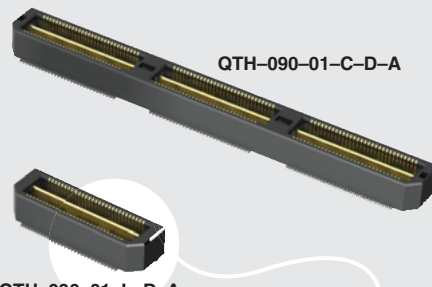




QTH-060-07-F-D-A



QTH-090-01-C-D-A

QTH-030-01-L-D-A

(0.50 mm) .0197"

QTH SERIES

HIGH SPEED GROUND PLANE HEADER

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?QTH

Insulator Material: Liquid Crystal Polymer
Terminal Material: Phosphor Bronze
Plating: Au or Sn over 50µ" (1.27 µm) Ni

Current Rating:
Contact:
2 A per pin
(1 pin powered per row)
Ground Plane:
25 A per ground plane
(1 ground plane powered)
Operating Temp Range:
-55°C to +125°C
Voltage Rating:
125 VAC (5 mm Stack Height)
Max Cycles: 100
RoHS Compliant: Yes

Processing:

Lead-Free Solderable: Yes
SMT Lead Coplanarity:
 (0.10 mm) .004" max (030-060)
 (0.15 mm) .006" max (090)
Board Stacking:
 For applications requiring
 more than two connectors per
 board contact jqc@samtec.com

RECOGNITIONS

For complete scope
of recognitions see
www.samtec.com/quality



FILE NO. E111594

ALSO AVAILABLE
(MOQ Required)

- 15 mm, 22 mm and 30 mm stack height (Caution: Some automatic placement/inspection machines may have component height restrictions. Please consult machinery specifications.)
 - 30μ" (0.76 μm) Gold (Specify -H plating for Data Rate cable mating applications.)
 - Edge Mount & Guide Posts
 - 80 (-DP), 120, 150 positions per row
 - Retention Option
- Contact Samtec.

Board Mates:
QSH

Cable Mates:
HQCD, HQDP
(See Also Available note)



QTH/QSH 5 mm Stack Height	Type	Rated @ 3dB Insertion Loss	
		with PCB effects*	w/o PCB effects**
Single-Ended Signaling	-D	9 GHz / 18 Gbps	9.5 GHz / 19 Gbps
Differential Pair Signaling	-D	8.5 GHz / 16 Gbps	10.5 GHz / 21 Gbps
Differential Pair Signaling	-DP	9.5 GHz / 19 Gbps	16.5 GHz / 33 Gbps

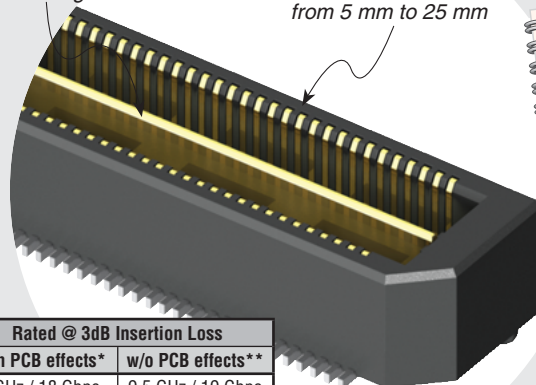
*Performance data includes effects of a non-optimized PCB.

**Test board losses de-embedded from performance data.

Performance data for other stack heights and complete test data available at www.samtec.com?QTH or contact sig@samtec.com

Integral metal plane for power or ground

Standard Stack Heights from 5 mm to 25 mm



Protocols Supported

100 GbE
Hypertransport™
XAUI
PCI Express®
SATA
InfiniBand™

Download app notes at
www.samtec.com/appnote
Contact SIG @ samtec.com
for questions on protocols



28+
Gbps

QTH	PINS PER ROW NO. OF PAIRS	LEAD STYLE	PLATING OPTION	TYPE	A	OTHER OPTION
	—030, —060, —090 (60 total pins per bank = —D) —020, —040, —060 (20 pairs per bank = —D—DP)	Specify LEAD STYLE from chart	—F = Gold Flash on Signal Pins and Ground Plane, Matte Tin on tails —L = 10μ" (0.25 μm) Gold on Signal Pins and Ground Plane, Matte Tin on tails —C* = Electro-Polished Selective 50μ" (1.27 μm) min Au over 150μ" (3.81 μm) Ni on Signal Pins in contact area, 10μ" (0.25 μm) min Au over 50μ" (1.27 μm) Ni on Ground Plane in contact area, Matte Tin over 50μ" (1.27 μm) min Ni on all solder tails	—D = Single-Ended —D—DP = Differential Pair (—01 only)		—K = (7.00 mm) .275" DIA Polyimide film Pick & Place Pad (N/A with —05 & —07 lead style) —TR = Tape & Reel (—090 positions maximum) —L = Latching Option (—01 lead style only) (N/A on —060 (—D—DP) & —090)

Technical drawing of a QTH component showing top and side views with dimensions and labels.

Top View Dimensions:

- Overall width: (7.11) .280
- Distance from left edge to first pin row: (20.00) .7875
- Distance between pin rows: (0.50) .0197
- Distance between pin rows (tail section): (0.20) .008
- Pin pitch: (20.00) .7875
- Pin diameter: .01
- Pin length: .02

Side View Dimensions:

- Overall height: A
- Pin height: A

Labels:

- 01 & —02
- 03 thru —09

Formulas:

- D = (No. of Pins per Row/30) x (20.00) .7875
- DP = (No. of Pairs per Row/20) x (20.00) .7875

QTH LEAD STYLE	A	HEIGHT WITH QSH*
—01	(4.27) .168	(5.00) .197
—02	(7.26) .286	(8.00) .315
—03	(10.27) .404	(11.00) .433
—04	(15.25) .600	(16.00) .630
—05	(18.26) .718	(19.00) .748
—07	(24.24) .954	(25.00) .984
—09	(13.26) .522	(14.00) .551

*Processing conditions will affect mated height.

***Note:** –C Plating passes
10 year MFG testing

Note: Some lengths, styles and options are non-standard, non-returnable.

OTHER SOLUTIONS

- Board Spacing Standoffs. See SO Series.