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Category Sensors & MEMS

ICs

Sensors & MEMS

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Hall ICs

Omnipolar Detection Hall IC Detects S- or N-pole Magnetic Fields and Turns the Output ON (active Low)

Part No.	Supply Voltage (V)	Operate Point (mT)		Pulse Drive Period (ms)	Supply Current (Avg.) (μA)	Output	Operating Temperature (°C)	Package (mm)
		S-pole	N-pole					
BD7411G	4.5 to 5.5	+3.4	-3.4	—	2.0 (mA)	CMOS	-40 to +85	SSOP5

Omnipolar Detection Hall ICs with Polarity Discrimination (Polarity Detection for Both S and N Features Dual Outputs) Features 2 Outputs to Discriminate Between N- and S-pole Detection

Part No.	Supply Voltage (V)	Operate Point (mT)		Pulse Drive Period (ms)	Supply Current (Avg.) (μA)	Output	Operating Temperature (°C)	Package (mm)
		S-pole	N-pole					
BU52272NUZ	1.65 to 3.60	+2.4	-2.4	50	4.4	CMOS (2 Outputs: S, N pole)	-40 to +85	VSON04Z1114A 1.1x1.4, H=Max 0.4
BU52072GWZ	1.65 to 3.60	+2.4	-2.4	50	4.4	CMOS (2 Outputs: S, N pole)	-40 to +85	UCSP35L1 0.8x0.8, H=Max 0.4
BU52073GWZ	1.65 to 3.60	+4.1	-4.1	50	4.4	CMOS (2 Outputs: S, N pole)	-40 to +85	UCSP35L1 0.8x0.8, H=Max 0.4
BU52074GWZ	1.65 to 3.60	+6.3	-6.3	50	4.4	CMOS (2 Outputs: S, N pole)	-40 to +85	UCSP35L1 0.8x0.8, H=Max 0.4
BU52075GWZ	1.65 to 3.60	+9.5	-9.5	50	5.0	CMOS (2 Outputs: S, N pole)	-40 to +85	UCSP35L1 0.8x0.8, H=Max 0.4
New BU52737GWZ	2.5 to 4.5	+15.0	+15.0	50	0.8	CMOS	-40 to +85	UCSP35L1 0.8x0.8, H=Max 0.4
BU52077GWZ	1.65 to 3.60	+15.0	-15.0	50	5.0	CMOS (2 Outputs: S, N pole)	-40 to +85	UCSP35L1 0.8x0.8, H=Max 0.4
BU52078GWZ	1.65 to 3.60	+24.0	-24.0	50	5.0	CMOS (2 Outputs: S, N pole)	-40 to +85	UCSP35L1 0.8x0.8, H=Max 0.4

Automotive Unipolar Hall ICs

Part No.	Supply Voltage (V)	Operate Point (mT)		Magnetic Signal Input Frequency (Hz)	Supply Current (μA)	Output	Operating Temperature (°C)	Package (mm)
		S-pole	N-pole					
New BD53103G-CZ	2.7 to 38	3.5	—	10k	1.3	Nch Open Drain	-40 to +150	SSOP3A 2.92x2.4, H=Max 1.12
New BD53104G-CZ	2.7 to 38	7.5	—	10k	1.3	Nch Open Drain	-40 to +150	SSOP3A 2.92x2.4, H=Max 1.12
New BD53105G-CZ	2.7 to 38	10.0	—	10k	1.3	Nch Open Drain	-40 to +150	SSOP3A 2.92x2.4, H=Max 1.12
New BD53106G-CZ	2.7 to 38	12.5	—	10k	1.3	Nch Open Drain	-40 to +150	SSOP3A 2.92x2.4, H=Max 1.12
New BD53107G-CZ	2.7 to 38	18.0	—	10k	1.3	Nch Open Drain	-40 to +150	SSOP3A 2.92x2.4, H=Max 1.12
New BD53108G-CZ	2.7 to 38	28.0	—	10k	1.3	Nch Open Drain	-40 to +150	SSOP3A 2.92x2.4, H=Max 1.12

