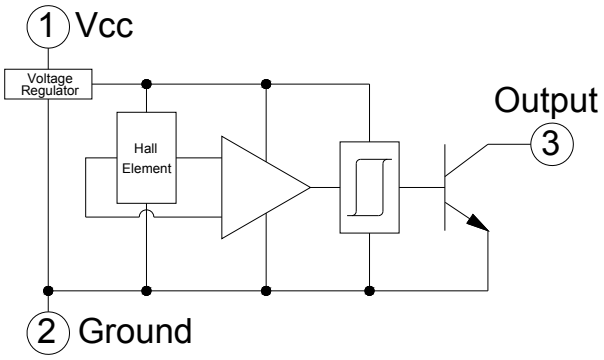
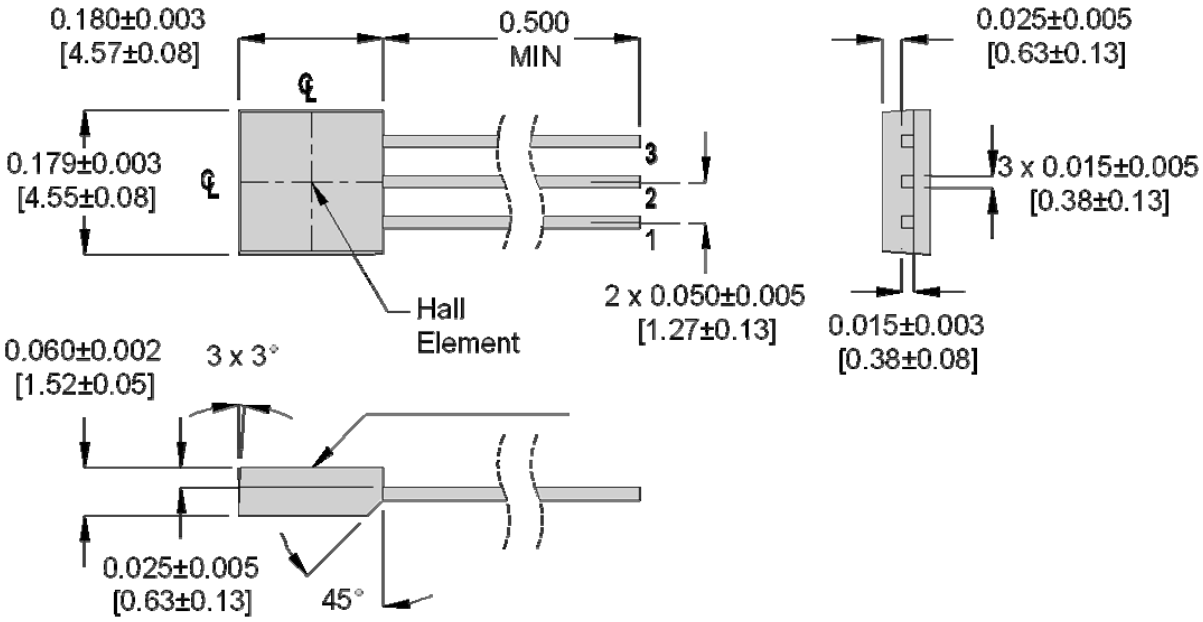


Pin #	Transistor
1	V_{CC}
2	Ground
3	Output



NOTE: The Hall Element is located 0.013" beneath the top surface of the package.
The back of the package is denoted by the 45° angle at the base of the plastic body.

DIMENSIONS ARE IN INCHES AND [MILLIMETERS].

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Absolute Maximum Ratings (T_A=25°C unless otherwise noted)

Supply Voltage, Vcc		25 V
Storage Temperature Range, T_S		-65°C to +160°C
Operating Temperature Range, T_A	OHN30_ _U OHS30_ _U OH090/180/360U	-20°C to +85°C -40°C to +125°C -40°C to +150°C
Lead Soldering Temperature (1/8 in. (3.2 mm) from case for 5 sec. with soldering iron)		260°C(1)
Output ON Current, I_{SINK}		25 mA
Output OFF Voltage, V_{OUT}		25 V
Magnetic Flux Density, B		Unlimited

Electrical Characteristics (Vcc = 4.5 V to 24 V, T_A = 25° C unless otherwise noted)

