

Series: QMS-RA/QFS-RA

Description: Board-to-Board, 0.635mm Pitch, Right Angle to Right Angle

Connector Overview

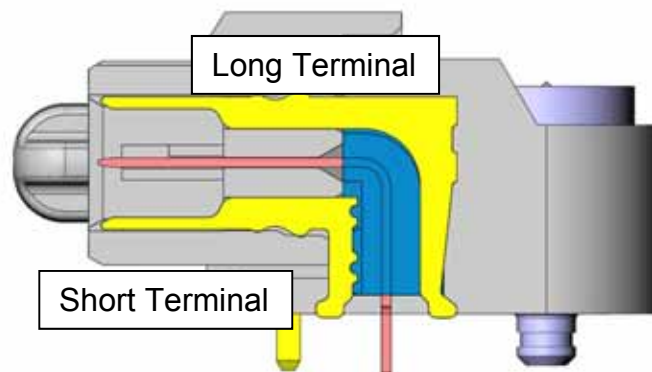
Samtec's QMS/QFS Series Micro High-Speed, 0.635mm (0.0250") pitch interfaces are available with up to 104 contacts per row. QFS/QMS series connector tail options include: double row vertical, right angle and edge-mount styles. The data in this report is applicable only to QMS right angle connector mated to QFS right angle connector.

QMS-RA/QFS-RA possesses two terminal types, with each terminal type having different performance. The signal integrity performance of these two terminal types is documented in this report. The terminology used in this report to define which connector terminal is as follows:

*The short terminal of the connector is referred to as "Case 1"

*The long terminal of the connector is referred to as "Case 2"

This is illustrated in the following figure.



Connector System Speed Rating

QFS-RA/QMS-RA, Micro High Speed Board-to-Board, 0.635mm Pitch, Right Angle

<u>Case</u>	<u>Signaling</u>	<u>Speed Rating</u>
1 (Short Row)	Single-Ended:	14.5 GHz/ 29 Gbps
	Differential:	7 GHz/ 14 Gbps
2 (Long Row)	Single-Ended:	20 GHz/ 40 Gbps
	Differential:	5 GHz/ 10 Gbps

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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.