Automotive Latch Type Hall ICs

Part No.	Supply Voltage (V)	Operate/Release Point (mT)		Magnetic Signal Input Frequency (Hz)	Supply Current (μA)	Output	Operating Temperature (°C)	Package (mm)
		Bop	Brp					
New BD54102G-CZ	2.7 to 38	2.0	-2.0	10k	1.3	Nch Open Drain	-40 to +150	SSOP3A 2.92x2.4, H=Max 1.12
New BD54103G-CZ	2.7 to 38	5.0	-5.0	10k	1.3	Nch Open Drain	-40 to +150	SSOP3A 2.92x2.4, H=Max 1.12
New BD54104G-CZ	2.7 to 38	7.5	-7.5	10k	1.3	Nch Open Drain	-40 to +150	SSOP3A 2.92x2.4, H=Max 1.12
New BD54105G-CZ	2.7 to 38	10.0	-10.0	10k	1.3	Nch Open Drain	-40 to +150	SSOP3A 2.92x2.4, H=Max 1.12
New BD54107G-CZ	2.7 to 38	15.0	-15.0	10k	1.3	Nch Open Drain	-40 to +150	SSOP3A 2.92x2.4, H=Max 1.12

Geomagnetic Sensor IC

3-Axis Digital Magnetometer IC							
Part No.	Supply Voltage (V)	Magnetic Measurement (μ T)	Magnetic Sensitivity (μ T/LSB)	Current Consumption (μ A)	I/F	Operating Temperature ($^{\circ}$ C)	Package (mm)
BM1422AGMV	1.7 to 3.6	\pm 1,200	0.042	150	I ² C	-40 to +85	MLGA010V020A 2.0x2.0, H=Max 1.0

Current Sensor ICs

Contactless Current Sensor IC							
Part No.	Supply Voltage (V)	Magnetic Measurement (μ T)	Magnetic Sensitivity (μ T/LSB)	Current Consumption (μ A)	I/F	Operating Temperature ($^{\circ}$ C)	Package (mm)
BM14270AMUV-LB	2.7 to 5.5	\pm 280	0.045	70	I ² C	-40 to +125	VQFN20QV3535 3.5x3.5, H=Max 1.0

Current Sense Amplifier IC								
Part No.	Ch	Supply Voltage (V)	Quiescent Current (μ A)	Common Mode Voltage (V)	Gain (V/V)	Gain Accuracy (%)	Operating Temperature ($^{\circ}$ C)	Package (mm)
New BD14210G-LA	1	2.7 to 5.5	170	-0.2 to +26	20	\pm 1 (Max)	-40 to +125	SSOP6 2.9x2.8, H=Max 1.25
☆BD14215FVJ-LA	2	2.7 to 5.5	310	-0.2 to +26	20	\pm 1 (Max)	-40 to +125	TSSOP-B8J 3.0x4.9, H=Max 1.10

☆: Under Development

Ambient Light Sensor ICs

Analog Current Output type Ambient Light Sensor ICs								
Part No.	Supply Voltage (V)	Sensitivity Variations (%)	Detection Range (lx)	Sensitivity (μ A/lx)	IR Cut	I/F	Operating Temperature ($^{\circ}$ C)	Package
BH1603FVC	2.4 to 5.5	\pm 15	0 to 100,000	0.6	-	Linear Current Output (Source)	-40 to +85	WSOF6
BH1620FVC	2.4 to 5.5	\pm 15	0 to 100,000	0.6	-	Linear Current Output (Source)	-40 to +85	WSOF5
BH1680FVC	2.4 to 5.5	\pm 15	0 to 50,000	6	✓	Linear Current Output (Source)	-40 to +85	WSOF5
BH1682FVC	2.3 to 5.5	\pm 3 μ A	1 to 55,000	-	✓	Logarithmic Current Output (Source)	-40 to +85	WSOF5

Digital 16bit Serial Output type Ambient Light Sensor ICs								
Part No.	Supply Voltage (V)	Sensitivity Variations (%)	Detection Range (lx)	Sensitivity (at 100ms) (lx/count)	IR Cut	I/F	Operating Temperature ($^{\circ}$ C)	Package
BH1721FVC	2.4 to 3.6	\pm 15	0 to 65,000	1	-	I ² C	-40 to +85	WSOF5
BH1730FVC	2.4 to 3.6	\pm 15	0 to 65,000	0.007	-	I ² C	-40 to +85	WSOF6
New BU27034NUC	1.7 to 2.0	\pm 15	0 to 20,000	0.000016	✓	I ² C	-40 to +85	WSON008X2120

