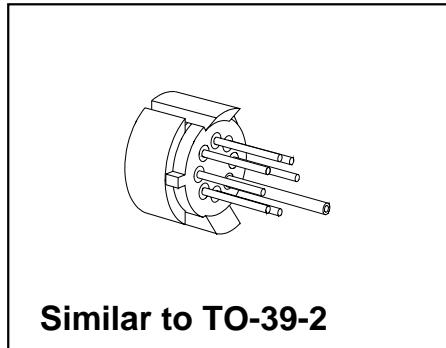


## Silicon Piezoresistive Absolute Pressure Sensor Preliminary Data

KPY 62-AK  
KPY 69-AK

### Features

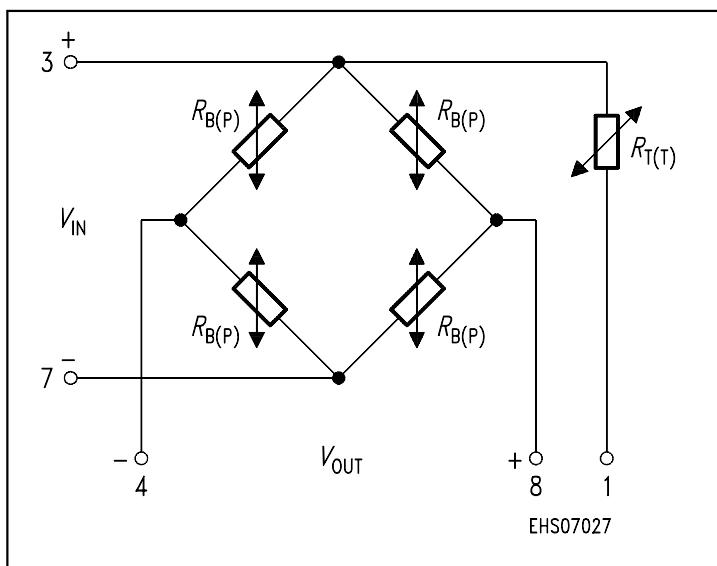
- Low pressure and temperature hysteresis
- Fast response
- High sensitivity and linearity
- Fatigue free monocrystalline silicon diaphragm giving high load cycle stability
- High long term stability
- Built in silicon temperature sensor
- Provided for further fabrication, protection cap



Type and Marking	Symbol	Pressure Range	Unit	Ordering Code
KPY 62 AK	$P_0 \dots P_N$	0 ... 0.6	bar	Q62705-K275
KPY 63 AK		0 ... 1.6		Q62705-K276
KPY 64 AK		0 ... 4		Q62705-K277
KPY 65 AK		0 ... 10		Q62705-K278
KPY 66 AK		0 ... 25		Q62705-K279
KPY 67 AK		0 ... 60		Q62705-K280
KPY 68 AK		0 ... 160		Q62705-K281
KPY 69 AK		0 ... 400		Q62705-K282

### Pin Configuration

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



**Absolute Maximum Ratings**

<b>Parameter</b>	<b>Symbol</b>	<b>Limit Values</b>		<b>Unit</b>
Pressure overload	$P_{\text{MAX}}$	4	bar	
Operating temperature range	$T_A$	– 40 ... + 125	°C	
Storage temperature range	$T_{\text{stg}}$	– 50 ... + 125	°C	
Supply voltage	$V_{\text{IN}}$	12	V	

