



(0,80mm) .0315"

QSE SERIES



QSE-020-01-L-D-A-RT1



QSE-060-01-F-D-A

# HIGH SPEED GROUND PLANE SOCKET

## SPECIFICATIONS

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

**Insulator Material:**

Liquid Crystal Polymer



**Terminal Material:**

Phosphor Bronze



**Plating:**

Au or Sn over 50µ" (1,27µm) Ni

**Current Rating:**

Contacts: 1.3A @ 95°C

Ground Plane: 10.1A @ 95°C

**Operating Temp Range:**

-55°C to +125°C

**Voltage Rating:**

225 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 (020-060)

(0,15mm) .006" max (080)

**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
  - 100 positions per row
  - Guide Posts and Friction Lock options.
- Call Samtec.

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

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

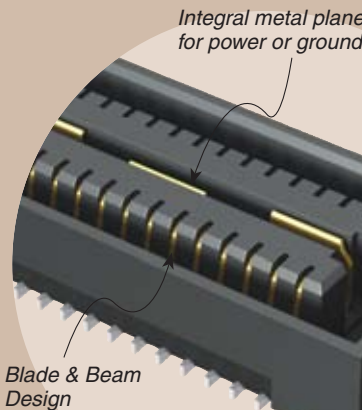
**Board Mates:**  
QTE

**Cable Mates:**  
EQCD, EQSD, EQDP, EQRF (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	8.5 GHz / 17 Gbps

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



- E.L.P.™ plating option (-C)
- Retention pin option

## Protocols Supported

- XAUI
  - PCI Express®
  - SATA
  - MGT (Rocket I/O)
  - Infiniband
- Download app notes at [www.samtec.com/appnote](http://www.samtec.com/appnote)  
Contact SIG @ samtec.com for questions on protocols

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

**QSE - PINS PER ROW NO. OF PAIRS - 01 - PLATING OPTION - TYPE - A - OTHER OPTION**

**-020, -040, -060, -080** (40 total pins per bank = -D)  
**-014, -028, -042, -056** (14 pairs per bank = -D-DP)

**-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** = (8,25mm) .325" DIA Polyimide Film Pick & Place Pad  
**-TR** = Tape & Reel Packaging (N/A on 56 & 80 positions)  
**-RT1** = Retention Option (N/A on 56 & 80 positions or -L (latch) option)  
**-L** = Latching Option (N/A on 42, 56, 60 & 80 positions or -RT1 option)

**Diagram Dimensions:**  
-D-DP = (No. of Positions per Row/14) x (20,00) .7875 + (1,27) .050  
-D = (No. of Positions per Row/20) x (20,00) .7875 + (1,27) .050  
Pin Dia: (0,80) .0315  
Pitch: (0,15) .006  
Total Height: (7,24) .285  
Pin Height: (0,76) .030  
Retention Pin Height: (3,76) .148 DIA  
Retention Pin Dia: (0,64) .025  
Retention Pin Dia: (3,25) .128  
Retention Pin Dia: (3,05) .120  
Retention Pin Dia: (0,89) .035 DIA

QTE LEAD STYLE	MATED HEIGHT WITH QSE*
-01	(5,00) .197
-02	(8,00) .315
-03	(11,00) .433
-04	(16,00) .630
-05	(19,00) .748
-07	(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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