

# MST Product Selection Guide

2021

Magnesensor Technology Ltd



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# Foundation

MST is a fabless semiconductor technology corporation offering the design and manufacture of integrated circuit Hall Effect sensors. Our company was established in 2003 in the State of New Hampshire, USA.

We supply the most advanced technology, the highest standard quality, and the most competitive price available. We also support our customer's technology requirements with a most advanced and active design and manufacturing team.

# Spirit

The name, Magnesensor Technology, represents our rich experience, pragmatic spirit and involvement in the semiconductor industry. We have individuals that have worked with Hall technology for more than 30 years thus making MST one of the most experienced staffed Hall Effect sensor companies in existence. Our company has manufacturing plants and distribution in four areas of the world with product distributors located globally. Our sensors are distributed to all market segments around the world through our powerful global distribution channels.

# Our missions



Provide recognizable value to our customers



Provide the most reliable and advanced technology products



Provide products that increase sales and profits of our customers



Provide our customers with an endless supply of innovative products



Maintain a positive environment for our partners and customers



Maintain a "Green" manufacturing environment world wide

\*Temperature: E(-20°C~+85°C) ; I (-30°C~+105°C) ; K (-40°C~+125°C) ; L (-40°C~+150°C)

\*Package: SO(SOT23-3L);ST(TSOT23-3L);SN(SOT553-5L);SQ(QFN 2020-3L);SP(Micro Sot23-3L);SF(SOT89-5L);  
SH(SOT23-5L);SM(DFN1616-6);UA(TO92S-3L);VK(TO94-4L);VF(TO92S-5L);VL(TO94-3L);  
SS(DFN1010-4L);SR(SOT23-6L);SD(DFN2020-6)

\*OD:Open Drain output

\*OC:Open collector output

\*TSD:Thermal Shut-Down

\*OCP:Over Current Protection

\*SW:Soft Switching

\*AR:Auto Restart

\*FG:Frequency Generation

\*RD:Revolution Detection

\*PWM:Pulse Width Modulation

## Latch

### Low Operating Voltage Latch(1.8V/3V/5V)

Part Number	Package	Voltage range	Temperature	Bop/ Brp(Typ/Gauss)	Output current(Max)	OD	OC	Pull up	TSD	Micro Power	Reverse Protection	Note
MH178	UA/SO	2.0V~5.5V	E/K	+/- 30	10mA	V				V		Micropower Hall Effect Latch
MH179	UA/SO	2.0V~5.5V	E/K	+/- 30	10mA	V				V		Micropower Hall Effect Latch(2K Hz)

### High Operating Voltage Latch(5V/12V/24V)

MH163	SO	3.5V~24V	E/K	+/- 30	100mA	V		V		V		General Purpose Hall Effect Latch(S->low)
MH173	SO	2.5V~26V	E/K	+/- 30	25mA			V		V		Built-in Pull High Res Hall Effect Latch(S->Low)
MH180	UA/SO/SF	2.5V~24V	E/K	+/- 50	25mA	V				V		General Purpose Hall Effect Latch
MH181	UA	3.5V~20V	K	+/- 50	25mA		V			V		General Purpose Hall Effect Latch
MH182	UA/SO	3.0V~24V	E/K	+/- 40	50mA	V						Multi-Purpose Hall Effect Latch
MH185	SO	2.5V~26V	E/K	+/- 30	25mA	V				V		High Sensitivity Hall Effect Latch( S->Low)
MH186	UA/SO	3.0V~26V	E/K	+/- 30	25mA	V				V		High Sensitivity Hall Effect Latch
MH188	UA/SO/SD	2.5V~26V	E/K	+/- 15	50mA	V				V		Ultra High Sensitivity Hall Effect Latch
MH189	UA/SO	3.0V~26V	E/K	+/- 15	50mA	V						High Sensitivity Hall Effect Latch(AECQ)
MH190	UA	4.0V~30V	E/K	+/- 60	25mA		V			V		High Voltage, Bipolar Process, Hall Effect Latch
MH191	UA	4.0V~30V	E/K	-/+ 55	25mA		V			V		Inverted Output Hall Effect Latch
MH193	UA/SO	2.5V~26V	E/K	+/- 15	25mA			V		V		Built-in Pull High Res Hall Effect Latch
MH195	UA/SO	4.0V~30V	E/K	+/- 60	20mA		V					High Voltage, Bipolar Process, Hall Effect Latch(AECQ)

## Direction

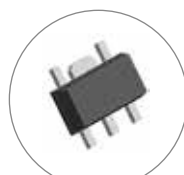
Part Number	Package	Voltage range	Temperature	Bop/ Brp(Typ/Gauss)	Output current(Max)	OD	OC	Pull up	TSD	Micro Power	Reverse Protection	Note
MH452	VK/SD	2.5V-26V	E/K	+/- 15	50mA	V				V		Dual Hall Speed and Direction Sensors



