2022 Edition

By Category PDF

Category Sensors & MEMS

ICs

Sensors & MEMS IC

Includes LAPIS Technology products/Includes Kionix products

Sensors & MEMS

Hall ICs

Omnipolar Detection Hall ICs 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 1.1×1.4, 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
New BU52777GWZ	2.5 to 4.5	+15.0	−15.0	50	1.7	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

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)
BM1422AGMV	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 IC

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

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
BU27030NUC	1.7 to 3.6	±15	0 to 20,000	0.0007	✓	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							
BH1749NUC	2.3 to 3.6	630	540	460	825	0 to 80,000	✓	✓	–	I²C	−40 to +85	WSON008X2120
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

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 (˚C)	Package (mm)
BH1790GLC	2.5 to 3.6	1.7 to 3.6	32/64	✓	I²C	−20 to +85	WLGA010V28 2.8×2.8, H=Max 1.0
BH1792GLC	2.5 to 3.6	1.7 to 3.6	32/64/128/256/1,024	✓	I²C	−20 to +85	WLGA010V28 2.8×2.8, H=Max 1.0

Pressure Sensor ICs

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)
New 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

(Kionix products)

3-Axis Accelerometers						
Part No.	Axis	Full-Scale Range	I/F Output	Current Consumption (μA)	Size, No. of Pins, Package	Features
KXTJ3-1057	3	User-selectable 2g, 4g, 8g, 16g	Digital I²C	10 to 155	2×2×0.9mm, 12pin, LGA	User-configurable wakeup function.
KX132-1211	3	User-selectable 2g, 4g, 8g, 16g	Digital SPI/I²C	0.53 to 148	2×2×0.9mm, 12pin, LGA	512B FIFO/Stream/Trigger buffer. Wide range of ODRs from 0.781Hz to 25.6kHz, Mechanical resonance frequency (−3dB) 4.2kHz (xy), 2.9kHz (z)
KX134-1211	3	User-selectable 8g, 16g, 32g,64g	Digital SPI/I²C	0.53 to 148	2×2×0.9mm, 12pin, LGA	512B FIFO/Stream/Trigger buffer. Wide range of ODRs from 0.781Hz to 25.6kHz, Mechanical resonance frequency (−3dB) 8.2kHz (x), 8.5kHz (y), 5.6kHz (z)

*For Automotive Non-Safety