

MAGNETIC SENSOR IC SELECTION CHART

Tables 1, 2, 3 and 4 provide an overview of Honeywell's Hall-effect and anisotropic magnetoresistive (AMR) sensor ICs.

TABLE 1. DIGITAL POSITION SENSORS ICs

Product Type	Package Style								Typical Operate (Gauss)	Typical Release (Gauss)	Maximum Operate (Gauss)	Reverse Polarity	Quad Hall Design	Operating Temperature (°C)	Supply Voltage (Vdc)	Typical Current Supply (mA)	
	SOT-23		TO-92-Style or U-Pack ¹ Straight Standard Leads		TO-92-Style SMT		SOT-89B										
	Catalog Listing	Standard Label	Catalog Listing	Standard Label	Catalog Listing	Standard Label	Catalog Listing	Standard Label									
Hall Effect	Bipolar																
	SS30AT	S30A	SS40A	40A	—	—	SS50AT	SS50A	45	-45	170	✓	—	-40 to 125	4.5 to 24	6.8	
	SS311PT	311P	SS411P	411P	—	—	—	—	60	-80	140	—	—	-40 to 150	2.7 to 7	5.5	
	—	—	SS41	S41	—	—	SS51T	SS51	40	-40	250	✓	—	-40 to 150	4.5 to 24	5.8	
	—	—	SS41F6	41F6	—	—	—	—	25	-25	115	✓	—	-40 to 150	4.5 to 60	10 max.	
	—	—	SS411A	11A	—	—	SS511AT	S511A	20	-20	70	—	✓	-40 to 150	3.8 to 30	6.5	
	—	—	SS413A	13A	—	—	SS513AT	S513A	50	-50	140	—	✓	-40 to 150	3.8 to 30	6.5	
	Latching																
	VF360NT ²	360NT	VF460S ²	460S	—	—	—	—	30	-30	55	✓	✓	-40 to 150	3 to 24	4	
	VF360ST ²	360ST	VF460S ²	460S	—	—	—	—	30	-30	55	✓	✓	-40 to 150	3 to 24	4	
	SS360NT	360NT	SS460S	460S	—	—	—	—	30	-30	55	✓	✓	-40 to 150	3 to 24	4	
	SS360ST	360ST	SS460P	460P	—	—	—	—	30	-30	55	✓	✓	-40 to 150	3 to 24	4	
	SS360PT	360PT	SS460P	460P	—	—	—	—	30	-30	55	✓	✓	-40 to 150	3 to 24	4	
	SS361RT	361RT	SS461R	461R	—	—	—	—	50	-50	120	✓	—	-40 to 150	3 to 24	4	
	SS361CT	361CT	SS461C	461C	—	—	—	—	50	-50	95	✓	✓	-40 to 125	4 to 24	4	
	—	—	SS461A	61A	—	—	—	S561A	50	-50	110	—	✓	-40 to 150	3.8 to 30	6.5	
	—	—	SS466A	66A	—	—	—	S566A	140	-140	200	—	✓	-40 to 150	3.8 to 30	6.5	
	Unipolar																
	SS341RT	341RT	SS441R	441R	—	—	—	—	75	35	135	✓	✓	-40 to 150	3 to 24	4	
	SS343RT	343RT	SS443R	443R	—	—	—	—	135	85	205	✓	✓	-40 to 150	3 to 24	4	
	SS349RT	349RT	SS449R	449R	—	—	—	—	305	225	460	✓	✓	-40 to 150	3 to 24	4	
	SS345PT	345PT	SS445P	445P	—	—	—	—	180	105	280	—	—	-40 to 150	2.7 to 7	5.5	
	—	—	SS441A	41A	SS541AT	S541A	—	—	85	58	135	—	✓	-40 to 150	3.8 to 30	6.5	
	—	—	SS443A	43A	SS543AT	S543A	—	—	145	115	215	—	✓	-40 to 150	3.8 to 30	6.5	
	—	—	SS449A	49A	SS549AT	S549A	—	—	350	275	435	—	✓	-40 to 150	3.8 to 30	6.5	
	Omnipolar																
	Hall Effect	SS351AT	351AT	SS451A	451A	SS551AT	S551A	—	—	±85	±40	±135	✓	✓	-40 to 150	3 to 24	4.5
	AMR	—	—	2SS52M	2SSM	2SS52M-S	2SSM	2SS52MT	S552M	±15	±11	±25	—	—	-40 to 150	3.8 to 30	6.5
AMR Standard Power	SM351RT	SM351R	SM451R	451R	—	—	—	—	±7	±5	±11	—	—	-40 to 85	3 to 24	4	
	SM353RT	SM353R	SM453R	453R	—	—	—	—	±14	±10	±20	—	—	-40 to 85	3 to 24	4	
AMR Low Power	SM351LT	SM351L	—	—	—	—	—	—	±7	±5	±11	—	—	-40 to 85	1.65 to 5.5	0.36 µA	
	SM353LT	SM353L	—	—	—	—	—	—	±14	±10	±20	—	—	-40 to 85	1.65 to 5.5	0.35 µA	
Hall effect Low Power	SL353HT	L353H	—	—	—	—	—	—	±60	±45	±110	—	✓	-40 to 85	2.2 to 5.5	330 µA	
	SL353LT	L353L	—	—	—	—	—	—	±60	±45	±110	—	✓	-40 to 85	2.2 to 5.5	1.8 µA	

