

0,50mm HI-SPEED SOCKET QSH SERIES

SPECIFICATIONS

For complete specifications see www.samtec.com/QSH

Insulator Material:

Liquid Crystal Polymer

Contact Material:

Phosphor Bronze

Plating:

Au over 50µ" (1,27µm) Ni

Current Rating:

Contact: 1.0A @ 30°C

Temperature Rise

Ground Plane: 7.8A @ 30°C

Temperature Rise

Operating Temp Range:

-55°C to +125°C

Voltage Rating:

125 VAC mated with QTH & 5mm Stack Height



Mates with:
QTH, HQCD
(See Application
Specific note)



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

Configuration (5mm Stack)	Near End Crosstalk	Prop. Delay	Rated at 5%	Rated at 10%
Single Ended	~5.25% @ 775 MHz	~10% @ 1.75 GHz	42.8pS	775 MHz
Differential Pair	~0.8% @ 585 MHz	~1.1% @ 1 GHz	42.8pS	585 MHz
Configuration (5mm Stack)	Impedance Mismatch (Ω)			
Single Ended	50.0 to 43.5 @ 100pS	50.0 to 48.1 @ 250pS	50.0 to 48.9 @ 500pS	50.0 to 49.1 @ 750pS
Differential Pair	100.0 to 87.6 @ 250pS	100.0 to 93.6 @ 500pS	100.0 to 95.9 @ 750pS	100.0 to 97.1 @ 1nS

For complete Test Report logon to www.samtec.com/QSH

Blade and
beam
design

Integral
ground plane

STACK HEIGHTS

QTH LEAD STYLE	MATED HEIGHT WITH QSH
-01	(5,00) .198
-02	(8,00) .316
-03	(11,00) .434
-09	(14,00) .552
-04	(16,00) .630

Processing conditions will
affect mated height.

APPLICATION SPECIFIC

- Edge Mount
- 30µ" (0,76µm) Gold (Specify -H plating for Data Rate cable applications)
- Guide Posts and Friction Lock options
- 19mm, 22mm, 25mm, 30mm stack height

Processing:

Max Processing Temp:

230°C for 60 seconds, or

260°C for 20 seconds 3x

Lead-Free Solderable:

Yes

SMT Lead Coplanarity:

(0,10mm) .004" max (030-060)

(0,15mm) .006" max (090-150)

Board Stacking:

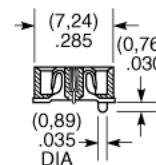
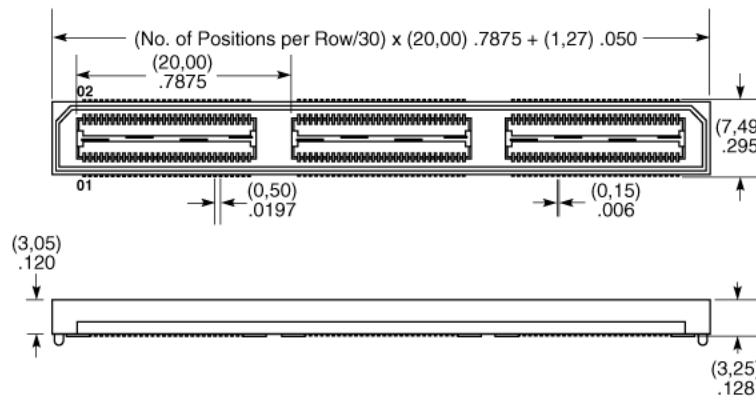
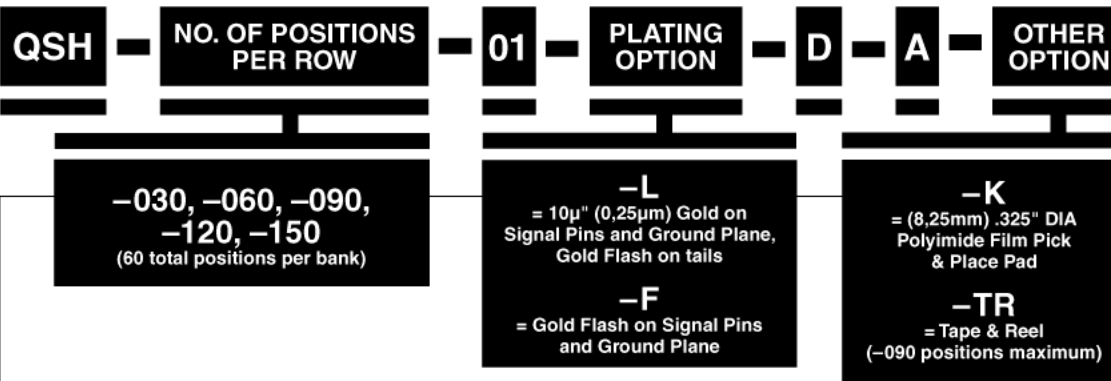
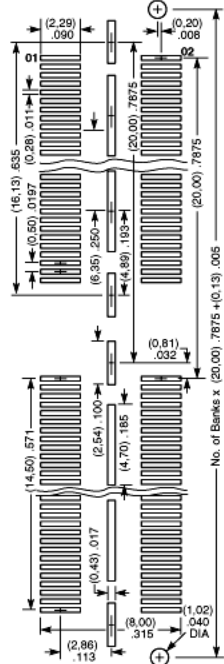
For applications requiring more
than two connectors per board,
contact ipg@samtec.com

