

**Series:** Basic Blade & Beam Header and Socket, Extended Life Product™

**Description:** 0.5mm (.0197") Pitch, 5mm (.197") Stack Height

## Connector Overview

Samtec's BTH/BSH Basic Blade & Beam Header and Socket are designed for high-speed board-to-board applications where signal integrity is essential. BTH/BSH is a double row contacts system available with up to 300 I/Os in stack height of 5,00 mm (.197") and other heights available as application specific. The data in this report is applicable only to a 5mm stack height.

## Connector System Speed Rating

BTH/BSH Series Basic Blade & Beam Header and Socket, 0.5mm (.0197") Pitch, 5mm (0.197") Stack Height

<u>Signaling</u>	<u>Speed Rating</u>
Single-Ended:	<b>9.0 GHz/ 18 Gbps</b>
Differential:	<b>9.5 GHz/ 19 Gbps</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.