OH090U Uni-Polar

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
B_{OP}	Magnetic Operate Point(1)	0	90	180	Gauss	
B_{RP}	Magnetic Release Point	-100	65	100	Gauss	
B_H	Magnetic Hysteresis	10	25	100	Gauss	
Icc	Supply Current	-	6	9	mA	Vcc = 24 V, Output Off
V_{OL}	Output Saturation Voltage	-	100	300	mV	Vcc = 4.5 V, I_{OL} = 20 mA, B ≥ 180 Gauss
I_{OH}	Output Leakage Current	-	0.5	10.0	µA	Vcc = 24 V, V_{OUT} = 24 V, B ≤ -100 Gauss
t_r	Output Rise Time	-	0.21	1.00	µs	R_L = 820 Ω, C_L = 20 pF, Vcc = 14 V
t_f	Output Fall Time	-	0.10	1.00	µs	

OH180U Uni-Polar

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
B_{OP}	Magnetic Operate Point(1)	70	180	290	Gauss	
B_{RP}	Magnetic Release Point	0	140	230	Gauss	
B_H	Magnetic Hysteresis	20	40	120	Gauss	
Icc	Supply Current	-	6	9	mA	Vcc = 24 V, Output Off
V_{OL}	Output Saturation Voltage	-	100	300	mV	Vcc = 4.5 V, I_{OL} = 20 mA, B ≥ 290 Gauss
I_{OH}	Output Leakage Current	-	0.5	10.0	µA	Vcc = 24 V, V_{OUT} = 24 V, B ≤ 0 Gauss
t_r	Output Rise Time	-	0.21	1.00	µs	R_L = 820 Ω, C_L = 20 pF, Vcc = 14 V
t_f	Output Fall Time	-	0.10	1.00	µs	

Notes:
(1) South pole facing symbolized surface.

Electrical Characteristics (Vcc = 4.5 V to 24 V, T_A = 25° C unless otherwise noted)

OH360U Uni-Polar

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
B_{OP}	Magnetic Operate Point(1)	235	300	465	Gauss	
B_{RP}	Magnetic Release Point	120	235	325	Gauss	
B_H	Magnetic Hysteresis	30	65	200	Gauss	
Icc	Supply Current	-	6	9	mA	Vcc = 24 V, Output Off
V_{OL}	Output Saturation Voltage	-	100	300	mV	Vcc = 4.5 V, I_{OL} = 20 mA, B ≥ 465 Gauss
I_{OH}	Output Leakage Current	-	0.1	10.0	µA	Vcc = 24 V, V_{OUT} = 24 V, B ≤ 120 Gauss
t_r	Output Rise Time	-	0.21	1.00	µs	R_L = 820 Ω, C_L = 20 pF, Vcc = 14 V
t_f	Output Fall Time	-	0.10	1.00	µs	

OHN3013U, OHN3113U Uni-Polar

SYMBOL	PARAMETER		MIN	TYP	MAX	UNITS	TEST CONDITIONS
B_{OP}	Magnetic Operate Point(1)	OHN3013 OHN3113	- -	300 -	450 510	Gauss	+25°C -20°C TO 85°C
B_{RP}	Magnetic Release Point	OHN3013 OHN3113	30 20	235 -	- -	Gauss	+25°C -20°C TO 85°C
B_H	Magnetic Hysteresis	OHN3013 OHN3113	20 10	65 -	- -	Gauss	+25°C -20°C TO 85°C
Icc	Supply Current		-	4	7	mA	Vcc = 24 V, Output Off, B ≤ 25 Gauss
V_{OL}	Output Saturation Voltage		-	100	400	mV	Vcc = 4.5 V, I_{OL} = 20 mA, B ≥ 450 Gauss
I_{OH}	Output Leakage Current		-	0.1	10.0	µA	Vcc = 24 V, V_{OUT} = 24 V, B ≤ 25 Gauss
t_r	Output Rise Time		-	0.21	1.00	µs	R_L = 820 Ω, C_L = 20 pF, Vcc = 12 V
t_f	Output Fall Time		-	0.10	1.00	µs	

Notes:
(1) South pole facing symbolized surface.