Suggested PCB Layouts:

For reference only. Go to

www.samtec.com/QSH for

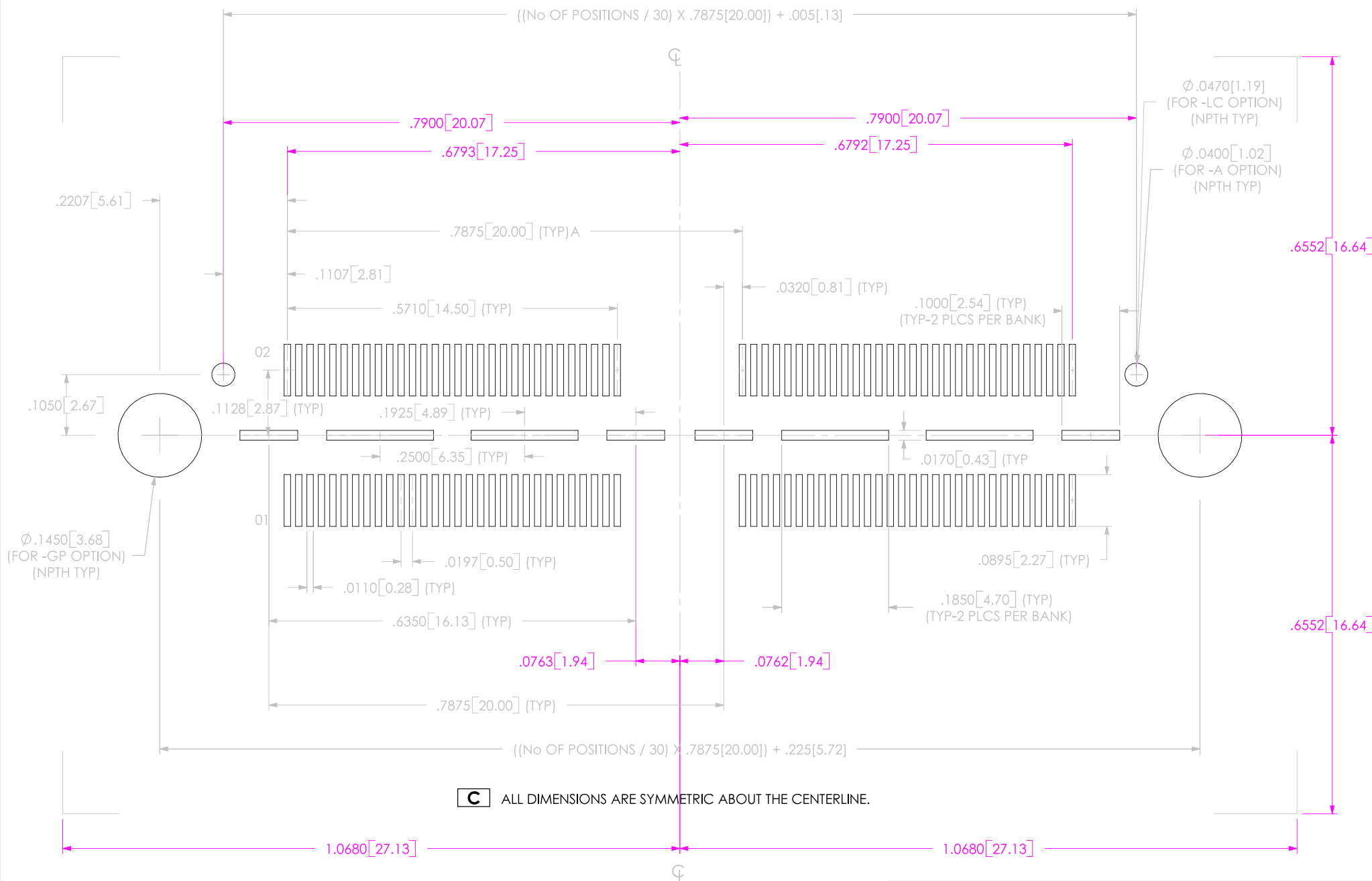
recommended PCB layout.



