

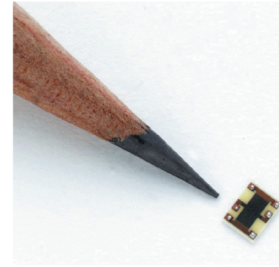
# Thin Film HS-100 Series

# Hall Sensors

# Hall Sensors

## 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.



## 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.

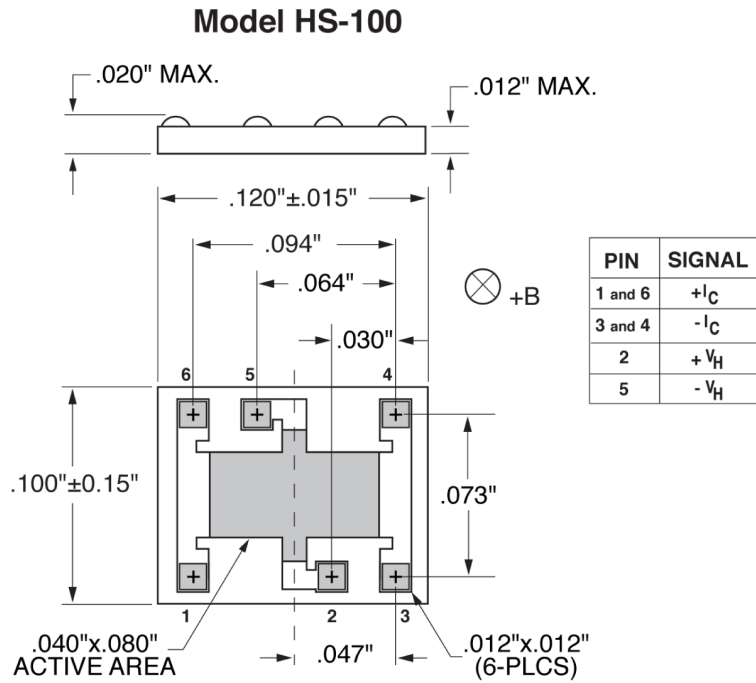
b. Note: Unless otherwise specified, all specifications apply at nominal control current and at a temperature of 25°C. Heat sinking can enhance performance in several respects.

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, $V_H @ I_c = 10 \text{ mA}$	mV/kG	8 min.
Misalignment voltage, $V_M @ I_c = 10 \text{ mA}$	±mV	6.0 max.
Mean temperature coefficient of magnetic sensitivity (-20°C to +80°C) ( $I_c = 10 \text{ mA}$ ) (B=5 kG)	%/°C	-0.1 max.
Mean temperature coefficient of input resistance (-20°C to +80°C) ( $I_c = 10 \text{ mA}$ )	%/°C	+ .1 max.
Temperature dependence of resistive residual voltage (-20°C to +80°C) ( $I_c = 10 \text{ mA}$ ) (B=0)	± $\mu$ V/°C	10 max.
Operating temperature range	°C	-55 to +185
Storage temperature range	°C	-55 to +190

## Mechanical Dimensions

All dimensions are in inches

### Model HS-100



Note: Due to continuous process improvement, all specifications are subject to change without notice.



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