

**Series:** LSEM

**Description:** Board-to-Board, 0.8mm (.0315") Pitch, , 12mm (0.472") Stack Height

## Connector Overview

Samtec's High Speed Hermaphroditic interconnect is a self-mating system ideal for rugged applications. The system is polarized and fully shrouded when mated. LSEM is a double row contacts system available in 20, 30, 40, and 50 contacts per row. Stack heights available are 6mm through 10mm at 1mm increments. 12mm is the largest stack height available. The data in this report is applicable only to a 12mm stack height.

## Connector System Speed Rating

High Speed LSEM Hermaphroditic, Board-to-Board,0.8mm (.0135") Pitch, 12mm (0.472") Stack Height

<u>Case</u>	<u>Signaling</u>	<u>Speed Rating</u>
1	Single-Ended:	<b>16.5 GHz/ 33Gbps</b>
	Differential:	<b>20.0 GHz/ 40Gbps</b>

The Speed Rating is based on the -3 dB insertion loss point of the connector system. The -3 dB point can be used to estimate usable system bandwidth in a typical, two-level signaling environment. To calculate the Speed Rating, the measured -3 dB point is rounded-up to the nearest half-GHz level. The up rounding corrects for a portion of the test board's trace loss, since a short length of trace loss included in the loss data in this report. The resulting loss value is then doubled to determine the approximate maximum data rate in Gigabits per second (Gbps).

For example, a connector with a -3 dB point of 7.8 GHz would have a Speed Rating of 8 GHz/ 16 Gbps. A connector with a -3 dB point of 7.2 GHz would have a Speed Rating of 7.5 GHz/ 15 Gbps.