T092S-3L(UA)  
4.0\*3.0\*1.52



SOT23-3L(SO)  
2.9\*1.6\*1.1



SOT89-5L(SF)  
4.5\*2.5\*1.5



DFN2020-6(SD)  
2.0\*2.0\*0.6



T094-4L(VK)  
5.22\*3.65\*1.56

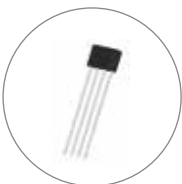
## Fan driver

### One coil fan driver

Part Number	Package	Voltage range	Temperature	Bop/Brp(Gauss)	Output current(Max)	Sorting											Short Protect Reverse Protection Note
						OD	OC	TP	SW	AR	FG	RD	PWM	TSD			
MH361	VK	3.5V ~ 20V	E/K	+/- 30(Max)	400mA			V		V	V	V		V		Single Phase Fan Motor Driver with Auto-restart	
MH365	SR/SD/SM	1.8V ~ 5.5V	E/K	+/- 30(Max)	1000mA			V	V	V	V	V	V	V	V	Single Phase Fan Motor Driver with Soft-Switch	
MH477	VK	3.5V ~ 20V	E	+/- 30(Max)	350mA			V						V		Single Phase Fan Motor Driver IC(CMOS Process)	

### Two coil fan driver

Part Number	Package	Voltage range	Temperature	Bop/Brp(Gauss)	Output current(Max)	Sorting											Short Protect Reverse Protection Note
						OD	OC	TP	SW	AR	FG	RD	PWM	TSD			
MH276T	VK	3.5V~20V	E	+/-50 (Max)		A	V							V	V	V	Complementary Output Fan driver (Bipolar Process)
				+/-70 (Max)	700mA	B	V					V	V	V			
				+/- 100 (Max)		C	V					V	V	V			
MH277	VK	3.5V~20V	E	+/- 30(Max)	700mA		V						V	V	V	Complementary Output Fan driver(CMOS Process)	
MH284	VK	2.5V ~ 20V	E/K	+/- 30(Max)	1200mA		V			V			V	V	V	Hall-Effect Smart Fan Motor Controller	
MH381	VK/VF/SF	2.5V ~ 20V	E/K	+/- 30(Max)	1200mA		V			V	V	V	V	V	V	High peak current Fan driver + Thermal shut-down + FG/RD	
MH382	VK/SF	4.5V ~ 30V	E/K	+/- 30(Max)	700mA		V			V	V	V	V	V	V	24V Fan Driver + Thermal shut-down + FG/RD	



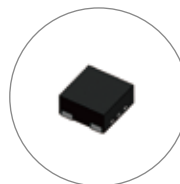
TO94-4L(VK)  
5.22\*3.65\*1.56



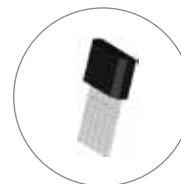
SOT23-6L(SR)  
3.0\*1.6\*1.1



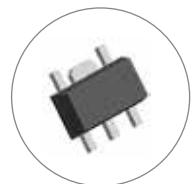
DFN2020-6(SD)  
2.0\*2.0\*0.6



DFN1616-6(SM)  
1.6\*1.6\*0.4



TO92S-5L(VF)  
5.23\*3.51\*1.55



SOT89-5L(SF)  
4.5\*2.5\*1.5

# Linear Hall Effect

## Programming Linear

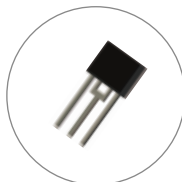
Part Number	Package	Voltage range	Temperature	Sensitivity	Output current (Max)	TP	Note
MH482	VK/VL	4.5V~5.5V	I	0.9~25mV/G	13mA	V	Programmable High speed Linear Hall
MH485	VL	4.5V~5.5V	I	0.9~25mV/G	13mA	V	High Speed Programming Linear Hall IC
MH486	VK	4.5V~5.5V	I	0.9~25mV/G	13mA	V	High Speed Programming Linear Hall IC+Vref
MH487	VK	4.5V~5.5V	I	0.9~25mV/G	13mA	V	High Speed Programming Linear Hall IC+Micro Power