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Electrical Characteristics (Vcc = 4.5 V to 24 V, T_A = 25° C unless otherwise noted)

OHN3019U, OHS3019U, OHN3119U, OHS3119U Uni-Polar

SYMBOL	PARAMETER		MIN	TYP	MAX	UNITS	TEST CONDITIONS
B_{OP}	Magnetic Operate Point(1)	OH_3019 OHN3119 OHS3119	175 100 45	300 - -	500 545 575	Gauss	+25°C -20°C to +85°C -40°C to +125°C
B_{RP}	Magnetic Release Point	OH_3019 OHN3119 OHS3119	125 50 25	235 - -	450 495 555	Gauss	+25°C -20°C to +85°C -40°C to +125°C
B_H	Magnetic Hysteresis	OH_3019 OHN3119 OHS3119	50 50 20	65 - -	- - -	Gauss	+25°C -20°C to +85°C -40°C to +125°C
Icc	Supply Current		-	4	7	mA	Vcc = 24 V, Output Off, B ≤ 125 Gauss
V_{OL}	Output Saturation Voltage		-	100	400	mV	Vcc = 4.5 V, I_{OL} = 20 mA, B ≥ 500 Gauss
I_{OH}	Output Leakage Current		-	0.1	10.0	µA	Vcc = 24 V, V_{OUT} = 24 V, B ≤ 100 Gauss
t_r	Output Rise Time		-	0.21	1.00	µs	R_L = 820 Ω, C_L = 20 pF, Vcc = 12 V
t_f	Output Fall Time		-	0.10	1.00	µs	

OHN3020U, OHS3020U, OHN3120U, OHS3120U Uni-Polar

SYMBOL	PARAMETER		MIN	TYP	MAX	UNITS	TEST CONDITIONS
B_{OP}	Magnetic Operate Point(1)	OH_3020 OHN3120 OHS3120	70 70 35	230 - -	350 425 450	Gauss	+25°C -20°C to +85°C -40°C to +125°C
B_{RP}	Magnetic Release Point	OH_3020 OHN3120 OHS3120	50 50 25	180 - -	330 405 430	Gauss	+25°C -20°C to +85°C -40°C to +125°C
B_H	Magnetic Hysteresis	OH_3020 OHN3120 OHS3120	20 20 20	50 - -	- - -	Gauss	+25°C -20°C to +85°C -40°C to +125°C
Icc	Supply Current		-	4	7	mA	Vcc = 24 V, Output Off, B ≤ 50 Gauss
V_{OL}	Output Saturation Voltage		-	100	400	mV	Vcc = 4.5 V, I_{OL} = 20 mA, B ≥ 350 Gauss
I_{OH}	Output Leakage Current		-	0.1	10.0	µA	Vcc = 24 V, V_{OUT} = 24 V, B ≤ 50 Gauss
t_r	Output Rise Time		-	0.21	1.00	µs	R_L = 820 Ω, C_L = 20 pF, Vcc = 12 V
t_f	Output Fall Time		-	0.10	1.00	µs	

Notes:
(1) South pole facing symbolized surface.

Electrical Characteristics (Vcc = 4.5 V to 24 V, T_A = 25° C unless otherwise noted)

OHN3030U, OHS3030U, OHN3130U & OHS3130U Uni-Polar

SYMBOL	PARAMETER		MIN	TYP	MAX	UNITS	TEST CONDITIONS
B_{OP}	Magnetic Operate Point(1)	OH_3030	-	205	250	Gauss	+25°C
		OH_3130	-	-	150		+25°C
		OHN3130	-	-	175		-20°C to +85°C
		OHS3130	-	-	200		-40°C to +125°C
B_{RP}	Magnetic Release Point	OH_3030	0	160	-	Gauss	+25°C
		OH_3130	-150	-	-		+25°C
		OHN3130	-175	-	-		-20°C to +85°C
		OHS3130	-200	-	-		-40°C to +125°C
B_H	Magnetic Hysteresis	OH_3030	20	45	-	Gauss	+25°C
		OH_3130	20	-	-		+25°C
		OHN3130	20	-	-		-20°C to +85°C
		OHS3130	20	-	-		-40°C to +125°C
Icc	Supply Current		-	4	7	mA	Vcc = 24 V, Output Off, B ≤ 0 Gauss
V_{OL}	Output Saturation Voltage		-	100	400	mV	Vcc = 4.5 V, I_{OL} = 20 mA, B ≥ 200 Gauss
I_{OH}	Output Leakage Current		-	0.1	10.0	µA	Vcc = 24 V, V_{OUT} = 24 V, B ≤ 50 Gauss
t_r	Output Rise Time		-	0.21	1.00	µs	R_L = 820 Ω, C_L = 20 pF, Vcc = 12 V
t_f	Output Fall Time		-	0.10	1.00	µs	

