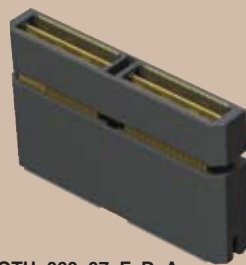


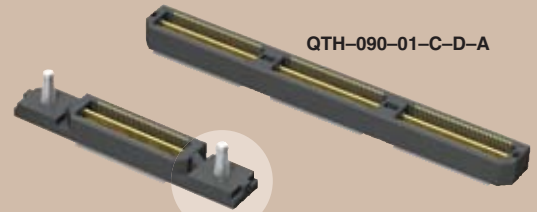


(0,50mm) .0197"

QTH SERIES



QTH-060-07-F-D-A



QTH-090-01-C-D-A

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

# 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.

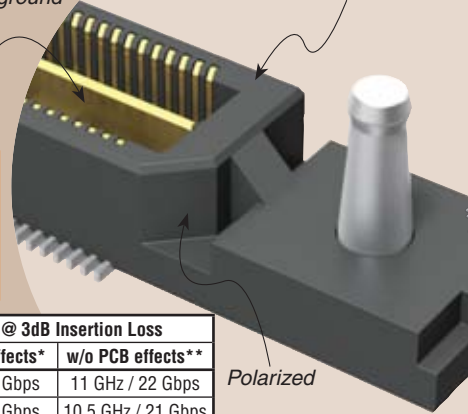
**Board Mates:**  
QSH

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

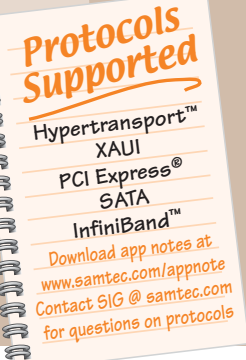


Integral metal plane for power or ground

Standard Stack Heights from 5mm to 25mm



Polarized



QTH/QSH 5mm Stack Height	Type	Rated @ 3dB Insertion Loss	
		with PCB effects*	w/o PCB effects**
Single-Ended Signaling	-D	9 GHz / 18 Gbps	11 GHz / 22 Gbps
Differential Pair Signaling	-D	8 GHz / 16 Gbps	10.5 GHz / 21 Gbps
Differential Pair Signaling	-DP	9.5 GHz / 19 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](http://www.samtec.com?QTH) or contact [sig@samtec.com](mailto:sig@samtec.com)

**ALSO AVAILABLE**  
Board Spacing Standoffs. See SO Series.

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)	Specify LEAD STYLE from chart	-F = Gold Flash on Signal Pins and Ground Plane, Matte Tin on tails	-D = Single-Ended		-K = (7,00mm) .275" DIA Polyimide film Pick & Place Pad (N/A with -05 & -07 lead style)
	-020, -040, -060, -080 (20 pairs per bank = -D-DP)		-L = 10µ" (0,25µm) Gold on Signal Pins and Ground Plane, Matte Tin on tails	-D-DP = Differential Pair (-01 only)		
			-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			-RT1 = Retention Option (-01 lead style only & -090 positions maximum)
						-L = Latching Option (-01 lead style only) (N/A on -060 (-D-DP), -080, -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.

[WWW.SAMTEC.COM](http://WWW.SAMTEC.COM)