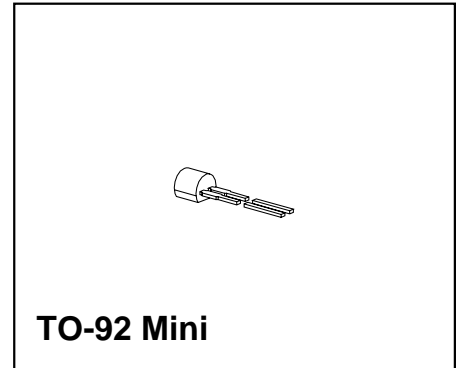


Silicon Spreading Resistance Temperature Sensor in Miniature Leaded Plastic Package

KT 110, KT 210,
KTY 11, KTY 21

Features

- Temperature dependent Resistor with Positive Temperature Coefficient
- Miniature plastic package for very small thermal time constants
- 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 (KTY-series)



Type	Marking	Ordering Code	Pin Configuration		Package
			1	2	
KT 110	T-1	Q62705-K332	electrical contact	electrical contact	TO-92 Mini
KTY 11-5	T-5	Q62705-K245			
KTY 11-6	T-6	Q62705-K246			
KTY 11-7	T-7	Q62705-K247			
KT 210	N-1	Q62705-K334			
KTY 21-5	N-5	Q62705-K258			
KTY 21-6	N-6	Q62705-K259			
KTY 21-7	N-7	Q62705-K260			

Absolute Maximum Ratings

Parameter	Symbol	KT 110 KTY 11	KT 210 KTY 21	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}	5	7	mA
Peak operating current $T_A \leq 25\text{ °C}, t \leq 10\text{ ms}$	I_{opp}	7	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.

Electrical Characteristics

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

Parameter	Symbol	Limit Values			Unit
		min.	typ.	max.	
Temperature sensor resistance $I_B = 1\text{ mA}$	R_{25}				Ω
KT 110		1940	—	2060	
KTY 11-5		1950	—	1990	
KTY 11-6		1980	—	2020	
KTY 11-7		2010	—	2050	
KT 210		970	—	1030	
KTY 21-5		975	—	995	
KTY 21-6		990	—	1010	
KTY 21-7	1005	—	1025		
Thermal time constant (63% of ΔT_A)					s
in still air	τ_{air}	—	11	—	
in still oil (Freon FC40/PP7)	τ_{oil}	—	1.5	—	

Package Outline

TO-92 Mini

Weight approx. 0.02 g

Dimensions in mm

Exterior Packaging

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