## Ratio-Metric Linear

Part Number	Package	Voltage range	Temperature	Sensitivity	Output current (Max)	Sorting	TP	Note
MH481	UA/SQ/ST	3.0V~ 6.5V	I	2mV/G	10mA		V	Ratio-metric Linear Hall Effect IC
				1.5mV/G		A	V	
MH491	UA/SO	2.8V~ 6.0V	I	2mV/G	5mA	B	V	CMOS Ratio-Metric Linear Hall Effect IC
				2.5mV/G		C	V	
				3mV/G		D	V	
MH491	SD	2.8V~ 6.0V	I	1.5mV/G, 2mV/G, 2.5mV/G, 3mV/G	5mA		V	4 Sensitivity in one chip
MH492	UA/SO	2.8V~ 6.0V	I	5mV/G	5mA	A	V	CMOS Ratio-Metric Linear Hall Effect IC
				9mV/G		B	V	
MH492	SD	2.8V~ 6.0V	I	3mV/G,5mV/G, 7mV/G, 9mV/G	5mA		V	4 Sensitivity in one Chip
				4mV/G		A	V	
MH493	UA/SO	2.8V~ 6.0V	I	7mV/G	5mA	B	V	CMOS Ratio-Metric Linear Hall Effect IC
				10mV/G		C	V	
				13mV/G		D	V	
MH493	SD	2.8V~ 6.0V	I	4mV/G,7mV/G, 10mV/G,13mV/G	5mA		V	4 Sensitivity in one chip



TO94-4L(VK)  
5.22\*3.65\*1.56



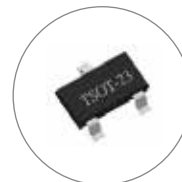
TO94-3L(VL)  
5.22\*3.65\*1.56



TO92S-3L(UA)  
4.0\*3.0\*1.52



QFN 2020-3L(SQ)  
2.0\*2.0\*0.55



TSOT23-3L(ST)  
2.9\*1.6\*0.8



SOT23-3L(SO)  
2.9\*1.6\*1.1



DFN2020-6(SD)  
2.0\*2.0\*0.6

## Omni-polar Switch

Low Operating Voltage Omni-polar Switch(1.8V/3V/5V)

Part Number	Package	Voltage range	Temperature	BopS/N(Typ/Gauss)	BH(Typ/Gauss)	Output current(Max)	OD	TP	SPD	Micro Power (µA)	Note
MH235	UA/ST				10		V				V All-polarity (NS) output "action is LO"
	SS	2.7V~5.5V	E	+/- 30	10	5mA	V				V All polarity (NS) output Hi+ Inverted-output high
	SD				10		V	V	V		V All polarity (NS) output Hi+ Inverted-output high+ containing SPD acceleration PIN
MH235H	UA/ST	2.7V~5.5V	E	+/- 30	10	5mA	V		V		V Ultra low power, Inverted Omni-polar Hall Switch
MH238	UA/ST				10		V				V All-polarity (NS) output "action is LO"
	SS	2.7V~5.5V	E	+/- 30	10	5mA	V				V All polarity (NS) output Hi+ Inverted - output Hi
	SD				10		V		V	V	V All polarity (NS) output Hi+ Inverted-output high+ containing SPD acceleration PIN
MH238H	UA/ST	2.7V~5.5V	E	+/- 30	10	5mA	V		V		V All polarity (NS) inverse output "action is Hi"
MH248	UA/SO/ST/SQ	2.5V~3.5V	E	+/- 30	10	5mA	V				V Omnipolar-CMOS Micropower Switch
MH248-β	ST	2.5V~3.5V	E	+/- 40	10	5mA	V				V Micro power Hall Effect Switch
MH251	UA/SP/ST/SQ/SN/SO	1.65V~3.5V	E	+/- 30	10	1mA	V				V Micropower CMOS Output Hall Effect Switch
MH251-β	ST/SQ	1.65V~3.5V	E	+/- 40	10	1mA	V				V Micropower CMOS Output Hall Effect Switch
MH253	UA/SO	2.5V~6.0V	E/K	+/- 30	10	25mA	V				V High Sensitivity Omni-Polar Hall Effect Switch
MH253C	UA/SO	2.5V~6.0V	E/K	+/- 30	10	25mA	V				V High Sensitivity Omni-Polar Hall Effect Switch
MH255	SP/UA/ST	1.7V~5.5V	E	+/- 30	10	5mA	V			V	V Micro power, General Purpose Hall Effect Switch
MH256	UA/SO	2.5V~6.0V	E	+/- 30	10	5mA	V	V	V		V Micropower CMOS Output Hall Effect Switch
MH258	ST/UA/SO	1.7V~5.5V	E	+/- 30	10	10mA	V			V	V Micropower Hall Effect Switch
MH259	UA/SO	2.5V~6.0V	E	+/- 30	10	10mA	V		V	V	V Micropower Open Drain Output Hall Effect Switch
MH260	SS	1.7V~5.5V	E	+/- 30	10	5mA	V	V	V		V Micro power, General Purpose Hall Effect Switch
MH261	SS	1.7V~5.5V	E	+/- 30	10	10mA	V		V	V	V Micro power, General Purpose Hall Effect Switch
MH262	UA/ST	1.65V~3.5V	E	+/- 20	8	5mA	V		V		V Ultra High Sensitivity Micropower Hall Switch