Color Sensor ICs

Digital 16bit Serial Output type Color Sensor ICs												
Part No.	Supply Voltage (V)	λ_p (nm)				Illuminance Measurement (lx)	High Sensitivity	IR Cut	Flicker detection	I/F	Operating Temperature ($^{\circ}$ C)	Package (mm)
		Red	Green	Blue	IR							
BH1749NUC	2.3 to 3.6	630	540	460	825	0 to 80,000	✓	✓	-	I ² C	-40 to +85	WSON008X2120 2.1x2.0, H=Max 0.6
BU27006MUC-Z	1.7 to 3.6	630	540	460	825	0 to 50,000	✓	✓	✓	I ² C	-40 to +85	WQFN12X2520A 2.5x2.0, H=Max 0.55

Optical Sensor for Heart Rate Monitor ICs

Optical Sensor for Heart Rate Monitor ICs							
Part No.	Analog Supply Voltage (V)	IO Supply Voltage (V)	Sampling Frequency (Hz)	Red Light, IR Cut	I/F	Operating Temperature ($^{\circ}$ C)	Package (mm)
BH1790GLC	2.5 to 3.6	1.7 to 3.6	32/64	✓	I ² C	-20 to +85	WLGA010V28 2.8x2.8, H=Max 1.0
BH1792GLC	2.5 to 3.6	1.7 to 3.6	32/64/128/256/1,024	✓	I ² C	-20 to +85	WLGA010V28 2.8x2.8, H=Max 1.0

Pressure Sensor IC

Digital Pressure Sensor ICs with Built-in Temperature Compensation Function

Part No.	Supply Voltage (V)	Pressure Range (hPa)	Relative Pressure Accuracy (hPa)	Absolute Pressure Accuracy (hPa)	I/F	Operating Temperature (°C)	Waterproof	Package (mm)
BM1390GLV-Z	1.7 to 3.6	300 to 1,300	±0.06	±1	I ² C	-40 to +85	✓	RLGA10VG020T 2.0×2.0, H=Max 1.0

Temperature Sensor ICs

Analog Output Temperature Sensor IC

Part No.	Supply Voltage (V)	Temperature Accuracy (°C)		Temperature Sensitivity (mV/°C)	Output Voltage (V) (T _s =+30°C, V _{DD} =3V)	Supply Current (μA)	Operating Temperature (°C)	Package
		T _s =+30°C	T _s =-30, +100°C					
BD1020HFV	2.4 to 5.5	±1.5	±2.5	-8.2	1.3	4.0	-30 to +100	HVSOF5

Digital Output Temperature Sensor IC

Part No.	Supply Voltage (V)	Temperature Accuracy (°C) T _s =-20 to +85°C	Current Consumption (μA)	I/F	Operating Temperature (°C)	Package
BH1900NUX	2.7 to 3.6	±3	75	I ² C	-30 to +95	VSON008X2030

Shock Sensor Amplifier

Shock Sensor Amplifier

Part No.	Supply Voltage (V)	Current Consumption (mA)	Notch Frequency (kHz)	Notch Attenuation Rate (dB)	Operating Temperature (°C)	Package
BD3852MUZ-Z	1.6 to 2.3	1.6 to 4.5	31.0	-23.0	-40 to +85	VQFN16Z3030A

Accelerometers

(Kionix products)

3-Axis Accelerometers

Part No.	G range (±g)	Mechanical Signal Bandwidth (Hz)	Current Consumption* (μA)	I/F	Size, No. of Pins, Package	Features
KXTJ3-1057	2, 4, 8, 16	800	1.5 to 155	I ² C	2×2×0.9mm, 12pin, LGA	Wake-Up Function
KX132-1211	2, 4, 8, 16	4200 (XY) 2900 (Z)	0.53 to 148	I ² C/SPI	2×2×0.9mm, 12pin, LGA	Wake-Up and Back-To-Sleep Function, 512Byte Buffer, Wide Output Data Rate (0.781Hz to 25.6kHz)
KX134-1211	8, 16, 32, 64	8200 (X) 8500 (Y) 5600 (Z)	0.53 to 148	I ² C/SPI	2×2×0.9mm, 12pin, LGA	Wake-Up and Back-To-Sleep Function, 512Byte Buffer, Wide Output Data Rate (0.781Hz to 25.6kHz), Wide Mechanical Signal Bandwidth

*Current consumption can be adjusted by setting