

(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  
50µ" (1.27 µm) Ni

**Current Rating:**  
Contacts:  
2 A per pin

(1 pin powered per row)  
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

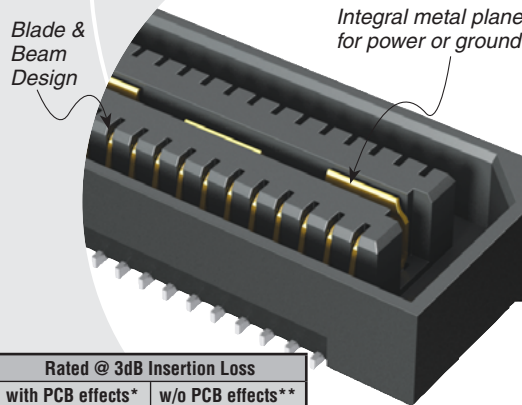
### Processing:

**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)

**Board Mates:**  
QTE

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



QTE/QSE 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 GHz / 18 Gbps
Differential Pair Signaling	-D	8 GHz / 16 Gbps	14 GHz / 28 Gbps
Differential Pair Signaling	-DP	8.5 GHz / 17 Gbps	13.5 GHz / 27 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/QSE](http://www.samtec.com/QSE) or contact [sig@samtec.com](mailto:sig@samtec.com)

**infinch**  
CERTIFIED

**28+**  
Gbps

## RECOGNITIONS

For complete scope of recognitions see [www.samtec.com/quality](http://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
  - 56 (-DP), 80, 100 positions per row
  - Guide Posts and Friction Lock options.
  - Retention Option
- 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**  
= 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)

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

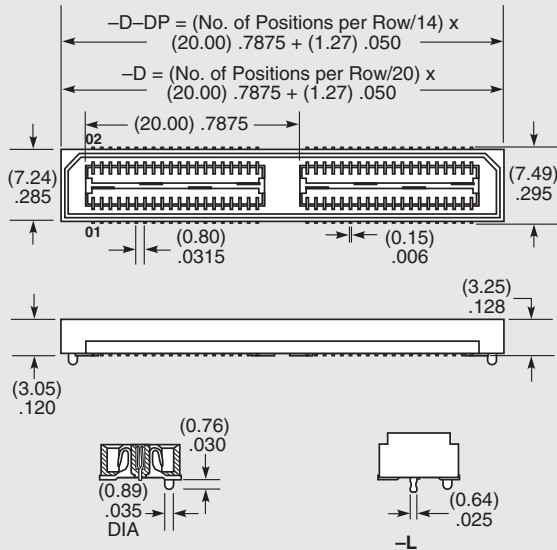
**-K**  
= (8.25 mm) .325" DIA Polyimide Film Pick & Place Pad

**-TR**  
= Tape & Reel Packaging

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

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.



\*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