# Omni-polar Switch

## High Operating Voltage Omni-polar Switch(5V/12V/24V)

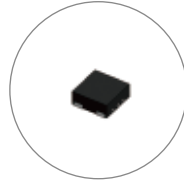
Part Number	Package	Voltage range	Temperature	BopS/N(Typ/Gauss)	BH(Typ/Gauss)	Output current(Max)	OD	TP	Pull Up	Note
MH271	UA/SO	2.5V~26V	E/K	+/- 80	20	25mA	V			Low Sensitivity Omni polar Switch
MH272	UA/SO	2.5V~26V	E/K	+/- 30	10	25mA	V			High Sensitivity Omni polar Hall Effect Switch
MH273	UA/SO	2.5V~26V	E/K	+/- 80	20	25mA		V		Low Sensitivity Omni polar Switch
MH274	UA/SO	2.5V~26V	E/K	+/- 30	10	25mA		V		High Sensitivity Omni polar Hall Effect Switch
MH275	UA/SO	2.5V~26V	E/K	+/- 175	45	25mA	V			Ultra Low Sensitivity Omni polar Switch
MH278	UA/SO	2.5V~26V	E/K	+/- 175	45	25mA		V		Ultra Low Sensitivity Omni polar Switch



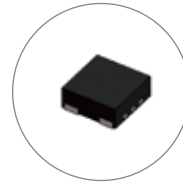
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4.0\*3.0\*1.52



SOT23-3L(SO)  
2.9\*1.6\*1.1



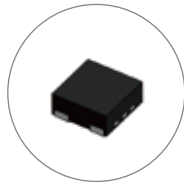
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DFN2020-6(SD)  
2.0\*2.0\*0.6



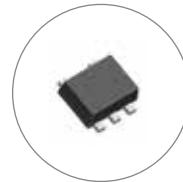
TSOT23-3L(ST)  
2.9\*1.6\*0.8



QFN 2020-3L(SQ)  
2.0\*2.0\*0.55



Micro  
Sot23-3L(SP)  
2.92\*1.3\*1.0



SOT553-5L(SN)  
1.6\*1.2\*0.6

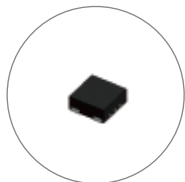
## Uni-polar Switch

### Low Voltage Uni-polar Switch(1.8V/3V/5V)

Part Number	Package	Voltage range	Temperature	Bop(Typ/Gauss)	BH(Typ/Gauss)	Output current(Max)	OD	TP	SPD	Micro Power (μA)	Note
MH232	SS/SD	2.7V~5.5V	E	±30	10	5mA	V	V	V		Ultra-Low power Dual Output Hall Switch
MH232N	UA/ST	2.7V~5.5V	E	-30	10	5mA	V		V		
MH232S	UA/ST	2.7V~5.5V	E	+30	10	5mA	V		V		
MH233	SS/SD	2.7V~5.5V	E	+/- 70	10	5mA	V	V	V		Ultra-Low power Dual Output Hall Switch
MH233N	UA/ST	2.7V~5.5V	E	-70	10	5mA	V		V		
MH233S	UA/ST	2.7V~5.5V	E	+70	10	5mA	V		V		
MH254	SQ/ST/UA/SS/SP SN	1.7V~5.5V	E	-30 +30	10	5mA	V		V		Unipolar Hall Effect Switch, SQ/ST/UA/SS/SP N polar active LO, SN S polar active LO
MH257	ST/SQ/SP/UA SN	1.7V~5.5V	E	+30 -30	10	5mA	V		V		Unipolar Hall Effect Switch,ST/UA S polar active LO, SN N polar active LO

### High Voltage Uni-polar Switch(5V/12V/24V)

Part Number	Package	Voltage range	Temperature	Bop(Typ/Gauss)	BH(Typ/Gauss)	Output current(Max)	OD	TP	Reverse Protection	Note
MH281	UA/SO	3.0V~24V	E/K	175	45	50mA	V		V	Ultra Low Sensitivity Unipolar Hall Effect Switch
MH282	UA/SO	3.0V~24V	E/K	90	20	50mA	V		V	General Sensitivity Unipolar Hall Effect Switch
MH283	UA/SO	2.5V~24V	E/K	120	50	50mA	V		V	Low Sensitivity Unipolar Hall Effect Switch
MH285	UA/SO	2.5V~24V	E/K	25	8	50mA	V		V	High sensitivity Unipolar Hall Effect Switch



DFN1010-4L(SS)  
1.0\*1.0\*0.4



DFN2020-6(SD)  
2.0\*2.0\*0.6



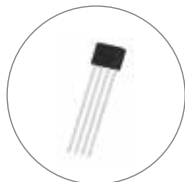
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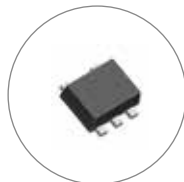
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4.0\*3.0\*1.52