¹U-pack package style applies to the 2SS52M Series only. ²Qualified to AEC-Q100 (Grade 0).

PACKAGE STYLES

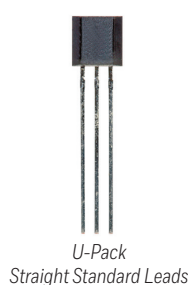


TABLE 2. LINEAR SENSOR ICs

Package Style								Typical Sensitivity (mV/Gauss)	Typical Range (Gauss)	Quad Hall Design	Operating Temperature (°C)	Supply Voltage (Vdc)	Typ. Current (mA)
SOT-23		TO-92-Style Straight Standard Leads		TO-92-Style SMT		SOT-89B							
Catalog Listing	Standard Label	Catalog Listing	Standard Label	Catalog Listing	Standard Label	Catalog Listing	Standard Label						
SS39ET	—	SS49ET	49E	—	—	SS59ET	SS59E	1.4	±1000	✓	-40 to 100	2.7 to 6.5	6
—	—	SS494B	94B	SS494B-SP	94B	—	—	5.0	±420	✓	-40 to 150	4.5 to 10.5	7
—	—	SS495A	95A	SS495A-SP	95A	—	—	3.125	±670	✓	-40 to 150	4.5 to 10.5	7
—	—	SS495A1	95A	SS495A1-SP	95A	—	—	3.125	±670	✓	-40 to 150	4.5 to 10.5	7
—	—	SS495A2	95A	SS495A2-SP	95A	—	—	3.125	±670	✓	-40 to 150	4.5 to 10.5	7
—	—	SS495B	95B	SS495B-SP	95B	—	—	3.125	±670	✓	-40 to 150	4.5 to 10.5	7
—	—	SS496A	96A	SS496A-SP	96A	—	—	2.50	±840	✓	-40 to 150	4.5 to 10.5	7
—	—	SS496A1	96A	SS496A1-SP	96A	—	—	2.50	±840	✓	-40 to 150	4.5 to 10.5	7
—	—	SS496B	96B	SS496B-SP	96B	—	—	2.50	±840	✓	-40 to 150	4.5 to 10.5	7
—	—	—	—	VF495A1-SP ¹	495A	—	—	3.125	±670	✓	-40 to 150	4.5 to 10.5	7

¹ Qualified to AEC-Q100 (Grade 0).

TABLE 3. ANGULAR AMR POSITION SENSOR IC

SOIC-8 Package Style		Typical Sensitivity (mV/deg.)	Typical Range (degree)	Operating Temperature (°C)	Supply Voltage (Vdc)	Current (mA)
Catalog Listing	Standard Label					
APS00B	—	2.1	±90	-40 to 150	1 to 12	7 max.

TABLE 4. SPEED AND DIRECTION, SPEED SENSOR ICs

Product Type	Catalog Listing	Standard Label	Function	Target	Package Style	Output	Typical Sensitivity (Gauss)	Operating Temperature (°C)	Supply Voltage (Vdc)	Current (mA)
AMR	VM821Q1	VM821Q1	speed and direction or position sensing	ring magnet encoder	4-pin SIP	quadrature, dual open collector sinking	±30	-40 to 150	4.0 V to 24 V	high: 14 typ. low: 6.95 typ. 20 max.
	VF401	VF401			VF401 2-pin, TO-92-style, straight standard leads	2-pin current	±7	-40 to 150	4.0 V to 16 V	high: 14 typ. low: 7 typ.
Hall Effect, Back Biased	VG481V1 ¹	VG481V1	speed sensing	ferrous gear tooth wheel	TO-92-style, straight standard leads	sinking	49.5	-40 to 150	4 V to 24 V	10 max.
Hall Effect, Dual Latching	VF526DT	V526	speed and direction sensing	ring magnet encoder	SOT-89B	dual open collector sinking	130	-40 to 125	3.4 V to 24 V	off: 12 max. on: 14 max.
	SS526GT	S526G								

¹ Qualified to AEC-Q100 (Grade 0). ² ISO26262 ASIL B(D) compliant.

FOR MORE INFORMATION

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