OHN3131U & OHS3131U Uni-Polar

SYMBOL	PARAMETER		MIN	TYP	MAX	UNITS	TEST CONDITIONS
B_{OP}	Magnetic Operate Point(1)	OH_3131	-75	-	95	Gauss	+25°C
		OHN3131	-75	-	95		-20°C to +85°C
		OHS3131	-75	-	135		-40°C to +125°C
B_{RP}	Magnetic Release Point	OH_3031	-95	-	85	Gauss	+25°C
		OHN3131	-59	-	85		-20°C to +85°C
		OHS3131	-135	-	125		-40°C to +125°C
B_H	Magnetic Hysteresis	OH_3031	10	-	-	Gauss	+25°C
		OHN3131	10	-	-		-20°C to +85°C
		OHS3131	10	-	-		-40°C to +125°C
Icc	Supply Current		-	4	7	mA	Vcc = 24 V, Output Off, B ≤ 0 Gauss
V_{OL}	Output Saturation Voltage		-	100	400	mV	Vcc = 4.5 V, I_{OL} = 20 mA, B ≥ 200 Gauss
I_{OH}	Output Leakage Current		-	0.1	10.0	µA	Vcc = 24 V, V_{OUT} = 24 V, B ≤ 50 Gauss
t_r	Output Rise Time		-	0.21	1.00	µs	R_L = 820 Ω, C_L = 20 pF, Vcc = 12 V
t_f	Output Fall Time		-	0.10	1.00	µs	

Notes:
(1) South pole facing symbolized surface.

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Electrical Characteristics (Vcc = 4.5 V to 24 V, T_A = 25° C unless otherwise noted)

OHN3040U, OHS3040U, OHN3140U, OHS3140U Uni-Polar

SYMBOL	PARAMETER		MIN	TYP	MAX	UNITS	TEST CONDITIONS
B_{OP}	Magnetic Operate Point[1]	OH_3040 OHN3140 OHS3140	70 45 45	150 - -	220 260 270	Gauss	+25°C -20°C to +85°C -40°C to +125°C
B_{RP}	Magnetic Release Point	OH_3040 OHN3140 OHS3140	50 25 25	115 - -	180 240 250	Gauss	+25°C -20°C to +85°C -40°C to +125°C
B_H	Magnetic Hysteresis	OH_3040 OHN3140 OHS3140	20 20 20	35 - -	- - -	Gauss	+25°C -20°C to +85°C -40°C to +125°C
Icc	Supply Current		-	4	7	mA	Vcc = 24 V, Output Off, B ≤ -50 Gauss
V_{OL}	Output Saturation Voltage		-	100	400	mV	Vcc = 4.5 V, I_{OL} = 20 mA, B ≥ 200 Gauss
I_{OH}	Output Leakage Current		-	0.1	10.0	µA	Vcc = 24 V, V_{OUT} = 24 V, B ≤ -50 Gauss
t_r	Output Rise Time		-	0.21	1.00	µs	R_L = 820 Ω, C_L = 20 pF, Vcc = 12 V
t_f	Output Fall Time		-	0.10	1.00	µs	

OHN3075U, OHS3075U, OHN3175U, OHS3175U Bi-Polar Latch

SYMBOL	PARAMETER		MIN	TYP	MAX	UNITS	TEST CONDITIONS
B_{OP}	Magnetic Operate Point[1]	OH_3075 OH_3175 OHN3175 OHS3175	50 25 15 10	100 - - -	250 170 180 260	Gauss	+25°C +25°C -20°C to +85°C -40°C to +125°C
B_{RP}	Magnetic Release Point	OH_3075 OH_3175 OHN3175 OHS3175	-250 -170 -180 -260	-100 - - -	-50 -25 -15 -10	Gauss	+25°C +25°C -20°C to +85°C -40°C to +125°C
B_H	Magnetic Hysteresis	OH_3075 OH_3175 OHN3175 OHS3175	100 100 80 50	200 - - -	500 - - -	Gauss	+25°C +25°C -20°C to +85°C -40°C to +125°C
Icc	Supply Current		-	4	7	mA	Vcc = 24 V, Output Off, B ≤ -250 Gauss
V_{OL}	Output Saturation Voltage		-	100	400	mV	Vcc = 4.5 V, I_{OL} = 20 mA, B ≥ 250 Gauss
I_{OH}	Output Leakage Current		-	0.1	10.0	µA	Vcc = 24 V, V_{OUT} = 24 V, B ≤ -250 Gauss
t_r	Output Rise Time		-	0.21	1.00	µs	R_L = 820 Ω, C_L = 20 pF, Vcc = 12 V
t_f	Output Fall Time		-	0.10	1.00	µs	

Notes:
(1) South pole facing symbolized surface.

