



(0.50 mm) .0197"

QTH-060-07-F-D-A

QTH-030-01-L-D-A

QTH-090-01-C-D-A

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 ipg@samtec.com

Board Mates:

QSH

Cable Mates:

HQCD, HQDP

(See Also Available note)

EXTENDED LIFE PRODUCT

10 year Mixed Flowing Gas with 50µ" Gold
Call Samtec for maximum mated cycles

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/appnoteContact SIG @ samtec.com

for questions on protocols

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 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

Final **inch**
C E R T I F I E D

28+
Gbps

RECOGNITIONS

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

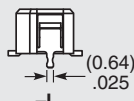
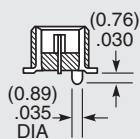
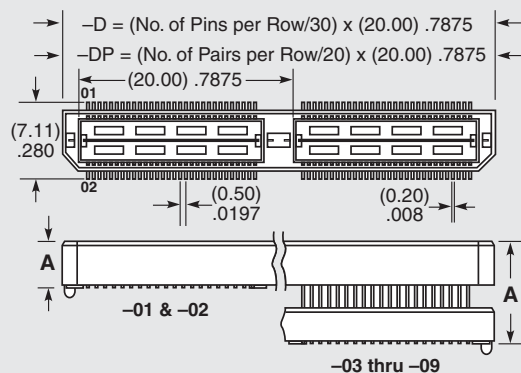


ALSO AVAILABLE (MOQ Required)

- 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.

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