

Magnetic Sensor Switching Output Type

HGDE□/HGDF□ Series



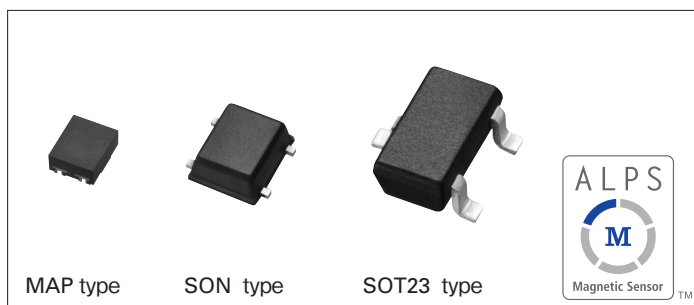
Various product lineup contributes to set design flexibility. High precision, compact and low-profile product based on magnetic sensing devices technologies.

Magnetic Sensors

Piezo Sensors

Capacitive Sensor

Resistive Sensors



Typical Specifications

Items	Specifications	
	HGDE□	HGDF□
Drive voltage	Typ. 1.8V (1.6V min. to 3.6V max.)	Typ. 5V (4.5V min. to 5.5V max.)
Current consumption	3μA Ave. (at VDD=1.8V)	Typ. 1.65mA (at VDD=5V)
Operating temperature range	-40°C to +85°C	

Product list

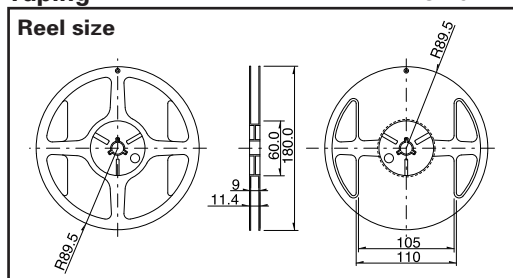
Drive voltage	Package specifications/Size	Function	Minimum order unit (pcs.)	Model No.	Operating magnetic field(Hon)
Typ. 1.8V	MAP type 1.3×0.9×0.55mm	Single polarity/ Single output	3,000	HGDESM021A	2.0mT
		Dual polarity/ Single output		HGDEPM021A	
		Dual polarity/ Dual output		HGDEDM021A	
	SON type 2.1×2.1×0.75mm	Single polarity/ Single output		HGDESN021A	
		Dual polarity/ Single output		HGDEPN021A	
		Dual polarity/ Dual output		HGDEDN021A	
	SOT23 type 2.9×2.8×1.1mm	Single polarity/ Single output		HGDEST021B	
		Dual polarity/ Single output		HGDEPT021B	
		Dual polarity/ Dual output		HGDFSN021A	
Typ. 5V	SON type 2.1×2.1×0.75mm	Single polarity/ Single output	3,000	HGDFPN021A	2.0mT
		Dual polarity/ Single output		HGDFDN021A	
		Dual polarity/ Dual output		HGDFST021B	
	SOT23 type 2.9×2.8×1.1mm	Single polarity/ Single output		HGDFST021B	
		Dual polarity/ Single output		HGDFST021B	
		Dual polarity/ Single output		HGDFPT021B	

Note

※ Operating magnetic field is compatible with both high-sensitive and low-sensitive types. Please contact us for details.

Packing Specifications

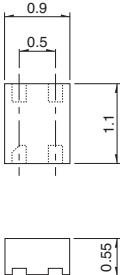
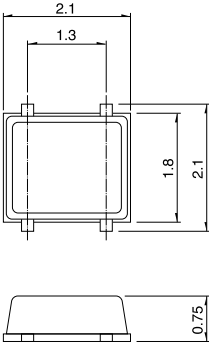
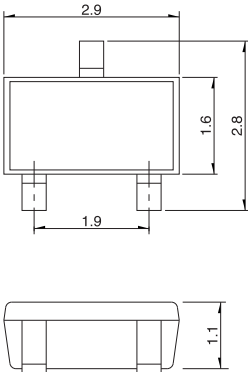
Taping



Number of packages (pcs.)			Tape width (mm)	Export package measurements (mm)
1 reel	1 case /Japan	1 case /export packing		
3,000	3,000	45,000	8	210×210×230

Note

Please place purchase orders per minimum order unit N (integer).

Dimensions	Unit:mm
Style	
MAP type	
SON type	
SOT23 type	

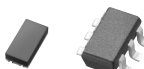
Magnetic
Sensors

Piezo
Sensors

Capacitive
Sensor

Resistive
Sensors

Index for Functions

Style	Series	Photo	Type	Package / Size		Function	Drive voltage	Operating magnetic field	Automotive use	Page			
Magnetic	HGDE□		Switching output (Detection switch)	MAP	1.3×0.9×0.55mm	Single polarity / Single output	Typ.1.8V	Hon 2.0mT	—	499			
						Dual polarity / Single output							
				SON	2.1×2.1×0.75mm	Single polarity / Single output							
						Dual polarity / Single output							
				SOT23	2.9×2.8×1.1mm	Single polarity / Single output							
						Dual polarity / Single output							
	HGDF□		Snap-in type	SON	2.1×2.1×0.75mm	Single polarity / Single output	Typ.5V						
						Dual polarity / Single output							
				SOT23	2.9×2.8×1.1mm	Single polarity / Single output							
						Dual polarity / Single output							
				HGDFA□		Switching output (Connector Connection Model)		14×9×5mm		Dual polarity / Single Output (open collector output)	Typ.5V Typ.12V	—	501
						Snap-in type				14.15×13.2×5mm			
	HGP□P		Latch output type (direction of rotation)	MAP	1.3×0.9×0.55mm	1-phase alternating output Sampling period 1.3msec	Typ.1.8V	Hon 1mT/ Hoff –1mT	●	503			
				SOT23	2.9×2.8×1.1mm	1-phase alternating output Sampling period 35μ sec	Typ.5V						
	HGP□D		Incremental encoding output (direction of rotation/rotation direction)	MAP	2×1×0.55mm	2-phase alternating output Sampling period 1.3msec	Typ.1.8V			504			
SOT23				2.9×2.8×1.1mm	2-phase alternating output Sampling period 35μ sec	Typ.5V							
HGAR□		Linear analog output (Rotation detection)	2×1.5×0.65mm		Output:Typ.±75mV (rotation angle±30°)	1.5 to 5.5V	—	505					
Geomagnetic	HSCD□		Geomagnetic detection	2.5×2.5×0.7mm		Output resolution 0.3 μT / LSB	Ana:2.4 to 3.6V Digi:1.7 to 2.3V	±0.6mT	—	506			

Magnetic Sensors

Piezo Sensors

Resistive Sensors

Resistive Sensors

Note

●marks in "Available for automotive use" indicate that all of the series products can work at the operating temperature range from -40°C to +85°C.