Electrical Characteristics (Vcc = 4.5 V to 24 V, T_A = 25° C unless otherwise noted)

OHN3177U, OHS3177U Bi-Polar Latch

SYMBOL	PARAMETER		MIN	TYP	MAX	UNITS	TEST CONDITIONS
B_{OP}	Magnetic Operate Point(1)	OH_3177 OHN3177 OHS3177	50 25 25	- - -	150 150 200	Gauss	+25°C -20°C to +85°C -40°C to +125°C
B_{RP}	Magnetic Release Point	OH_3177 OHN3177 OHS3177	-150 -150 -200	- - -	-50 -25 -25	Gauss	+25°C -20°C to +85°C -40°C to +125°C
B_H	Magnetic Hysteresis	OH_3177 OHN3177 OHS3177	100 50 50	- - -	- - -	Gauss	+25°C -20°C to +85°C -40°C to +125°C
Icc	Supply Current		-	4	7	mA	Vcc = 24 V, Output Off, B ≤ -250 Gauss
V_{OL}	Output Saturation Voltage		-	100	400	mV	Vcc = 4.5 V, I_{OL} = 20 mA, B ≥ 250 Gauss
I_{OH}	Output Leakage Current		-	0.1	10.0	µA	Vcc = 24 V, V_{OUT} = 24 V, B ≤ -250 Gauss
t_r	Output Rise Time		-	0.21	1.00	µs	R_L = 820 Ω, C_L = 20 pF, Vcc = 12 V
t_f	Output Fall Time		-	0.10	1.00	µs	

Notes:
(1) South pole facing symbolized surface.

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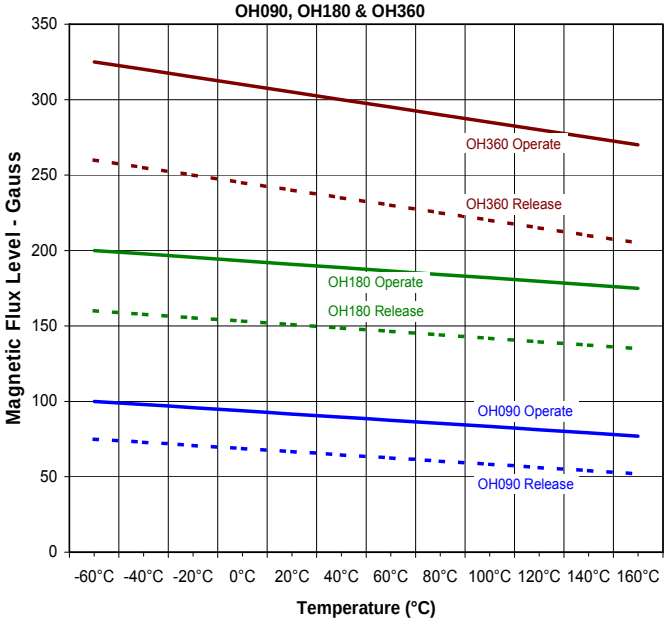
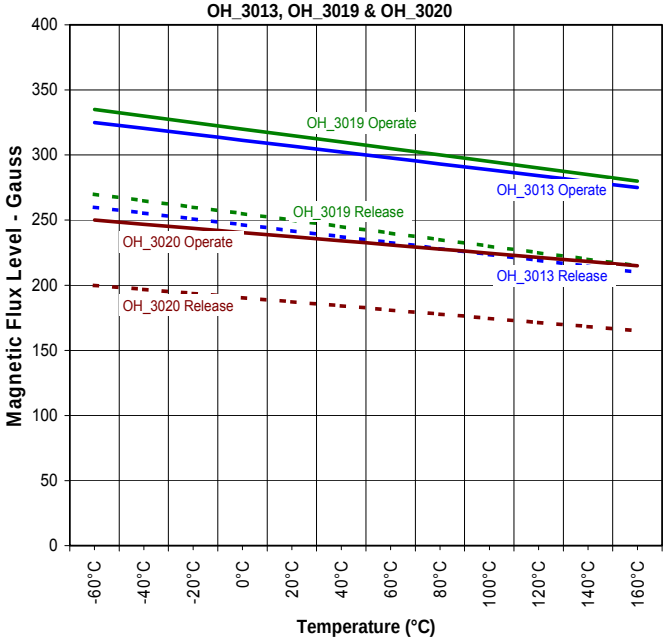
Typical Operate & Release Points

