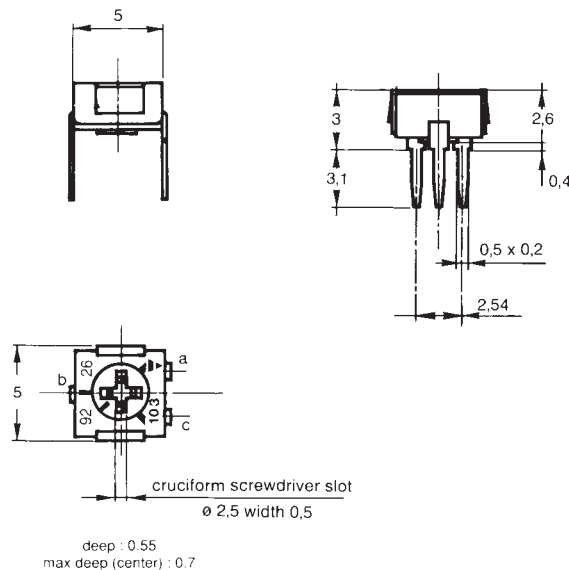
The T53 trimming potentiometer volumetric efficiency (5x5x2,7 mm) with high performance and stability.

The T53 design is suitable for both manual or automatic operation.

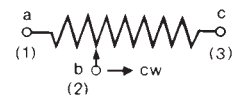
The trimmer provides:

- EXCELLENT STABILITY
- WIDE OHMIC RANGE
- LOW TEMPERATURE COEFFICIENT
- LOW CONTACT RESISTANCE VARIATION
- SMALL SIZE FOR OPTIMUM PACKING DENSITY
- SUITABLE FOR BOTH MANUAL OR AUTOMATIC OPERATION

PCB LAYOUT



CIRCUIT DIAGRAM



Dimensions in mm.

SPECIFICATIONS

MECHANICAL

MECHANICAL TRAVEL...	270° ±10°
OPERATING TORQUE (max. Ncm)...	1,5
END STOP TORQUE (Ncm)...	3,5
UNIT WEIGHT (max. g)...	0,15

ENVIRONMENTAL

TEMPERATURE RANGE...	-55°C +155°C
CLIMATIC CATEGORY...	55 / 125 / 56
SEALING...	enables cleaning IP67

ELECTRICAL

RESISTIVE ELEMENT...	cermet
ELECTRICAL TRAVEL...	220° ±15°
RESISTANCE RANGE...	10Ω... 1 MΩ
Standard series	1 - 2 - 5
TOLERANCE standard...	±20%
POWER RATING linear...	0,2 W at 85°C or 0,25 W at 70°C
logarithmic...	not applicable
TYPICAL TEMP. COEFFICIENT (for R _n ≥ 100 Ω)...	50 ppm/°C
LIMITING ELEMENT VOLTAGE (linear law)...	200 V
CONTACT RESISTANCE VARIATION...	2 % or 3 Ω
END RESISTANCE (typical)...	0,1 % or 3 Ω
DIELECTRIC STRENGTH (RMS)...	1000 V
INSULATION RESISTANCE...	10 ⁶ MΩ
SPECIFICATION...	in accordance with NFC 83251 or CECC 41100

PERFORMANCES

Table 1

TESTS	CONDITIONS	TYPICAL VALUES AND DRIFTS	
		$\frac{\Delta R_T}{R_T}$ (%)	$\frac{\Delta R_{1-2}}{R_{1-2}}$ (%)
LOAD LIFE	1000 hours at rated power 90'/30' - ambient temperature +85°C	± 2% Contact resistance variation : $\Delta R < 1\% R_n$	± 3 %
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 90-95 % 10% rated power 56 days	± 2 % Dielectric strength : 1000 V RMS Insulation resistance : > 10 ⁴ MΩ	± 3 %
THERMAL SHOCKS	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 %	
SHOCKS	MIL STD 202 Method 213/1 100 g - 6 ms 3 successive shocks in 3 directions	± 1 %	$\frac{\Delta V_{1-2}}{V_{1-3}} \leq \pm 1\%$
VIBRATIONS	MIL STD 202 Method 204/D 20 g - 12 hours	± 1 %	$\frac{\Delta V_{1-2}}{V_{1-3}} \leq \pm 1\%$

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	0 +200	
20		2	100		
50		3,16	63		
100	0,2	4,47	45	±100	
200		6,32	32		
500		10	20		
1 k		14,1	14		
2 k		20	10		
5 k		31,6	6,3		
10 k		44,7	4,5		
20 k		63,2	3,2		
50 k		100	2		
100 k		0,2	141		1,4
200 k		0,2	200		1
500 k		0,08	200		0,4
1 M		0,04	200		0,2

MARKING

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

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

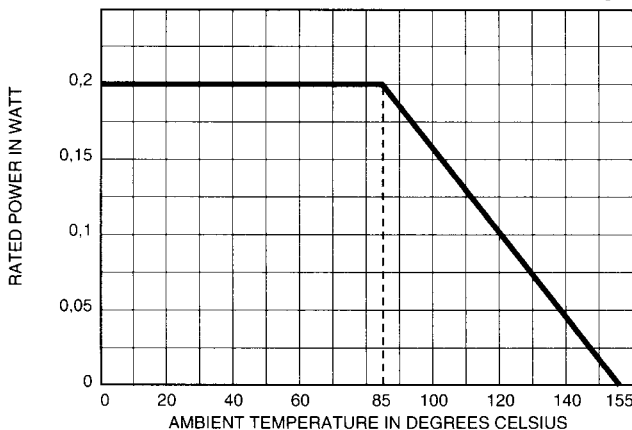
The manufacturing date is indicated by four digits, the first two for the year, the others for the week.

PACKAGING

- In bulk (plastic box of 250 pieces).

POWER RATING CHART

Fig. 1



ORDERING PROCEDURE



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