

(0.80 mm) .0315"

QSE SERIES

# 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 50 μ" (1.27 μm) Ni
- Current Rating:** Contacts: 2 A per pin (2 pins powered)  
Ground Plane: 23 A per ground plane (1 ground plane powered)
- Operating Temp Range:** -55 °C to +125 °C
- Voltage Rating:** 225 VAC (5 mm Stack Height)
- Max Cycles:** 100
- RoHS Compliant:** Yes

**Board Mates:**  
QTE

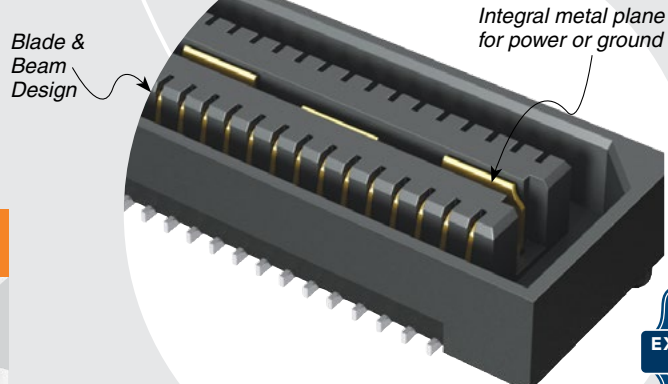
**Cable Mates:**  
EQCD, EQDP  
(See Also Available Note)

**Standoffs:**  
SO

## POWER/SIGNAL APPLICATION



Compatible with UMPT/UMPS for flexible two-piece power/signal solutions



## HIGH-SPEED CHANNEL PERFORMANCE

QTE-D/QSE-D or QTE-DP/QSE-DP @ 5 mm Mated Stack Height	QSE-DP/QTE-DP	QSE-DP/QSF-DP
Rating based on Samtec reference channel. For full SI performance data visit <a href="http://Samtec.com">Samtec.com</a> or contact <a href="mailto:SIG@samtec.com">SIG@samtec.com</a>	<b>14</b> Gbps	<b>28</b> Gbps

## PROCESSING

- Lead-Free Solderable:** Yes
- SMT Lead Coplanarity:** (0.10 mm) .004" max (020-060)
- Board Stacking:** For applications requiring more than two connectors per board contact [ipg@samtec.com](mailto:ipg@samtec.com)

## RECOGNITIONS

For complete scope of recognitions see [www.samtec.com/quality](http://www.samtec.com/quality)



## PROTOCOLS

- 100 GbE
- XAUI
- PCI Express®
- SATA
- MGT (Rocket I/O)
- InfiniBand™

## ALSO AVAILABLE (MOQ Required)

- 15 mm, 22 mm and 30 mm stack height
- 30 μ" (0.76 μm) Gold (Specify -H plating for Data Rate cable mating applications.)
- Edge Mount
- 56 (-DP), 80, 100 positions per row
- Retention, Guide Posts and Friction Lock options.
- Contact Samtec.

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

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

**-F**  
= Gold Flash on Signal Pins and Ground Plane, Matte Tin on tails

**-L**  
= 10 μ" (0.25 μm) Gold on Signal Pins and Ground Plane, Matte Tin on tails

**-C\***  
= Electro-Polished Selective  
50 μ" (1.27 μm) min Au over 150 μ" (3.81 μm) Ni on Signal Pins in contact area, 10 μ" (0.25 μm) min Au over 50 μ" (1.27 μm) Ni on Ground Plane in contact area, Matte Tin over 50 μ" (1.27 μm) min Ni on all solder tails

**-D**  
= Single-Ended

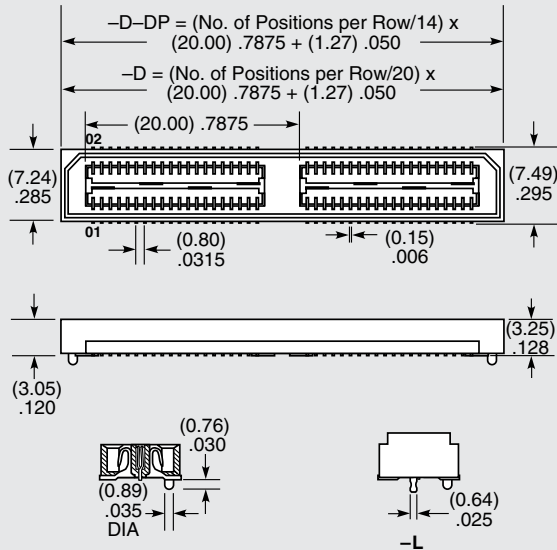
**-D-DP**  
= Differential Pair (-01 only)

**-GP**  
= Guide Post (-020 only)

**-K**  
= (8.25 mm) .325" DIA Polyimide Film Pick & Place Pad

**-TR**  
= Tape & Reel Packaging

**-L**  
= Latching Option (N/A on -042 & -060 positions)



**\*Note:** -C Plating passes 10 year MFG testing  
**Note:** Some lengths, styles and options are non-standard, non-returnable.

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
-09	(14.00) .551

\*Processing conditions will affect mated height. See SO Series for board space tolerances