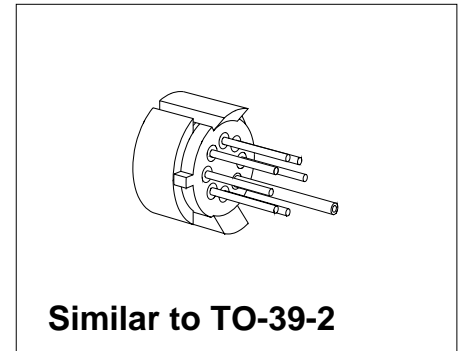


Silicon Piezoresistive Absolute Pressure Sensor

KPY 62-AK
KPY 69-AK

Features

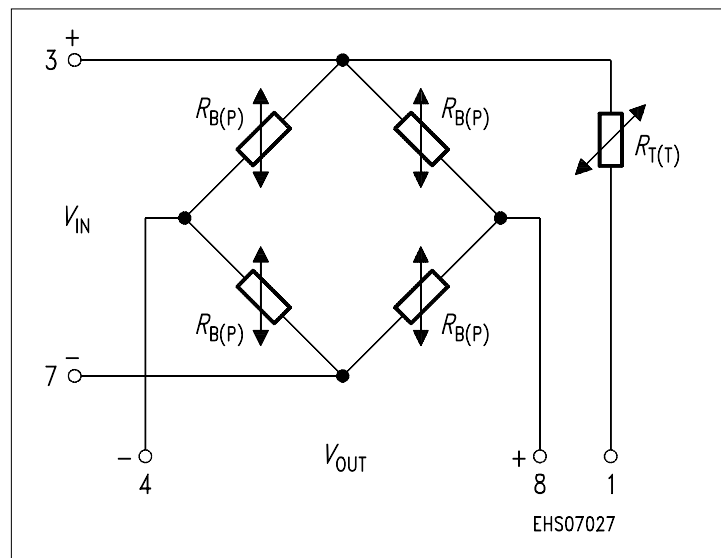
- Low pressure and temperature hysteresis
- Fast response
- High sensitivity and linearity
- Fatigue free monocrystalline silicon diaphragm giving high load cycle stability
- High long term stability
- Built in silicon temperature sensor
- Provided for further fabrication, protection cap



Type	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 to be 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

Parameter	Symbol	Limit Values	Unit
Pressure overload	P_{MAX}	4	bar
KPY 62-AK		8	
KPY 63-AK		12	
KPY 64-AK		20	
KPY 65-AK		50	
KPY 66-AK		70	
KPY 67-AK		200	
KPY 68-AK		500	
Operating temperature range	T_A	- 40 ... + 125	°C
Storage temperature range	T_{stg}	- 50 ... + 125	°C
Supply voltage	V_{IN}	12	V

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	s	23.3	43.0	73.3	mV/ Vbar
KPY 62-AK		11.3	20.0	30.0	
KPY 63-AK		6.5	11.0	15.5	
KPY 64-AK		3.6	5.2	8.0	
KPY 65-AK		1.1	2.1	3.0	
KPY 66-AK		0.63	1.0	1.4	
KPY 67-AK		0.38	0.53	0.66	
KPY 68-AK		0.16	0.22	0.27	
Output voltage	V_{fin}	70	130	220	mV
KPY 62-AK		90	160	240	
KPY 63-AK		130	220	310	
KPY 64-AK		180	260	400	
KPY 65-AK		150	260	370	
KPY 66-AK		190	300	410	
KPY 67-AK		310	420	530	
KPY 68-AK		330	440	550	

Electrical Characteristics (cont'd)

at $T_A = 25\text{ °C}$ 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				% V_{fin}
	KPY 62 ... 65-AK	-	± 0.3	± 0.5	
	KPY 66 ... 69-AK	-	± 0.3	-	
Pressure hysteresis $P_1 = P_0, P_2 = P_N, P_3 = P_0$	P_H	-	± 0.1	-	% V_{fin}
	KPY 62 ... 69-AK				

Electrical Characteristics

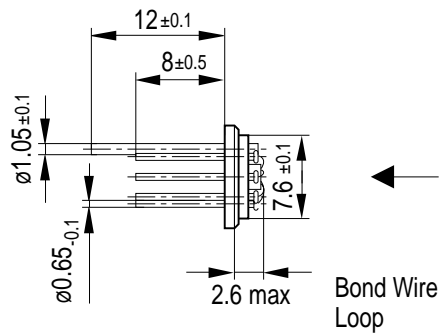
at $T_1 = 25\text{ °C}$, $T_2 = 125\text{ °C}$, $T_3 = 25\text{ °C}$ and $V_{IN} = 5\text{ V}$, unless otherwise specified.

Parameter	Symbol	Limit Values			Unit
		min.	typ.	max.	
Temperature coefficient of V_{fin} KPY 62 ... 69-AK	$TC_{V_{fin}}$	- 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_{V_0}	- 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_{R_B}	-	+ 0.23	-	%/K
Temperature hysteresis of $V_0; V_{fin}$ KPY 62 ... 66-AK KPY 67 ... 69-AK	TH	- -	± 0.2 - 0.1	- -	% v. V_{fin}

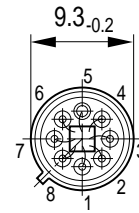
Package Outline

Similar to TO-39-2

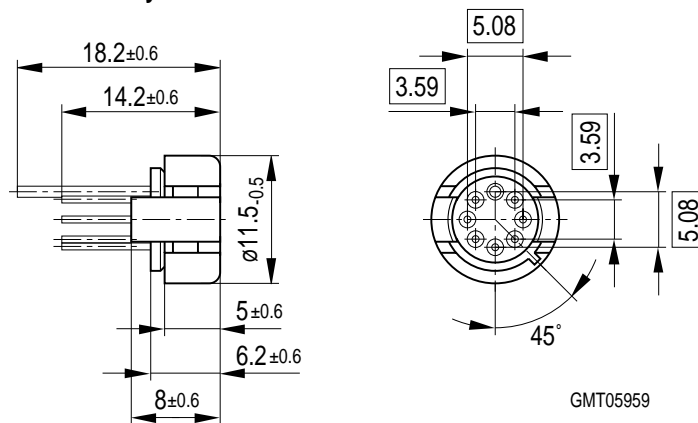
Basic Component



View on Chip



Component Delivery Form



Weight approx. 1.5 g

Sorts of Packing

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

Dimensions in mm