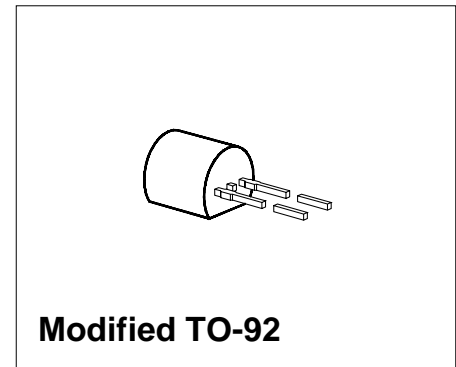


Silicon Spreading Resistance Temperature Sensor in Leaded Plastic Package

KT 100
KTY 10

Features

- Temperature dependent Resistor with Positive Temperature Coefficient
- Small plastic package
- Fast response
- High reliability due to multilayer gold contacts
- n-conducting silicon crystal
- Polarity independent due to symmetrical construction
- Available selected in $\pm 1\%$ tolerance groups



Electrical Characteristics

at $T_A = 25^\circ\text{C}$ unless otherwise specified

Parameter	Symbol	Limit Values			Unit
		min.	typ.	max.	
Temperature sensor resistance $I_B = 1\text{ mA}$ KT 100 KTY 10-5 KTY 10-6 KTY 10-62 KT 10-7	R_{25}	1940 1950 1980 1990 2010	— — — — —	2060 1990 2020 2010 2050	Ω
Thermal time constant (63% of ΔT_A) in still air in still oil (Freon FC40/PP7)	τ_{air} τ_{oil}	— —	40 4	— —	s

Type	Marking	Ordering Code	Pin Configuration		Package
			1	2	
KT 100	KT 100	Q62705-K331	electrical contact	electrical contact	Modified TO-92
KTY 10-5	KTY 10-5	Q62705-K110			
KTY 10-6	KTY 10-6	Q62705-K132			
KTY 10-62	KTY 10-62	Q62705-K71			
KTY 10-7	KTY 10-7	Q62705-K111			

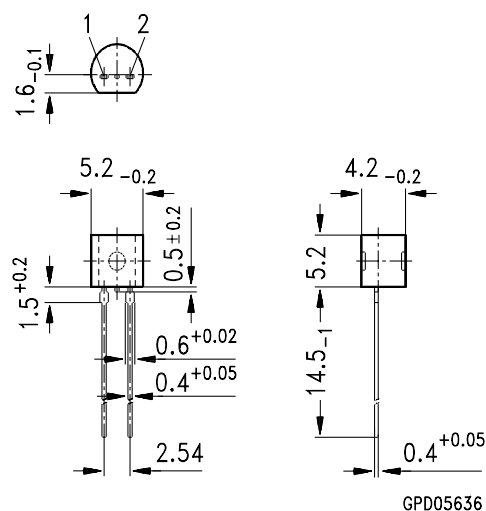
Absolute Maximum Ratings

Parameter	Symbol	Limit Values	Unit
Maximum operating voltage ¹⁾ $T_A \leq 25\text{ °C}, t \leq 10\text{ ms}$	V_{opmax}	25	V
Maximum operating current	I_{opmax}	7	mA
Peak operating current $T_A \leq 25\text{ °C}, t \leq 10\text{ ms}$	I_{opp}	10	mA
Operating temperature range	T_{op}	- 50 ... + 150	°C
Storage temperature range	T_{stg}	- 50 ... + 150	°C

¹⁾ ESD Class 1. When the temperature sensor is operated with long supply leads, it should be protected through the parallel connection of a > 10 nF capacitor to prevent damage to the sensor through induced voltage peaks.

Package Outline

Modified TO-92



Weight approx. 0.25 g

Dimensions in mm

Exterior Packaging

I.e. tubes, trays, boxes are shown in our Data Book "Package Information".