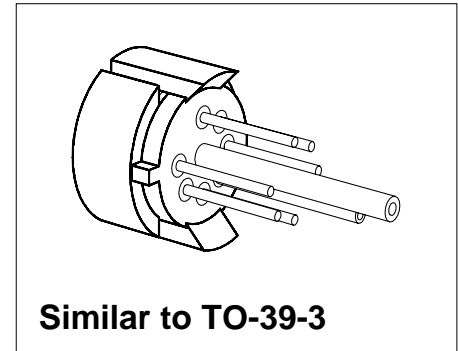


## Silicon Piezoresistive Pressure Sensor

KPY 62-RK  
KPY 66-RK

### Features

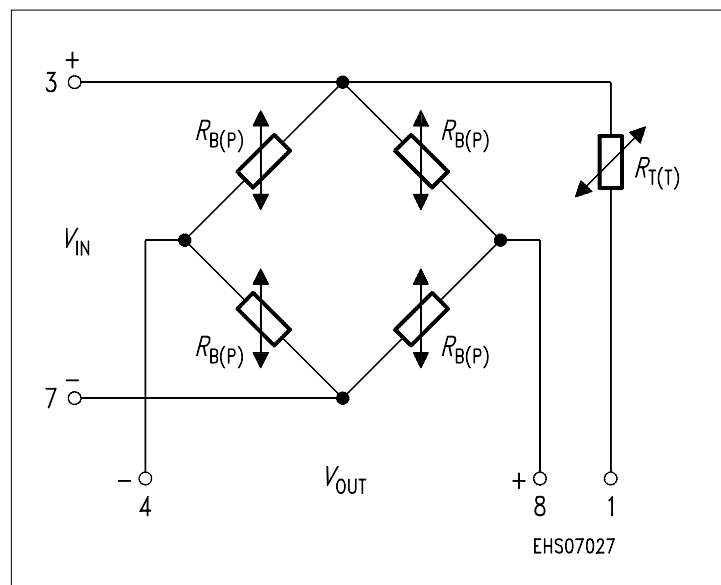
- Low pressure and temperature hysteresis
- Fast response
- High sensitivity and linearity
- Fatigue free monocrystalline silicon diaphragm giving high load cycle stability
- High long term stability
- Built in silicon temperature sensor
- Metal housing



Type	Symbol	Pressure Range	Unit	Ordering Code
KPY 62-RK	$P_0 \dots P_N$	0 ... 600	mbar	Q62705-K319
KPY 63-RK		0 ... 1.6	bar	Q62705-K320
KPY 64-RK		0 ... 4		Q62705-K321
KPY 65-RK		0 ... 10		Q62705-K322
KPY 66-RK		0 ... 25		Q62705-K292

### Pin Configuration

1	Temp.- Sensor (typ. $R_{25} = 2 \text{ k}\Omega$ )
2	Not to be connected
3	+ $V_{IN}$ ; Temperature sensor
4	- $V_{OUT}$
5	Capillary 3
6	Shielding, to be connected to + $V_{IN}$
7	- $V_{IN}$
8	+ $V_{OUT}$



### Absolute Maximum Ratings

Parameter	Symbol	Limit Values <sup>1)</sup>		Unit
		Frontside	Rearside	
Pressure overload KPY 65-RK KPY 66-RK	$P_{MAX}$	20 50	10 10	bar
Operating temperature range	$T_A$	- 40 ... + 125		°C
Storage temperature range	$T_{stg}$	- 40 ... + 125		°C
Supply voltage	$V_{IN}$	12		V

1) Frontside coupling applies pressure onto chip face.  
Rearside coupling applies pressure through Kovar centre tube.

### Electrical Characteristics

at  $T_A = 25\text{ °C}$  and  $V_{IN} = 5\text{ V}$ , unless otherwise specified.

Parameter	Symbol	Limit Values			Unit
		min.	typ.	max.	
Bridge resistance	$R_B$	4	–	8	kΩ
Sensitivity KPY 65-RK KPY 66-RK	$s$	3.6 1.1	5.2 2.1	8.0 3.0	mV/ Vbar
Output voltage KPY 65-RK KPY 66-RK	$V_{fin}$	180 150	260 260	400 370	mV
Offset voltage $P = P_0$	$V_0$	- 25	–	+ 25	mV
Linearity error (Best fit straight line) $P_0 = P_0 \dots P_N$ KPY 65 ... 66-RK	$F_L$	–	± 0.3	± 0.5	% $V_{fin}$
Pressure hysteresis $P_1 = P_0, P_2 = P_N, P_3 = P_0$ KPY 65 ... 66-RK	$P_H$	–	± 0.1	–	% $V_{fin}$

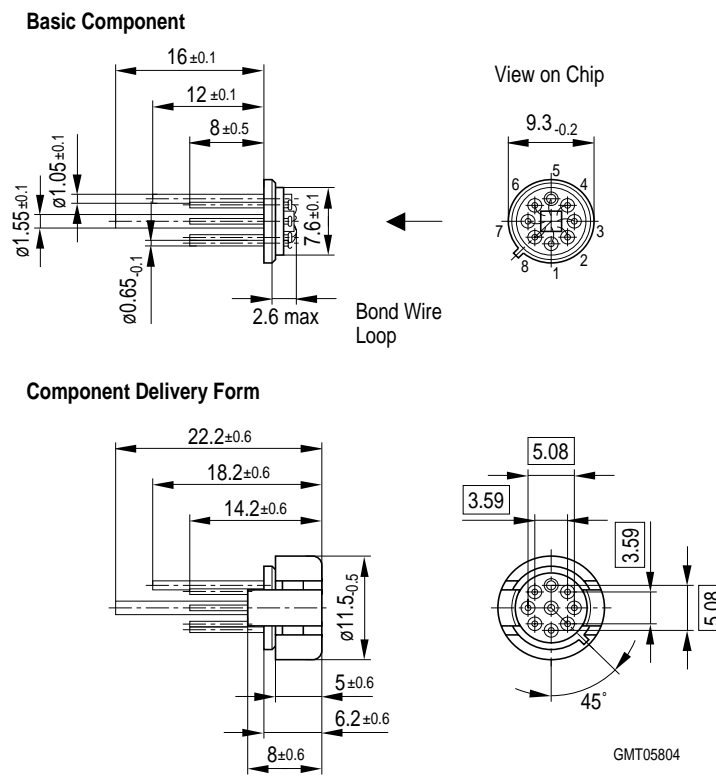
### Electrical Characteristics

at  $T_1 = 25\text{ °C}$ ,  $T_2 = 125\text{ °C}$ ,  $T_3 = 25\text{ °C}$  and  $V_{IN} = 5\text{ V}$ , unless otherwise specified.

Parameter	Symbol	Limit Values			Unit
		min.	typ.	max.	
Temperature coefficient of $V_{fin}$ KPY 65 ... 66-RK	$TC_{V_{fin}}$	- 0.22	- 0.18	- 0.15	%/K
Temperature coefficient of $V_0$ KPY 65 ... 66-RK	$TC_{V_0}$	- 0.02	-	+ 0.02	%/K
Temperature coefficient of $R_B$ KPY 65 ... 66-RK	$TC_{R_B}$	-	+ 0.23	-	%/K
Temperature hysteresis of $V_0$ ; $V_{fin}$ KPY 65 ... 66-RK	$TH$	-	$\pm 0.2$	-	% v. $V_{fin}$

### Package Outline

#### Similar to TO-39-3



### Sorts of Packing

Package outlines for tubes, trays etc. are contained in our Data Book "Package Information".

Dimensions in mm