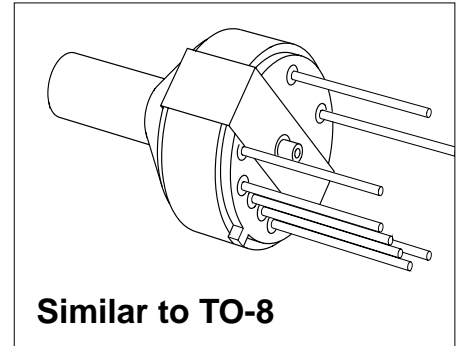![Infineon Technologies logo]

# Silicon Piezoresistive Relative Pressure Sensor

KPY 32-RK

Features

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

Similar to TO-8

Type	Symbol	Pressure Range	Unit	Ordering Code
KPY 32-RK	$P_0 \dots P_N$	0 … 0.06	bar	Q62705-K266

Pin Configuration

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

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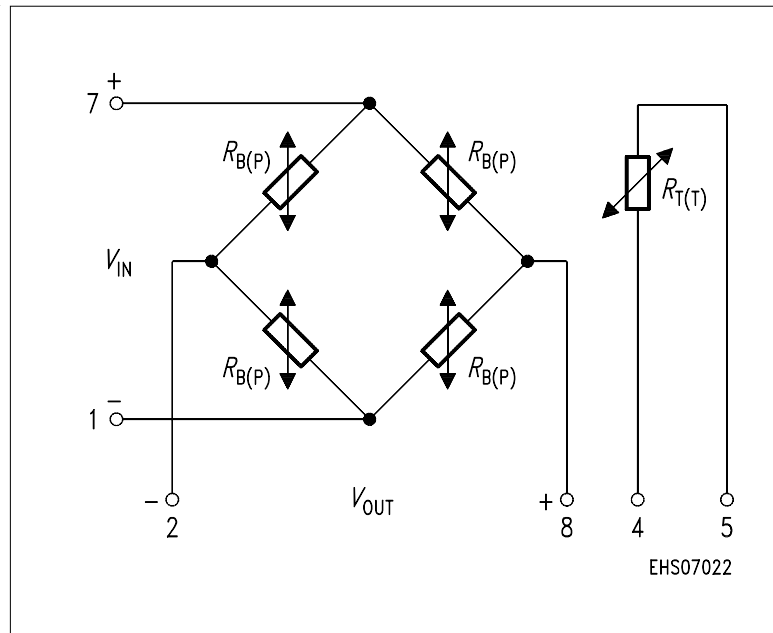
Absolute Maximum Ratings

Parameter	Symbol	Limit Values	Unit
Pressure overload	P_{MAX}	± 0.6	bar
Operating temperature range	T_A	$-40 \dots +125$	°C
Storage temperature range	T_{stg}	$-50 \dots +150$	°C
Supply voltage	V_{IN}	12	V

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	s	100.0	220.0	–	mV/Vbar
Output voltage	V_{fin}	30.0	66.0	–	mV
Offset voltage $P = P_0$	V_0	-25	–	$+25$	mV
Linearity error (best fit straight line) $P = P_0 \dots P_N$	F_L	–	± 0.3	± 2.0	% V_{fin}
Pressure hysteresis $P_1 = P_0, P_2 = P_N, P_3 = P_0$	P_H	–	± 0.1	–	% V_{fin}

Electrical Characteristics

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

Parameter	Symbol	Limit Values			Unit
		min.	typ.	max.	
Temperature coefficient of V_{fin}	TC_{Vfin}	-0.19	–	-0.11	%/K
Temperature coefficient of V_0	TC_{V0}	-0.06	–	$+0.06$	%/K
Temperature coefficient of R_B	TC_{RB}	–	$+0.095$	–	%/K
Temperature hysteresis of $V_{0;}$ V_{fin}	TH	-0.7	–	$+0.7$	% v. V_{fin}

Package Outline

Similar to TO-8

Basic Component

View on Chip

$10^{+0.6}$

$3_{-0.6}$

$\varnothing 2^{+0.1}$

$\varnothing 0.65_{-0.1}$

1.5 ± 0.1

3.6 max

Bond Wire Loop

$13.35^{+0.05}$

$15.3^{+0.1}$

$0.8^{+0.1}$

$0.8^{+0.1}$

3
2
1
8
7
6
5
4
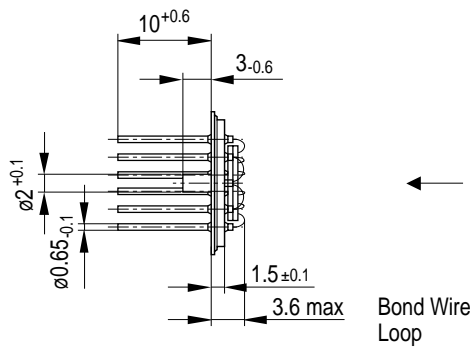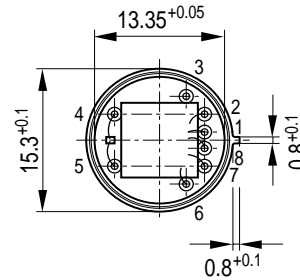
Component Delivery Form

$21^{+0.5}$

$\varnothing 5.1_{-0.2}$

18.2 ± 0.3

10 ± 0.5

9.52

2.85

1.9

9.52

5.7

17 ± 0.3
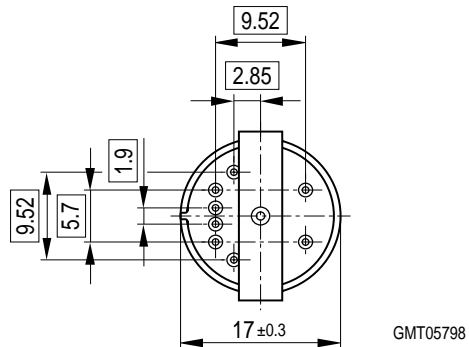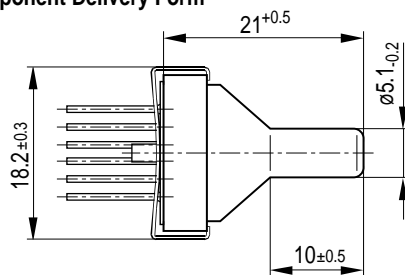
GMT05798

Weight approx. 2.5 g

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

Dimensions in mm