2024 Edition

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ICs

Sensors & MEMS IC

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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
		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 1.1×1.4, 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 0.8×0.8, 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 0.8×0.8, 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 0.8×0.8, 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 0.8×0.8, H=Max 0.4
BU52737GWZ	2.5 to 4.5	+15.0	+15.0	50	0.8	CMOS (2 Outputs: S, N pole)	−40 to +85	UCSP35L1 0.8×0.8, 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 0.8×0.8, 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 0.8×0.8, H=Max 0.4

Industrial Equipment Latch Type Hall IC

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 BD54132G-LBZ	2.5 to 38	2.7	−2.7	20k	1.3	Nch Open Drain	−40 to +150	SSOP3A 2.92×2.4, H=Max 1.12

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)	Automotive Grade AEC-Q100
		S-pole	N-pole						
BD53103G-CZ	2.7 to 38	3.5	—	10k	1.3	Nch Open Drain	−40 to +150	SSOP3A 2.92×2.4, H=Max 1.12	YES
BD53104G-CZ	2.7 to 38	7.5	—	10k	1.3	Nch Open Drain	−40 to +150	SSOP3A 2.92×2.4, H=Max 1.12	YES
BD53105G-CZ	2.7 to 38	10.0	—	10k	1.3	Nch Open Drain	−40 to +150	SSOP3A 2.92×2.4, H=Max 1.12	YES
BD53106G-CZ	2.7 to 38	12.5	—	10k	1.3	Nch Open Drain	−40 to +150	SSOP3A 2.92×2.4, H=Max 1.12	YES
BD53107G-CZ	2.7 to 38	18.0	—	10k	1.3	Nch Open Drain	−40 to +150	SSOP3A 2.92×2.4, H=Max 1.12	YES
BD53108G-CZ	2.7 to 38	28.0	—	10k	1.3	Nch Open Drain	−40 to +150	SSOP3A 2.92×2.4, H=Max 1.12	YES

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)	Automotive Grade AEC-Q100
		Bop	Brp						
BD54102G-CZ	2.7 to 38	2.0	−2.0	10k	1.3	Nch Open Drain	−40 to +150	SSOP3A 2.92×2.4, H=Max 1.12	YES
BD54103G-CZ	2.7 to 38	5.0	−5.0	10k	1.3	Nch Open Drain	−40 to +150	SSOP3A 2.92×2.4, H=Max 1.12	YES
BD54104G-CZ	2.7 to 38	7.5	−7.5	10k	1.3	Nch Open Drain	−40 to +150	SSOP3A 2.92×2.4, H=Max 1.12	YES
BD54105G-CZ	2.7 to 38	10.0	−10.0	10k	1.3	Nch Open Drain	−40 to +150	SSOP3A 2.92×2.4, H=Max 1.12	YES
BD54107G-CZ	2.7 to 38	15.0	−15.0	10k	1.3	Nch Open Drain	−40 to +150	SSOP3A 2.92×2.4, H=Max 1.12	YES

Geomagnetic Sensor IC

3-Axis Digital Magnetometer IC

Part No.	Supply Voltage (V)	Magnetic Measurement (μT)	Magnetic Sensitivity (μT/LSB)	Current Consumption (μA)	I/F	Operating Temperature (°C)	Package (mm)
BM1423GMV	1.7 to 3.6	±1,200	0.042	150	I²C	−40 to +85	MLGA010V020A 2.0×2.0, H=Max 1.0

Current Sensor ICs

Contactless Current Sensor IC

Part No.	Supply Voltage (V)	Magnetic Measurement (μT)	Magnetic Sensitivity (μT/LSB)	Current Consumption (μA)	I/F	Operating Temperature (°C)	Package (mm)
BM14270AMUV-LB	2.7 to 5.5	±280	0.045	70	I²C	−40 to +125	VQFN20QV3535 3.5×3.5, H=Max 1.0

