



(0.80 mm) .0315"

QSE SERIES

HIGH SPEED GROUND PLANE SOCKET

SPECIFICATIONS

For complete specifications and recommended PCB layouts see 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

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 or contact sig@samtec.com

Blade &
Beam
Design

Integral metal plane
for power or ground

Protocols
Supported

100 GbE

XAUI

PCI Express®

SATA

MGT (Rocket I/O)

InfiniBand™

Download app notes at:

www.samtec.com/appnote

Contact SIG @ samtec.com

for questions on protocols

Finalinch®
CERTIFIED

28+
Gbps

RECOGNITIONS

For complete scope of recognitions see www.samtec.com/quality



FILE NO. E111594

FILE NO. 090871_0_000

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)																						
-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 (7.24) .285 (7.49) .295 (0.80) .0315 (0.15) .006 (3.25) .128 (3.05) .120 (0.76) .030 (0.89) .035 DIA (0.64) .025 -L																						
-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)																						
<table border="1"> <thead> <tr> <th>QTE LEAD STYLE</th> <th>MATED HEIGHT WITH QSE*</th> </tr> </thead> <tbody> <tr> <td>-01</td> <td>(5.00) .197</td> </tr> <tr> <td>-02</td> <td>(8.00) .315</td> </tr> <tr> <td>-03</td> <td>(11.00) .433</td> </tr> <tr> <td>-04</td> <td>(16.00) .630</td> </tr> <tr> <td>-05</td> <td>(19.00) .748</td> </tr> <tr> <td>-07</td> <td>(25.00) .984</td> </tr> <tr> <td>-09</td> <td>(14.00) .551</td> </tr> </tbody> </table> *Processing conditions will affect mated height.							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
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*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																						