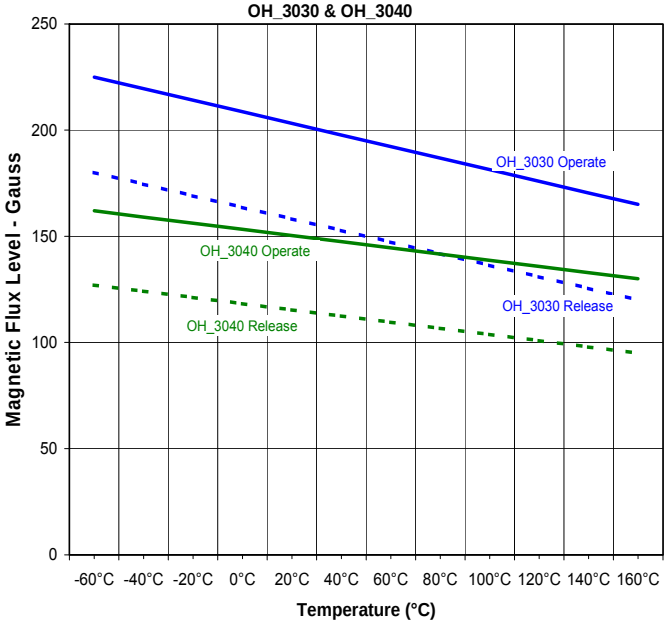
Magnetic Operate & Release Points vs Temperature
OH090, OH180 & OH360



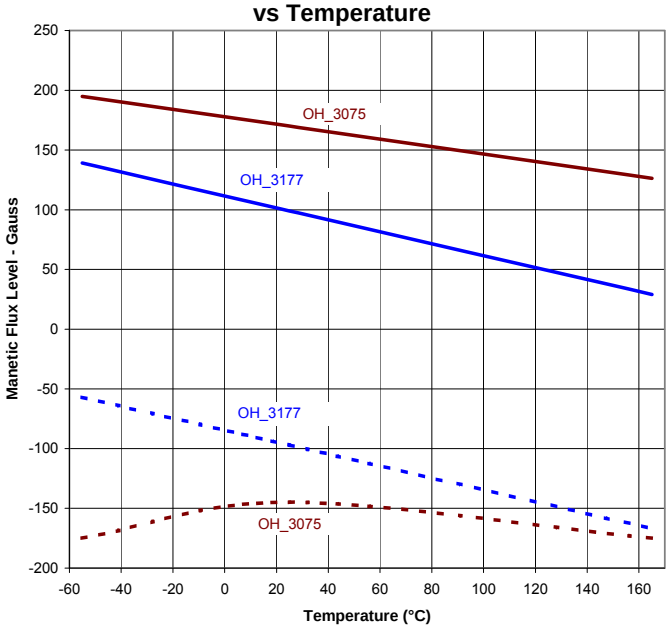
Magnetic Operate & Release Points vs Temperature
OH_3013, OH_3019 & OH_3020

