

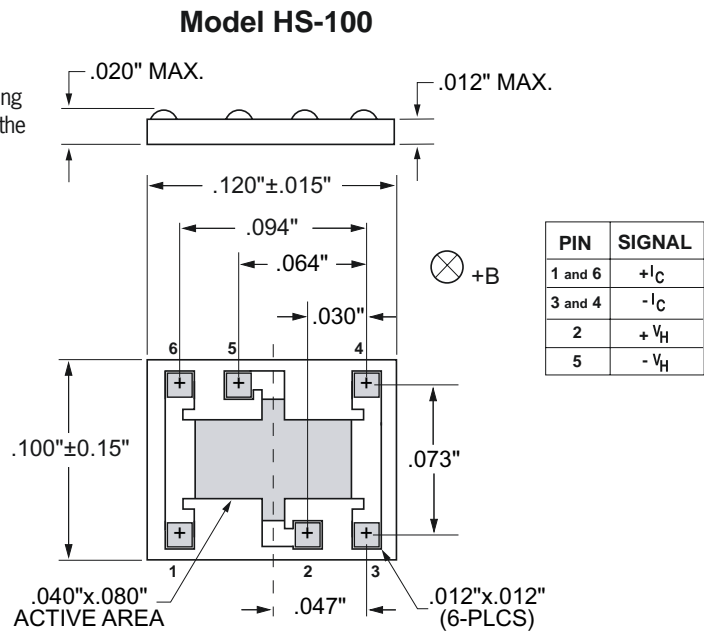
Description

The F.W. Bell HS-100 is the world's thinnest thin film InAs Hall sensor measuring 0.012 inch (0.3 mm) thick maximum. Manufactured from Indium Arsenide, the HS-100 offers stable operation over a wide temperature range of -55°C to +185°C. The HS-100, packaged in a unique flip chip configuration, is available in bulk and tape and reel formats. Applications include: use in Brushless DC motors, contact-less switches, compasses, magnetizers, and gaussmeters. Sensor applications include current, voltage, power, frequency, position, tilt/level, tachometer, pressure, and thickness sensors.

Electrical Specifications

a. Polarity: With field direction (B+) as shown and I_C entering the I_C (+) terminal, the positive Hall voltage will appear at the V_H (+) terminal.

b. Note: Unless otherwise specified, all specifications apply at nominal control current and at a temperature of 25°C. Heat sinking can enhance performance in several respects.



SPECIFICATIONS	UNITS	HS-100
Input resistance, R_{in}	ohms	30 to 160
Output resistance, R_{out}	ohms	60 to 360
Maximum continuous control current	mA	30
Magnetic sensitivity, $V_H @ I_C = 10$ mA	mV/kG	8 min.
Misalignment voltage, $V_M @ I_C = 10$ mA	±mV	6.0 max.
Mean temperature coefficient of magnetic sensitivity (-20°C to +80°C) ($I_C = 10$ mA) (B=5 kG)	%/°C	-0.1 max.
Mean temperature coefficient of input resistance (-20°C to +80°C) ($I_C = 10$ mA)	%/°C	+1 max.
Temperature dependence of resistive residual voltage (-20°C to +80°C) ($I_C = 10$ mA) (B=0)	± μ V/°C	10 max.
Operating temperature range	°C	-55 to +185
Storage temperature range	°C	-55 to +190