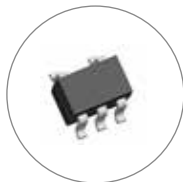
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TO94-4L(VK)  
5.22\*3.65\*1.56



SOT553-5L(SN)  
1.6\*1.2\*0.6



SOT23-5L(SH)  
2.9\*1.6\*1.1



QFN 2020-3L(SQ)  
2.0\*2.0\*0.55

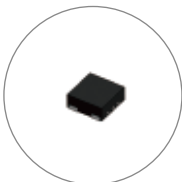


Micro  
Sot23-3L(SP)  
2.92\*1.3\*1.0

# MH23X-MH25X-MH26X

## MH23X

Part Number	Package	Voltage range	Temperature	BopS/N(Typ/Gauss)	BH	Output current(Max)	OD	TP	SPD	Micro Power(1.5uA)	Note
MH232	SS/SD	2.7V~5.5V	E	±30	10	5mA	V	V	V		Ultra-Low power Dual Output Hall Switch
MH232N	UA/ST	2.7V~5.5V	E	-30	10	5mA	V		V		
MH232S	UA/ST	2.7V~5.5V	E	+30	10	5mA	V		V		
MH233	SS/SD	2.7V~5.5V	E	+/- 70	10	5mA	V	V	V		Ultra-Low power Dual Output Hall Switch
MH233N	UA/ST	2.7V~5.5V	E	-70	10	5mA	V		V		
MH233S	UA/ST	2.7V~5.5V	E	+70	10	5mA	V		V		
MH235	UA/ST						V		V		All-polarity (NS) output "action is LO"
	SS	2.7V~5.5V	E	+/- 30	10	5mA	V		V		All polarity (NS) output Hi+ Inverted - output high
	SD						V	V	V		All polarity (NS) output Hi+ Inverted output+ containing SPD acceleration PIN
MH235H	UA/ST	2.7V~5.5V	E	+/- 30	10	5mA	V		V		Ultra low power, Inverted Omnipolar Hall Switch
MH238	UA/ST						V		V		All-polarity (NS) output "action is LO"
	SS	2.7V~5.5V	E	+/- 30	10	5mA	V		V		All polarity (NS) output Hi+ Inverted- output high
	SD						V	V	V		All polarity (NS) output Hi+ Inverted output high+ containing SPD acceleration PIN
MH238H	UA/ST	2.7V~5.5V	E	+/- 30	10	5mA	V		V		All polarity (NS) inverted output "action is Hi"



DFN1010-4L(SS)  
1.0\*1.0\*0.4



TSOT23-3L(ST)  
2.9\*1.6\*0.8



T925-3L(UA)  
4.0\*3.0\*1.52



DFN2020-6(SD)  
2.0\*2.0\*0.6

## MH23X-MH25X-MH26X

### MH25X

Part Number	Package	Voltage range	Temperature	BopS/N(Typ/Gauss)	BH(Gauss)	Output current	OD	TP	SPD	Micro Power (µA)	Note
MH251	UA/SP/ST/SQ/SN/SO	1.65V~3.5V	E	+/- 30	10	1mA	V	V	V	V	Micropower CMOS Output Hall Effect Switch
MH251-β	ST/SQ	1.65V~3.5V	E	+/- 40	10	1mA	V	V	V	V	Micropower CMOS Output Hall Effect Switch
MH253	UA/SO	2.5V~6.0V	E/K	+/- 30	10	25mA	V				High Sensitivity Omni-Polar Hall Effect Switch
MH253C	UA/SO	2.5V~6.0V	E/K	+/- 30	10	25mA	V				High Sensitivity Omni-Polar Hall Effect Switch
MH254	SQ/ST/UA/SS/SP	1.7V~5.5V	E	-30	10	5mA	V	V	V	V	Unipolar Hall Effect Switch, SQ/ST/UA/SS/SP N polar active LO, SN S polar active LO
	SN			+30	10						
MH257	ST/SQ/SP/UA	1.7V~5.5V	E	+30	10	5mA	V	V	V	V	Unipolar Hall Effect Switch, ST/UA S polar active LO, SN N polar active LO
	SN			-30	10						
MH255	SP/UA/ST	1.7V~5.5V	E	+/- 30	10	5mA	V				Micro power, General Purpose Hall Effect Switch
MH256	UA/SO	2.5V~6.0V	E	+/- 30	10	5mA	V	V	V	V	Micropower CMOS Output Hall Effect Switch (High Speed)
MH258	ST/UA/SO	1.7V~5.5V	E	+/- 30	10	10mA	V				Micropower Hall Effect Switch
MH259	UA/SO	2.5V~6.0V	E	+/- 30	10	10mA	V	V	V	V	Micropower Output Hall Effect Switch (High Speed)