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

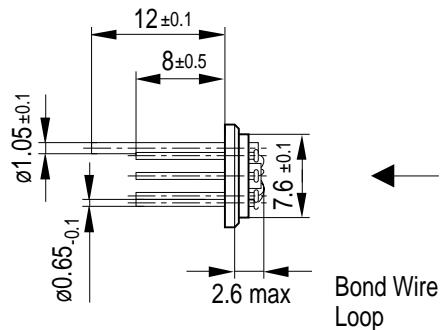
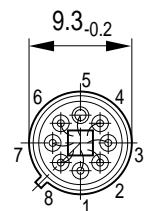
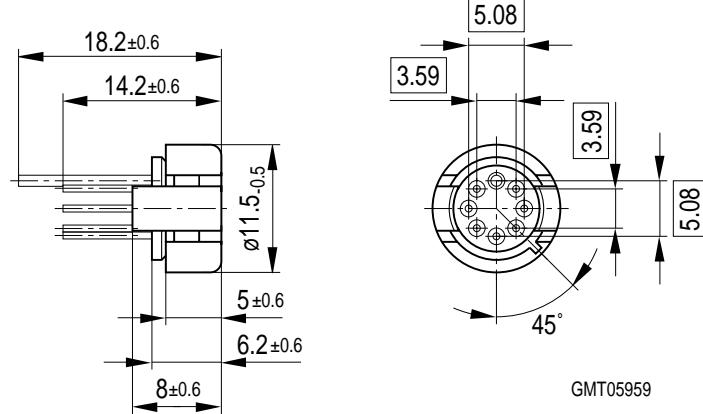
<b>Parameter</b>	<b>Symbol</b>	<b>Limit Values</b>			<b>Unit</b>
		<b>min.</b>	<b>typ.</b>	<b>max.</b>	
Bridge resistance	$R_B$	4	–	8	kΩ
Sensitivity	$s$	23.3	43.0	73.3	mV/ Vbar
Output voltage	$V_{\text{fin}}$	70	130	220	mV
	KPY 62 AK	90	160	240	

**Electrical Characteristics (cont'd)**at  $T_A = 25^\circ\text{C}$  and  $V_{IN} = 5\text{ V}$ , unless otherwise specified.

Parameter	Symbol	Limit Values			Unit
		min.	typ.	max.	
Offset voltage $P = P_0$	$V_0$	- 25	-	+ 25	mV
Linearity error (Best fit straight line) $P_0 = P_0 \dots P_N$	$F_L$	-	$\pm 0.3$	$\pm 0.5$	% $V_{fin}$
		-	$\pm 0.3$	-	
Pressure hysteresis $P_1 = P_0, P_2 = P_N, P_3 = P_0$ KPY 62 ... 69 AK	$P_H$	-	$\pm 0.1$	-	% $V_{fin}$

**Electrical Characteristics**at  $T_1 = 25^\circ\text{C}$ ,  $T_2 = 125^\circ\text{C}$ ,  $T_3 = 25^\circ\text{C}$  and  $V_{IN} = 5\text{ V}$ , unless otherwise specified.

Parameter	Symbol	Limit Values			Unit
		min.	typ.	max.	
Temperature coefficient of $V_{fin}$ KPY 62 ... 69 AK	$TC_{Vfin}$	- 0.22	- 0.18	- 0.15	%/K
Temperature coefficient of $V_0$ KPY 62 AK KPY 63 AK KPY 64 AK KPY 65 AK KPY 66 AK KPY 67 AK KPY 68 AK KPY 69 AK	$TC_{V0}$	- 0.04 - 0.04 - 0.02 - 0.02 - 0.02 - 0.01 - 0.01 - 0.01	- - - - - - - -	+ 0.04 + 0.04 + 0.02 + 0.02 + 0.02 + 0.01 + 0.01 + 0.01	%/K
Temperature coefficient of $R_B$ KPY 62 ... 69 AK	$TC_{RB}$	-	+ 0.23	-	%/K
Temperature hysteresis of $V_0; V_{fin}$ KPY 62 ... 66 AK KPY 67 ... 69 AK	$TH$	-	$\pm 0.2$ - 0.1	-	% v. $V_{fin}$

**Package Outline****Similar to TO-39-2****Basic Component****View on Chip****Component Delivery Form**

Weight approx. 1.5 g

Dimensions in mm

**Exterior Packaging**

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