Current Sense Amplifier ICs

Part No.	Ch	Supply Voltage (V)	Quiescent Current (μA)	Common Mode Voltage (V)	Gain (V/V)	Gain Accuracy (%)	Operating Temperature (°C)	Package (mm)
BD14210G-LA	1	2.7 to 5.5	170	−0.2 to +26	20	±1 (Max)	−40 to +125	SSOP6 2.9×2.8, H=Max 1.25
New BD14211G-LA	1	2.7 to 5.5	170	−0.2 to +26	50	±1 (Max)	−40 to +125	SSOP6 2.9×2.8, H=Max 1.25
New BD14215FVJ-LA	2	2.7 to 5.5	310	−0.2 to +26	20	±1 (Max)	−40 to +125	TSSOP-B8J 3.0×4.9, H=Max 1.10

Ambient Light Sensor ICs

Analog Current Output type Ambient Light Sensor ICs

Part No.	Supply Voltage (V)	Sensitivity Variations (%)	Detection Range (lx)	Sensitivity (μA/lx)	IR Cut	I/F	Operating Temperature (°C)	Package
BH1603FVC	2.4 to 5.5	±15	0 to 100,000	0.6	–	Linear Current Output (Source)	−40 to +85	WSOF6
BH1620FVC	2.4 to 5.5	±15	0 to 100,000	0.6	–	Linear Current Output (Source)	−40 to +85	WSOF5
BH1680FVC	2.4 to 5.5	±15	0 to 50,000	6	✓	Linear Current Output (Source)	−40 to +85	WSOF5
BH1682FVC	2.3 to 5.5	±3μA	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 (°C)	Package
BH1721FVC	2.4 to 3.6	±15	0 to 65,000	1	–	I²C	−40 to +85	WSOF5
BH1730FVC	2.4 to 3.6	±15	0 to 65,000	0.007	–	I²C	−40 to +85	WSOF6
BU27034ANUC	1.7 to 2.0	±15	0 to 20,000	0.000016	✓	I²C	−40 to +85	WSON008X2120

Color Sensor IC

Digital 16bit Serial Output type Color Sensor IC

Part No.	Supply Voltage (V)	λ_P (nm)				Illuminance Measurement (lx)	High Sensitivity	IR Cut	Fricker detection	I/F	Operating Temperature (°C)	Package (mm)
		Red	Green	Blue	IR							
BU27006MUC-Z	1.7 to 3.6	630	540	460	825	0 to 50,000	✓	✓	✓	I²C	−40 to +85	WQFN12X2520A 2.5×2.0, H=Max 0.55

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	I²C	−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_a=+30˚C, V_{DD}=3V)	Supply Current (μA)	Operating Temperature (˚C)	Package
		T_a=+30˚C	T_a=−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_a=−20 to +85˚C	Current Consumption (μA)	I/F	Operating Temperature (˚C)	Package
BH1900NUX	2.7 to 3.6	±3	75	I²C	−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

3-Axis Accelerometers

Part No.	Acceleration Range (±g)	Mechanical Signal Bandwidth (Hz)	I/F	Operating Temperature (˚C)	Size, No. of Pins, Package	Features
New KX022ACR-Z	2, 4, 8, 16	800	I²C/SPI	−40 to +85	2×2×1mm, 12pin, LGA	Wake-up and Back-to-sleep Function, 86sets (8bit) or 43sets (16bit) Buffer
New KX132ACR-LBZ	2, 4, 8, 16	4,200 (XY) 2,900 (Z)	I²C/SPI	−40 to +105	2×2×1mm, 12pin, LGA	Up to +105˚C Operating Temperature, Up to 25.6kHz Output Data Rate, 86sets (8bit) or 43sets (16bit) Buffer
New KX134ACR-LBZ	8, 16, 32, 64	8,200 (X) 8,500 (Y) 5,600 (Z)	I²C/SPI	−40 to +105	2×2×1mm, 12pin, LGA	Up to +105˚C Operating Temperature, Up to 25.6kHz Output Data Rate, Wide Mechanical Signal Bandwidth, 86sets (8bit) or 43sets (16bit) Buffer