### MH26X

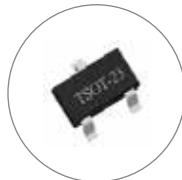
MH260	SS	1.7V~5.5V	E	+/- 30	10	5mA	V	V	V	V	Micro power, General Purpose Hall Effect Switch
MH261	SS	1.7V~5.5V	E	+/- 30	10	10mA	V	V	V	V	Micro power, General Purpose Hall Effect Switch
MH262	UA/ST	1.65V~3.5V	E	+/- 20	8	5mA	V				Ultra High Sensitivity Micropower Hall Switch



TO92S-3L(UA)  
4.0\*3.0\*1.52



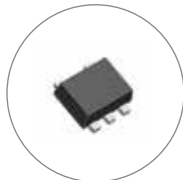
Micro  
Sot23-3L(SP)  
2.92\*1.3\*1.0



TSOT23-3L(ST)  
2.9\*1.6\*0.8



QFN 2020-3L(SQ)  
2.0\*2.0\*0.55



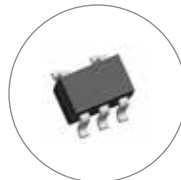
SOT553-5L(SN)  
1.6\*1.2\*0.6



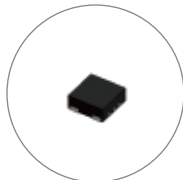
SOT23-3L(SO)  
2.9\*1.6\*1.1



TO94-4L(VK)  
5.22\*3.65\*1.56



SOT23-5L(SH)  
2.9\*1.6\*1.1



DFN1010-4L(SS)  
1.0\*1.0\*0.4

# MH48X-MH49X

## MH48X

Part Number	Package	Voltage range	Temperature	Sensitivity	Output current(Max)	TP	Note
MH481	UA/SQ/ST	3.0V~ 6.5V	I	2mV/G (Typ)	10mA	V	Ratio-metric Linear Hall Effect Sensor
MH482	VK/VL	4.5V~5.5V	I	0.9~25mV/G	13mA	V	Programming High speed Linear Hall Sensor
MH485	VL	4.5V~5.5V	I	0.9~25mV/G	13mA	V	High Speed Programming Linear Hall IC
MH486	VK	4.5V~5.5V	I	0.9~25mV/G	13mA	V	High Speed Programming Linear Hall+Vref
MH487	VK	4.5V~5.5V	I	0.9~26mV/G	13mA	V	High Speed Programming Linear Hall + Micro Power



TO92S-3L(UA)  
4.0\*3.0\*1.52



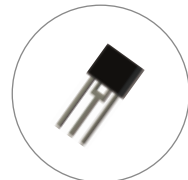
QFN 2020-3L(SQ)  
2.0\*2.0\*0.55



TSOT23-3L(ST)  
2.9\*1.6\*0.8



TO94-4L(VK)  
5.22\*3.65\*1.56



TO94-3L(VL)  
5.22\*3.65\*1.56

## MH49X

Part Number	Package	Voltage range	Temperature	Sensitivity	Output current(Max)	Sorting	TP	Note
MH491	UA/SO	2.8V~ 6.0V	I	1.5mV/G	5mA	A	V	CMOS Ratio-Metric Linear Hall Effect IC
				2mV/G		B	V	
				2.5mV/G		C	V	
				3mV/G		D	V	
MH491	SD	2.8V~ 6.0V	I	1.5mV/G, 2mV/G, 2.5mV/G, 3mV/G			V	4 Sensitivity in one chip
MH492	UA/SO	2.8V~ 6.0V	I	5mV/G	5mA	A	V	CMOS Ratio-Metric Linear Hall Effect IC
				9mV/G		B	V	
MH492	SD	2.8V~ 6.0V	I	3mV/G, 5mV/G, 7mV/G, 9mV/G			V	4 Sensitivity in one Chip
MH493	UA/SO	2.8V~ 6.0V	I	4mV/G	5mA	A	V	CMOS Ratio-Metric Linear Hall Effect IC
				7mV/G		B	V	
				10mV/G		C	V	
				13mV/G		D	V	
MH493	SD	2.8V~ 6.0V	I	4mV/G, 7mV/G, 10mV/G, 13mV/G			V	4 Sensitivity in one chip



TO92S-3L(UA)  
4.0\*3.0\*1.52



SOT23-3L(SO)  
2.9\*1.6\*1.1



DFN2020-6(SD)  
2.0\*2.0\*0.6

## Magnetic Angular Sensor

AG3

Voltage range (Min)	Operating Current (Max)	Power (Max)	Power On Output Response (Max)	Operating Temperature	Storage Temperature	Effective Electrical Angle	Shaft Rotation Wobble (Max)	Rotational Torque	Output Electric Angle Error	Noise (Max)	Refresh Frequency (Max)	Max Revolution	High Temp/Low Temp/Humid ESD	Note
3.3V	10mA	0.05W	1 ms	E/K	I	360° Linear	±2°	20 ± 10 gf.cm	±1°	12mV	8.3 KHz	3600 RPM	V	360° Contactless Angle Sensor
									±3°	30mV	3.9 KHz	600 RPM	V	

