

DATA SHEET

Selection guide **Semiconductor sensors**

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File under Discrete Semiconductors, SC17

Semiconductor sensors

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MAGNETIC FIELD SENSORS

TYPE ⁽¹⁾	FIELD RANGE (kA/m)	SENSITIVITY $\frac{\text{mV/V}}{\text{kA/m}}$	BRIDGE RESISTANCE (k Ω)	PACKAGE	PAGE
KMZ10A	−0.5 to +0.5	16	1.2	SOT195	
KMZ10A1; note 2	−0.05 to +0.05	22	1.3	SOT195	
KMZ10B	−2.0 to +2.0	4	2.1	SOT195	
KMZ10C	−7.5 to +7.5	1.5	1.4	SOT195	
KMZ11B1	−0.2 to +0.2	4	2.1	SOT96 (SO8)	
KMZ41	H = 100; note 3	2.8	2.5	SOT96 (SO8)	
KMZ50	−0.2 to +0.2	16	2	SOT96 (SO8)	
KMZ51	−0.2 to +0.2	16	2	SOT96 (SO8)	

Notes

1. In air, 1 kA/m corresponds to 1.25 mT.
2. Field range and sensitivity with switched H_x -field for detection of low magnetic fields.
3. Recommended field strength.

SENSORS FOR CONTACTLESS ROTATIONAL SPEED MEASUREMENT AND REFERENCE-/MARK DETECTION

TYPE	SENSING DISTANCE (mm)	FREQUENCY RANGE (Hz)	TARGET	PACKAGE	PAGE
KMI15/1	2.5	0 to 25000	note 1	SOT453B	
KMI15/2	2.5	0 to 25000	note 2	SOT453A	
KMI15/4	2.0	0 to 25000	note 1	SOT453C	
KMI16/1	2.0	0 to 25000	note 2	SOT477B	

Notes

1. Ferromagnetic target wheel.
2. Magnetized target wheel.

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SENSORS FOR CONTACTLESS ANGULAR POSITION MEASUREMENT

TYPE	ANGLE RANGE (DEG)	OUTPUT			PACKAGE	PAGE
		VALUE	TYPE	UNIT		
KM110BH/2130	30	0.5 to 4.5	linear	V	hybrid	
KM110BH/2190	90	0.5 to 4.5	sinusoidal	V	hybrid	
KM110BH/2270	70	4 to 20	sinusoidal	mA	hybrid	
KM110BH/2430	30	0.5 to 4.5	linear	V	hybrid	
KM110BH/2470	70	0.5 to 4.5	sinusoidal	V	hybrid	
UZZ9000	180	0.5 to 4.5	linear	V	SO24	

TEMPERATURE SENSORS

TYPE	TEMPERATURE RANGE (°C)	RESISTANCE		SENSOR ACCURACY		PACKAGE	PAGE
		R (Ω)	at T _{amb} (°C)	°C	at T _{amb} (°C)		
KTY81-110	–55 to +150	990 to 1010	25	±1.3	25	SOD70	
KTY81-120	–55 to +150	980 to 1020	25	±2.5	25	SOD70	
KTY81-121	–55 to +150	980 to 1000	25	±1.3	25	SOD70	
KTY81-122	–55 to +150	1000 to 1020	25	±1.3	25	SOD70	
KTY81-150	–55 to +150	950 to 1050	25	±6.3	25	SOD70	
KTY81-151	–55 to +150	950 to 1000	25	±3.2	25	SOD70	
KTY81-152	–55 to +150	1000 to 1050	25	±3.2	25	SOD70	
KTY81-210	–55 to +150	1980 to 2020	25	±1.3	25	SOD70	
KTY81-220	–55 to +150	1960 to 2040	25	±2.5	25	SOD70	
KTY81-221	–55 to +150	1960 to 2000	25	±1.3	25	SOD70	
KTY81-220	–55 to +150	2000 to 2040	25	±1.3	25	SOD70	
KTY81-250	–55 to +150	1900 to 2100	25	±6.3	25	SOD70	
KTY81-251	–55 to +150	1900 to 2000	25	±3.2	25	SOD70	
KTY81-252	–55 to +150	2000 to 2100	25	±3.2	25	SOD70	
KTY82-110	–55 to +150	990 to 1010	25	±1.3	25	SOT23	
KTY82-120	–55 to +150	980 to 1020	25	±2.5	25	SOT23	
KTY82-121	–55 to +150	980 to 1000	25	±1.3	25	SOT23	
KTY82-122	–55 to +150	1000 to 1020	25	±1.3	25	SOT23	
KTY82-150	–55 to +150	950 to 1050	25	±6.3	25	SOT23	
KTY82-151	–55 to +150	950 to 1000	25	±3.2	25	SOT23	
KTY82-152	–55 to +150	1000 to 1050	25	±3.2	25	SOT23	
KTY82-210	–55 to +150	1980 to 2020	25	±1.3	25	SOT23	
KTY82-220	–55 to +150	1960 to 2040	25	±2.5	25	SOT23	
KTY82-221	–55 to +150	1960 to 2000	25	±1.3	25	SOT23	
KTY82-222	–55 to +150	2000 to 2040	25	±1.3	25	SOT23	
KTY82-250	–55 to +150	1900 to 2100	25	±6.3	25	SOT23	
KTY82-251	–55 to +150	1900 to 2000	25	±3.2	25	SOT23	

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TYPE	TEMPERATURE RANGE (°C)	RESISTANCE		SENSOR ACCURACY		PACKAGE	PAGE
		R (Ω)	at T _{amb} (°C)	°C	at T _{amb} (°C)		
KTY82-252	–55 to +150	2000 to 2100	25	±3.2	25	SOT23	
KTY83-110	–55 to +175	990 to 1010	25	±1.3	25	SOD68	
KTY83-120	–55 to +175	980 to 1020	25	±2.5	25	SOD68	
KTY83-121	–55 to +175	980 to 1000	25	±1.3	25	SOD68	
KTY83-122	–55 to +175	1000 to 1020	25	±1.3	25	SOD68	
KTY83-150	–55 to +175	950 to 1050	25	±6.6	25	SOD68	
KTY83-151	–55 to +175	950 to 1000	25	±3.3	25	SOD68	
KTY83-152	–55 to +175	1000 to 1050	25	±3.3	25	SOD68	
KTY84-130	–40 to +300	970 to 1030	100	±4.8	100	SOD68	
KTY84-150	–40 to +300	950 to 1050	100	±8.0	100	SOD68	
KTY84-151	–40 to +300	950 to 1000	100	±4.0	100	SOD68	
KTY84-152	–40 to +300	1000 to 1050	25	±4.0	100	SOD68	
KTY85-110	–40 to +125	990 to 1010	25	±1.3	25	SOD80	
KTY85-120	–40 to +125	980 to 1020	25	±2.6	25	SOD80	
KTY85-121	–40 to +125	980 to 1000	25	±1.3	25	SOD80	
KTY85-122	–40 to +125	1000 to 1020	25	±1.3	25	SOD80	
KTY85-150	–40 to +125	950 to 1050	25	±6.6	25	SOD80	
KTY85-151	–40 to +125	950 to 1000	25	±3.3	25	SOD80	
KTY85-152	–40 to +125	1000 to 1050	25	±3.3	25	SOD80	