



(0.50 mm) .0197"

QTH-060-07-F-D-A

QTH-090-01-C-D-A

QTH-030-01-L-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 joo@samtec.com

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.

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

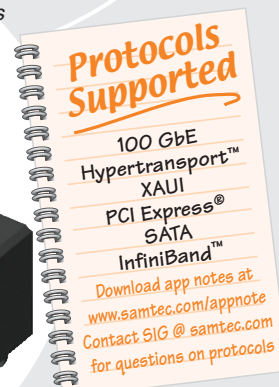
*Performance data includes effects of a non-optimized PCB.

**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



Final Inch
CERTIFIED

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)

→ —D = (No. of Pins per Row/30) x (20.00) .7875

→ —DP = (No. of Pairs per Row/20) x (20.00) .7875

↓ (20.00) .7875

↓ (7.11) .280

↑ .01

↑ .02

→ (0.50) .0197

→ (0.20) .008

↓ A

↓ A

—01 & —02

—03 thru —09

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.