## Magnetic Joy Sticker

HJ-08N

Operating Voltage	Operating Current (Max)	Output Current (Max)	Power	Output Response Time	Operation temperature	Storage temperature	Joystick Rotation type	Joystick operating angle (Max)	Rotational torque	Shaft Rotation Wobble (Max)	Contact Noise	Output Bandwidth	High Temp/Low Temp/Humid ESD	Note
2.5~5 V	5mA	2.0 mA	0.008W~0.025W	3 μS	K	E	2D Rotating	55°	120 ± 50 gf.cm	±2°	<3mV	<20 KHz	V	Contactless Mini 3D Joystick

## AMR Position Module

MF8B, MA93

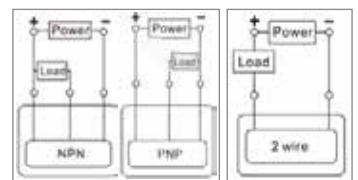
Wiring type	Output type (Auto)	Load voltage	Maximum load current	Internal voltage drop	Switch frequency	Leakage current	Operation temperature	Over current protect	Over temperature protect	Indicator light	Note
3-Wire	NPN , PNP	5V~ 30V	200mA	0.5V	1 KHz	50 uA	I	V	V		
2-Wire	-	5V~ 30V	100mA	3V	1 KHz	60 uA	I	V	V	Red LED	Non Contact Switch PCBA



AX3



HJ-08N



MF8B, MA93

## Hall Element

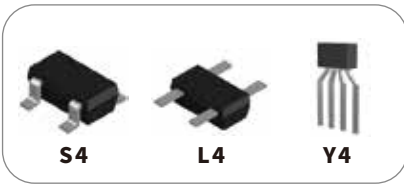
### ME101

Grade	Package	Supply Voltage, (V <sub>C</sub> )	Temperature	Output Hall Voltage, (V <sub>H</sub> ) (E Rank)	Output Hall Voltage, (V <sub>H</sub> ) (F Rank)	Output Hall Voltage, (V <sub>H</sub> ) (G Rank)
E/F/G	S4/L4/Y4	1.0~2.0V	K	228~274mV	226~320mV	310~370mV

## Current Sensor

### MCCWxxx-Tx Series

Voltage range	Temperature	Sensitivity	Supply current (Max)	Output current (Max)	Note
4.5V~ 5.5V	K	2.21~5.00mV/A	18mA	40mA	MCCWxxx-Tx Series Current Sensor Specifications



ME101



MCCWxxx-Tx Series

# Magnetic Encoder

## KEM2500D-8-OT

Operating Type	Resolution	Output Signals	ABZ & Differentials	B channel leading A channel	Z-&Z- channel	UVW & Differentials Signals	U ch leading V ch ; V ch leading W ch	Rated Power	Noise	Operating Current	Output Frequency	Output Delay	Output Digital Voltage	Magnet	Product Description
Motor Shaft Operating	2500 PPR	After 510±220 ms waiting status	22±11 ms after UVW phase	CCW, Viewed to the encoder from its mounting side	Pulse Width	Present time 22±11 ms	CCW, Viewed to the encoder from its mounting side, 120°electrical cycle	0.1W @ Vdd=5V	N/A	Max: <20mA Typical: <10mA	≤12K	510±220 ms	HIGH: VOH ≥4.9V LOW: VLO ≤0.1V	Dimension Ø5x2 or Ø6x2; Radial magnetized	ABZ+ UVW DIFFERENTIAL INCREMENTAL ENCODER,

## KEM17S-35-D

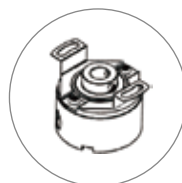
Operating Type	Resolution	Output Signals	Rated Power	Power-up Time	Consumption Current	Rotation Speed	Output Delay	Output Digital Voltage	Magnet	Data Memory	Serial Communication	Product Description
Motor Shaft Operating	131,072 positions	Pure Binary	0.1W @ Vdd=5V	20ms max.	50mA typ.	≤7K Recommended	5µs	HIGH: VOH ≥4.9V LOW: VLO ≤0.1V	Dimension Ø5x2 or Ø6x2; Radial magnetized	762 bytes	Communication rate 2.5Mbps	17 BIT ABSOLUTE ENCODER, SINGLE-TURN

