



(0,50mm) .0197"

QTH SERIES

QTH-060-07-F-D-A

QTH-030-01-L-D-A-RT1

QTH-090-01-C-D-A

## HIGH SPEED GROUND PLANE HEADER

### SPECIFICATIONS

For complete specifications and recommended PCB layouts see [www.samtec.com?QTH](http://www.samtec.com?QTH)

#### Insulator Material:

Liquid Crystal

Polymer

#### Terminal Material:

Phosphor Bronze

#### Plating:

Au or Sn over 50µ" (1,27µm) Ni

Current Rating:

Contact: 1.0A @ 30°C

Temperature Rise

Ground Plane: 7.8A @ 30°C

Temperature Rise

Operating Temp Range:

-55°C to +125°C

Voltage Rating:

125 VAC (5mm Stack Height)

Max Cycles:

100

Unmating Force (-RT1 option):

-RT1 option increases

unmating force up to 50%

RoHS Compliant:

Yes

### Processing:

Lead-Free Solderable:

Yes

SMT Lead Coplanarity:

(0,10mm) .004" max (030-060)

(0,15mm) .006" max (090-120)

Board Stacking:

For applications requiring

more than two connectors

per board or 4 banks or more,

contact [ipg@samtec.com](mailto:ipg@samtec.com)

### APPLICATION SPECIFIC OPTION

- 14mm, 15mm, 22mm and 30mm stack height (Caution: Some automatic placement/inspection machines may have component height restrictions. Please consult machinery specifications.)
  - 30µ" (0,76µm) Gold (Specify -H plating for Data Rate cable mating applications.)
  - Edge Mount & Guide Posts
  - 150 positions per row
- Call Samtec.

\*Note: -C Plating passes 10 year MFG testing

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

Board Mates:  
QSH

Cable Mates:  
HFHM2, HQCD,  
HQDP  
(See Application  
Specific note)



5mm Stack Height	Type	Rated @ 3dB Insertion Loss
Single-Ended Signaling	-D	9 GHz / 18 Gbps
Differential Pair Signaling	-D	8 GHz / 16 Gbps
Differential Pair Signaling	-DP	9.5 GHz / 19 Gbps

Performance data for other stack heights and complete test data available at [www.samtec.com?QTH](http://www.samtec.com?QTH) or contact [sig@samtec.com](mailto:sig@samtec.com)

Integral metal plane for  
power or ground

Standard  
Stack  
Heights  
from 5mm  
to 25mm

Polarized

### ALSO AVAILABLE

Board Spacing Standoffs.  
See SO Series.



Protocols  
Supported

Hypertransport™

XAUI

PCI Express®

SATA

Infiniband

Download app notes at  
[www.samtec.com/appnote](http://www.samtec.com/appnote)  
Contact SIG @ samtec.com  
for questions on protocols

QTH — PINS PER ROW NO. OF PAIRS — LEAD STYLE — PLATING OPTION — TYPE — A — OTHER OPTION

—030, —060, —090, —120  
(60 total pins per bank = -D)

—020, —040, —060, —080  
(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" (0,25µm)  
Gold on Signal Pins  
and Ground Plane,  
Matte Tin on tails

—C\*  
= Electro-Polished  
Selective  
50µ" (1,27µm) min Au  
over 150µ" (3,81µm)  
Ni on Signal Pins  
in contact area,  
10µ" (0,25µm) min Au  
over 50µ" (1,27µm)  
Ni on Ground Plane  
in contact area,  
Matte Tin over 50µ"  
(1,27µm) min Ni  
on all solder tails

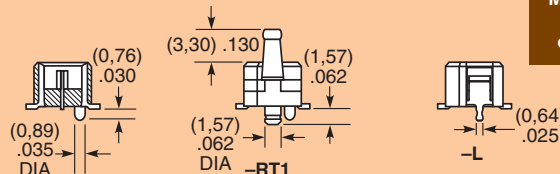
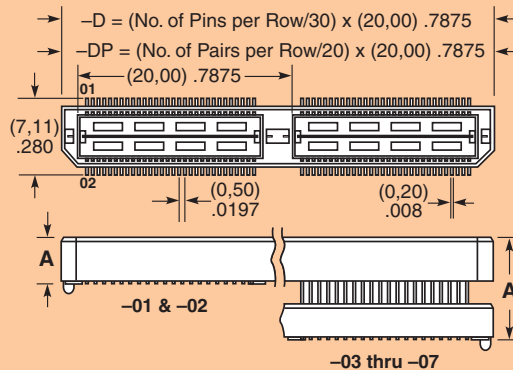
—D  
= Single-Ended  
  
—D-DP  
= Differential Pair  
(-01 only)

—K  
= (7,00mm)  
.275" DIA  
Polyimide film  
Pick &  
Place Pad  
(N/A with -05 &  
-07 lead style)

—TR  
= Tape & Reel  
(-090 positions  
maximum)

—RT1  
= Retention  
Option  
(-01 lead style  
only & -090  
positions  
maximum)

—L  
= Latching  
Option  
(-01 lead  
style only)  
(N/A on -090  
& -120 or  
-RT1 option)



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

\*Processing conditions will affect mated height.

Due to technical progress, all designs, specifications and components are subject to change without notice.

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