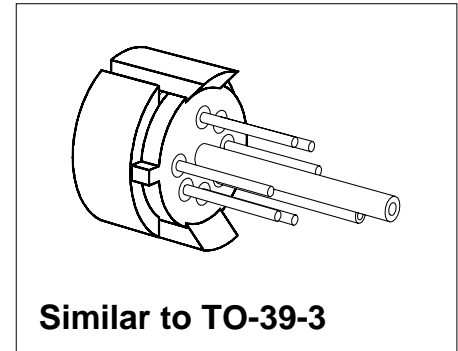


Silicon Piezoresistive Pressure Sensor

KPY 62-RK
KPY 66-RK

Features

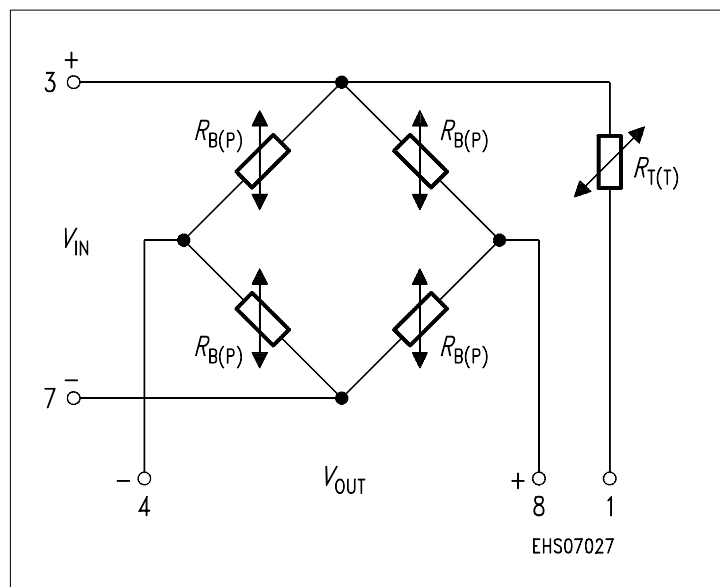
- Low pressure and temperature hysteresis
- Fast response
- High sensitivity and linearity
- Fatigue free monocrystalline silicon diaphragm giving high load cycle stability
- High long term stability
- Built in silicon temperature sensor
- Metal housing



| 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 ¹⁾ | | 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 $T_A = 25$ °C and $V_{IN} = 5$ 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} |

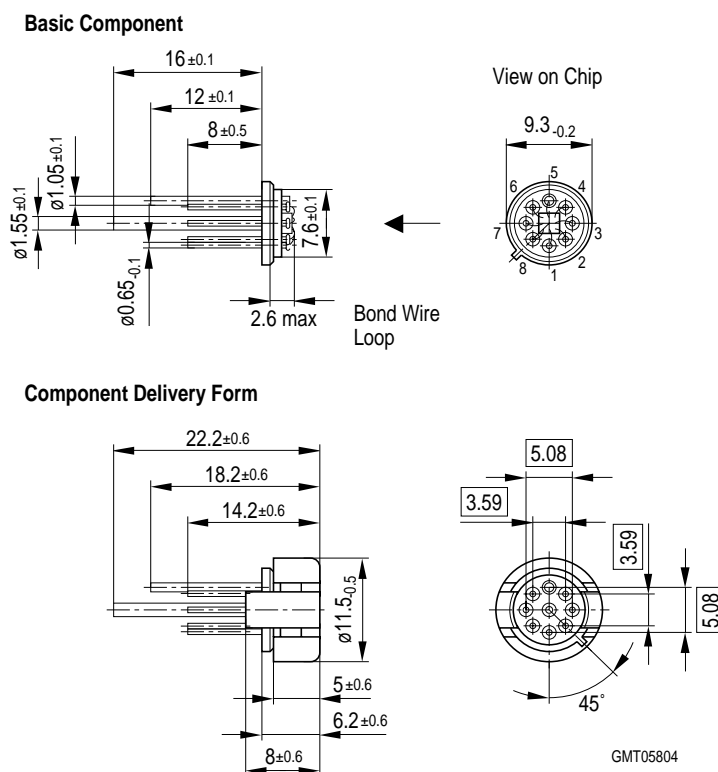
Electrical Characteristics

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 | - | ± 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