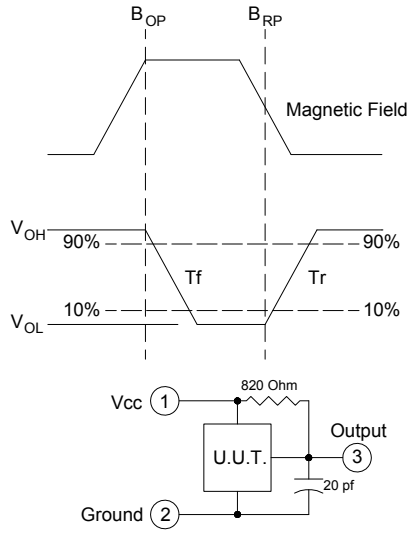


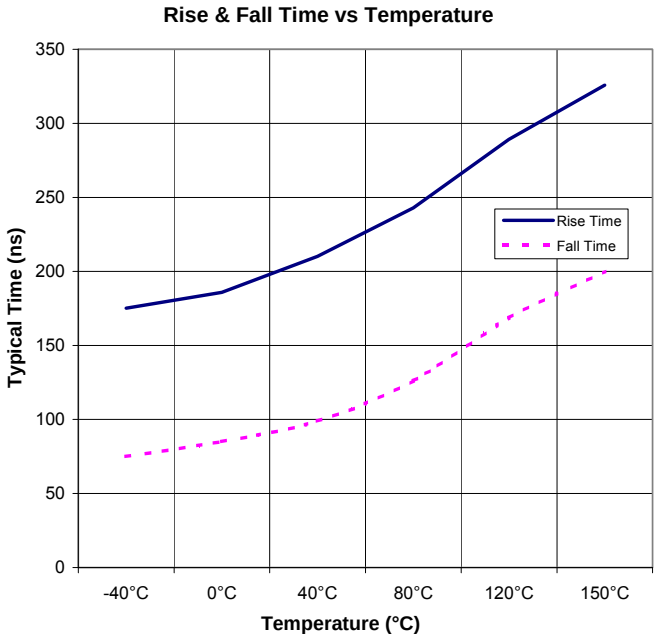
Magnetic Operate & Release Points vs Temperature
OH_3030 & OH_3040

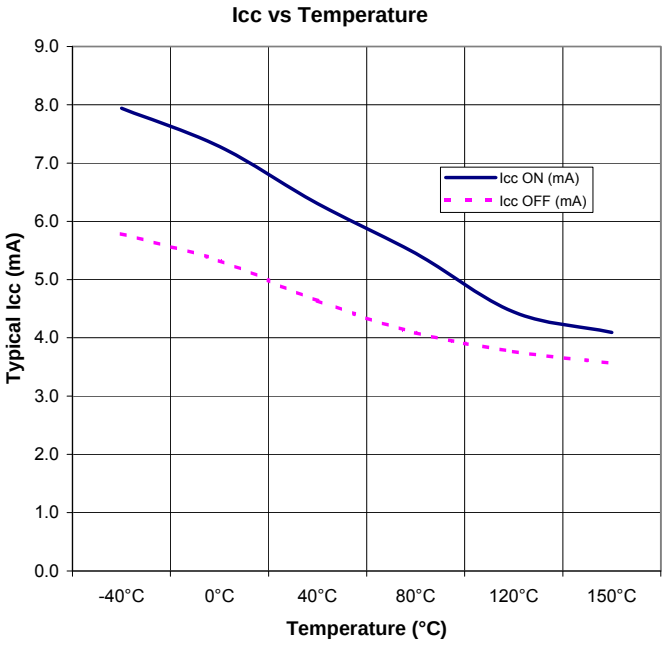


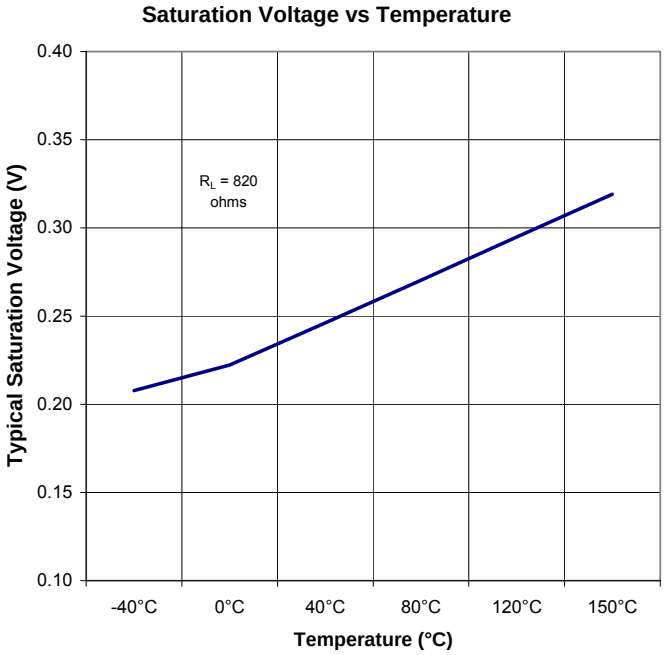
Magnetic Operate & Release Points vs Temperature











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