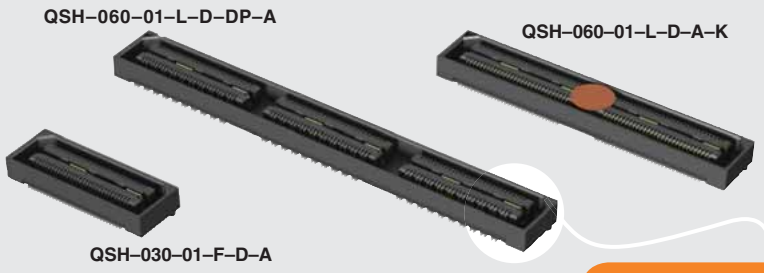
samtec

QSTRIP®

(0.50 mm) .0197"



QSH SERIES

HIGH SPEED GROUND PLANE SOCKET

SPECIFICATIONS

For complete specifications and recommended PCB layouts see www.samtec.com?QSH

Insulator Material: Liquid Crystal Polymer
Contact Material: Phosphor Bronze
Plating: Au or Sn over 50µ" (1.27 µm) Ni
Current Rating:
Contact:
2 A per pin
(1 pin powered per row)
Ground Plane:
25 A per ground plane
(1 ground plane powered)
Operating Temp Range: -55°C to +125°C
Voltage Rating: 175 VAC (5 mm Stack Height)
Max Cycles: 100
RoHS Compliant: Yes

Processing:

Lead-Free Solderable: Yes
SMT Lead Coplanarity:
(0.10 mm) .004" max (030-060)
(0.15 mm) .006" max (090)
Board Stacking:
For applications requiring more than two connectors per board contact ipg@samtec.com

RECOGNITIONS

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

FILE NO. E111594

FILE NO: 090871_0_000

ALSO AVAILABLE (MOQ Required)

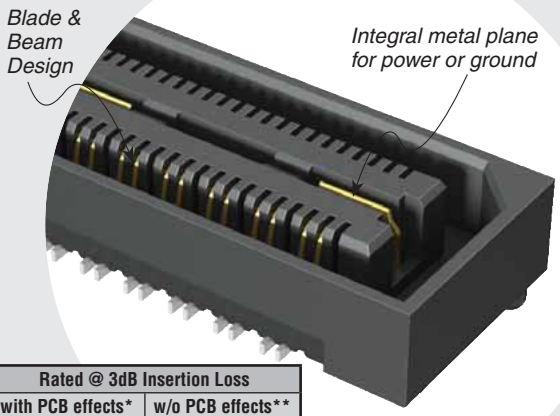
- 15 mm, 22 mm and 30 mm stack height (Caution: Some automatic placement/inspection machines may have component height restrictions. Please consult machinery specifications.)
- 30µ" (0.76 µm) Gold (Specify -H plating for Data Rate cable mating applications.)
- Edge Mount & Guide Posts
- 80 (-DP), 120, 150 positions per row
- Retention Option

Contact Samtec.

Board Mates:
QTH

Cable Mates:
HQCD, HQDP
(See Also Available note)

E.L.P.™
EXTENDED LIFE PRODUCT
10 year Mixed Flowing Gas with 50µ" Gold
Call Samtec for maximum mated cycles



Protocols Supported
100 GbE
Hypertransport™
XAUI
PCI Express®
SATA
InfiniBand™
Download app notes at www.samtec.com/appnote
Contact SIG @ samtec.com for questions on protocols

QTH/QSH 5 mm Stack Height	Type	Rated @ 3dB Insertion Loss	
		with PCB effects*	w/o PCB effects**
Single-Ended Signaling	–D	9 GHz / 18 Gbps	9.5 GHz / 19 Gbps
Differential Pair Signaling	–D	8 GHz / 16 Gbps	10.5 GHz / 21 Gbps
Differential Pair Signaling	–DP	9.5 GHz / 19 Gbps	16.5 GHz / 33 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?QSH or contact sig@samtec.com

FinalInch® CERTIFIED | 28+ Gbps

QSH	–	PINS PER ROW NO. OF PAIRS	–	01	–	PLATING OPTION	–	TYPE	–	A	–	OTHER OPTION

–030, –060, –090
(60 total pins per bank = –D)

–020, –040, –060
(20 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

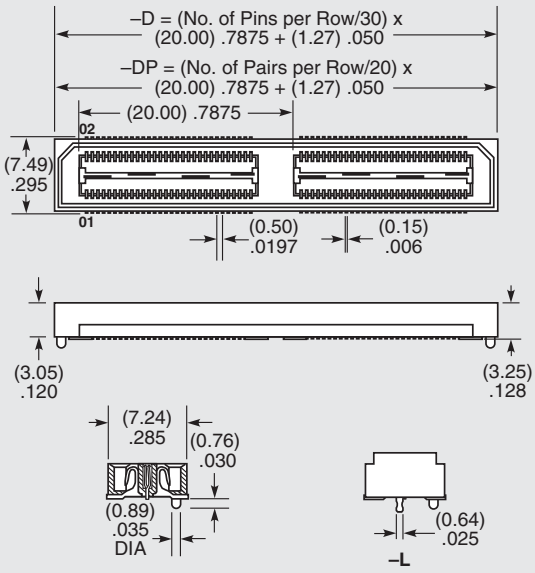
–D
= Single-Ended

–D–DP
= Differential Pair (–01 only)

–K
= (8,25 mm) .325" DIA Polyimide Film Pick & Place Pad

–TR
= Tape & Reel (–090 positions maximum)

–L
= Latching Option (Not available on –060 (–D–DP) & –090 positions)



QTH LEAD STYLE	MATED HEIGHT WITH QSH*
–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

Due to technical progress, all designs, specifications and components are subject to change without notice.