## KEM17M-OT-35mm

Operating Type	Resolution	Output Signals	Rated Power	Power-up Time	Consumption Current	Rotation Speed	Output Delay	Output Digital Voltage	Magnet	Data Memory	Serial Communication	Product Description
Motor Shaft Operating	16 bit Multi-Turn, 17-bit one turn 131,072 absolute positions	Pure Binary	0.1W @ Vdd=5V for normal model.	3ms max.	500mA max.	≤6K Recommended	5µs	High: VOH ≥4.9V LOW: VLO ≤0.1V	Dimension Ø5x2 or Ø6x2; Radial Magnetized.	762 bytes	Communication rate 2.5Mbps	16 BIT MULTI TURN 17 BIT SINGLE TURN ABSOLUTE ENCODER



KEM2500D-8-OT



KEM17S-35-D



KEM17M-OT-35mm



## Product Quality

**AECQ-100**

**Automotive Line  
Qualified by AECQ-100**

**JEDEC STD**

**Commercial Line  
Qualified by JEDEC**

**<1.0PPM**

**Product Quality Level  
<1.0PPM**

## Application Scope



**BLDC**



**Automation**



**Artificial Intelligence**



**Smart Meter**



**Industry**



**Robot**



**Appliance 3C**



**Big Data**



**White Goods**

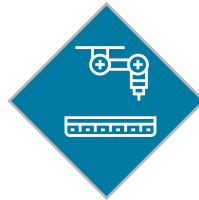


**Automotive**

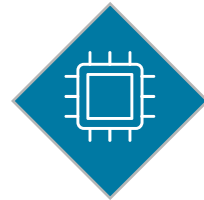
## R&D Strengths



**Custom Made  
Capability**



**Focus CMOS  
Technology**



**Hall IC  
Focus**

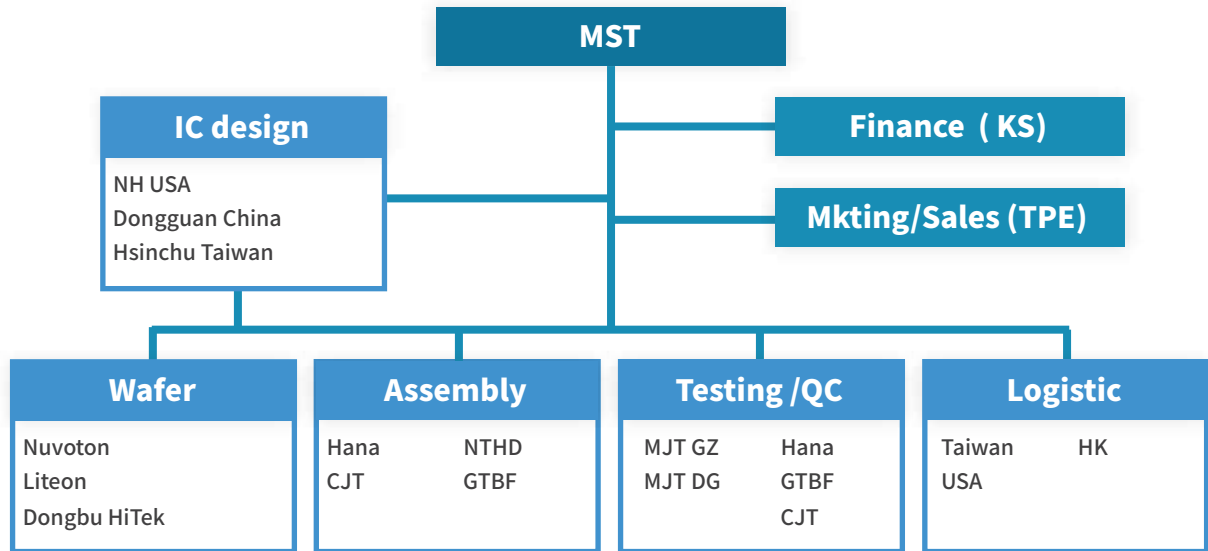


**Advance  
Testing Skill**



**Strong  
FAE Support**

# MST Manufacturing



# Certification



# QA



## Discipline & 5S Audits

Inspectors and Operators discipline will be audited **daily**.



## Product Audit

Customer product (base on end Product Requirement) will be audited **every month** based on different customer.



## System Audit

Quality Management System Audit will be carried out **twice** per year.



## Process Audit

Manufacturing process (base on Control Plan) will be audited **every week** base on different customer.

# Contact

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25 commerce drive, Franklin, NH. 03235

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Own Testing Factory:GuangZhou/DongGuan/China

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Warehouse: Hong Kong

Fin/Adm: Kaohsiung, Taiwan / Taipei, Taiwan

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Marketing office: Taipei, Taiwan

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Contact Person: Paul Lin

Wechat public account:Magnesensor



# Product Selection Guide

[www.magnesensor.com](http://www.magnesensor.com)