MICRO ELECTRONICS

CS1018

HALL-EFFECT SWITCH

HALL EFFECT IC SWITCH

This Hall-effect switch is stress-resistant sensor best utilized in applications that provide steep magnetic slopes and low residual levels of magnetic flux density.

The device includes a voltage regulator, Hall voltage generator, signal amplifier, Schmitt trigger and open-collector output on a single silicon chip. The on-board regulator permits operation with supply voltages of 3.6 to 24 volts. The switch can be used directly with bipolar or MOS logic circuits.

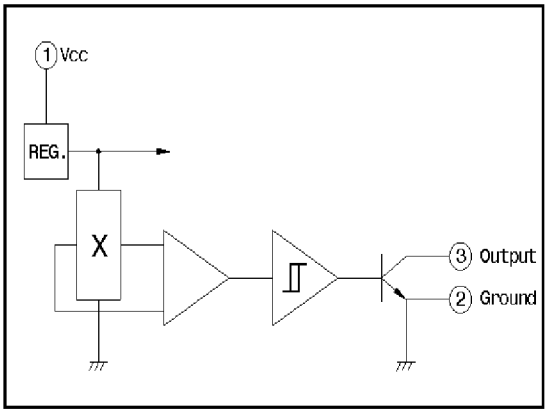
ELECTRICAL AND MAGNETICAL CHARACTERISTICS
@ (Ta=25°C, Vcc=3.6V to 24V)

CHARACTERISTIC	SYBMOL	TEST CONDITIONS	LIMITS			
			MIN	TYP	MAX	UNIT
Supply Voltage	Vcc		3.6	-	24	V
Output Saturation Voltage	Vout	Iout=5mA, B>Bop	-	-	400	mV
Output Leakage Current	Ioff	Vout=24V, B<Brp	-	1	10	µA
Supply Current	Icc	Vcc=3.6V, Output Open	-		9	mA
Output Rise Time	tr	Vcc=12V, RL=1.1K, CL=20uF	-	0.04	-	µS
Output Fall Time	tf	Vcc=12V, RL=1.1K, CL=20uF	-	0.04	-	µS
Operate Point	Bop	0°C<Ta<+70°C, Ta=25°C	-	-	15	mT
Release Point	Brp	0°C<Ta<+70°C, Ta=25°C	-15	-	-	mT
Hysteresis	Bhys	0°C<Ta<+70°C, Ta=25°C	2	-	-	mT

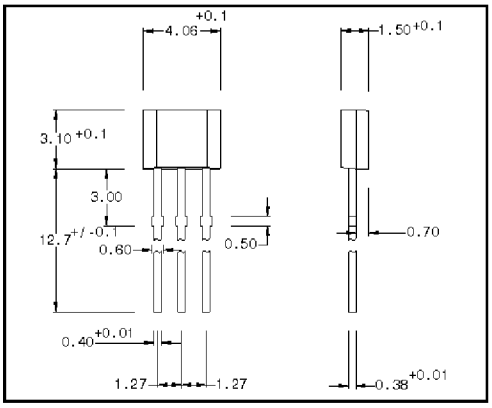
Features

3.6V to 24V Operation
Activate with small, commercially available permanent magnets.
Solid-state reliability … No moving parts small size
Resistant to physical stress

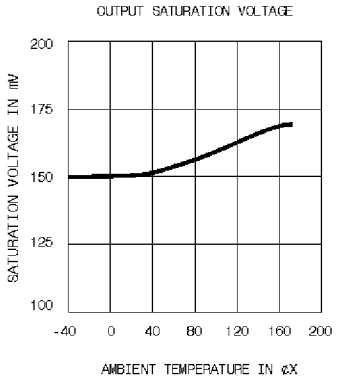
Functional Block Diagram

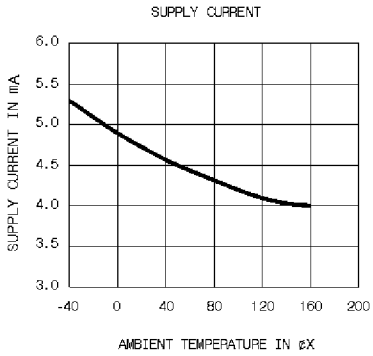


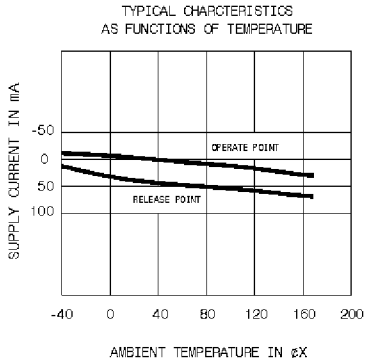
Case Drawing



Typical characteristics as functions of temperature







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Dec-98