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

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SAMTEC SCANDINAVIA • Tel: +46-84477280 • Fax: +46-87420413
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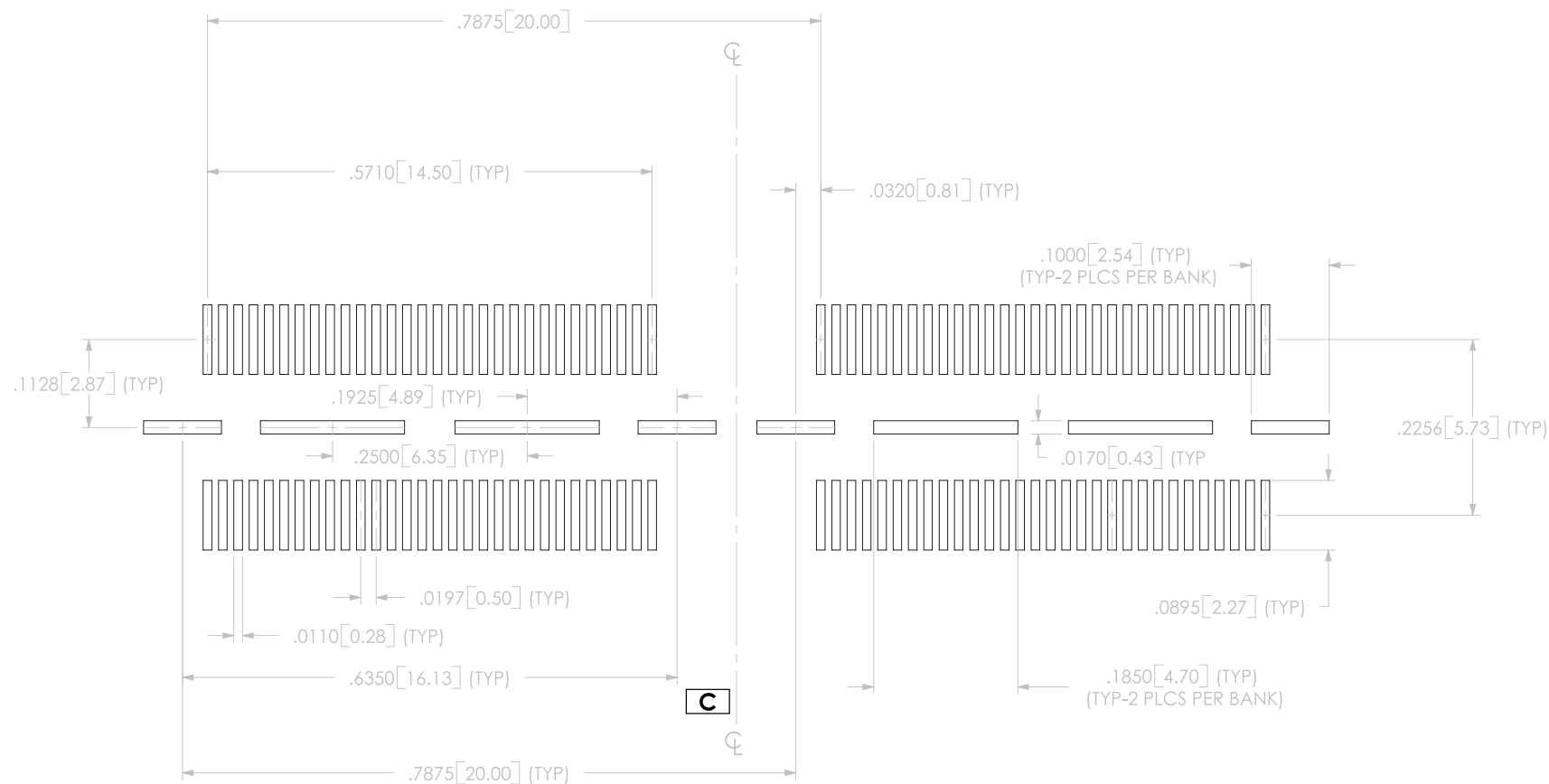
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e-Mail: INFO@SAMTEC.COM

CODE: 55322

NOTE:
STENCIL TO BE .0060[.152] THICK.



ALL DIMENSIONS ARE SYMMETRIC ABOUT THE CENTERLINE.



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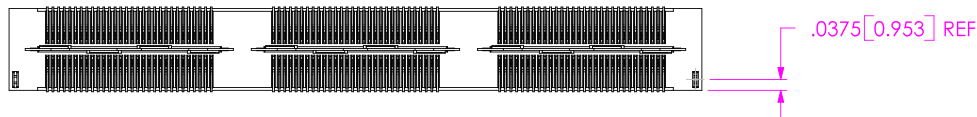
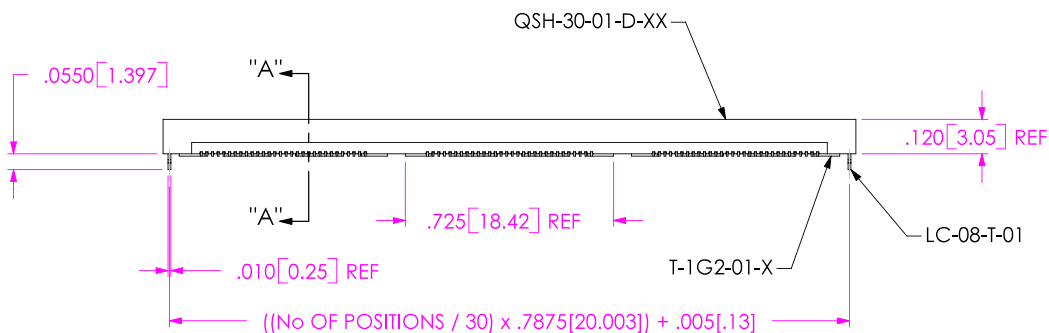
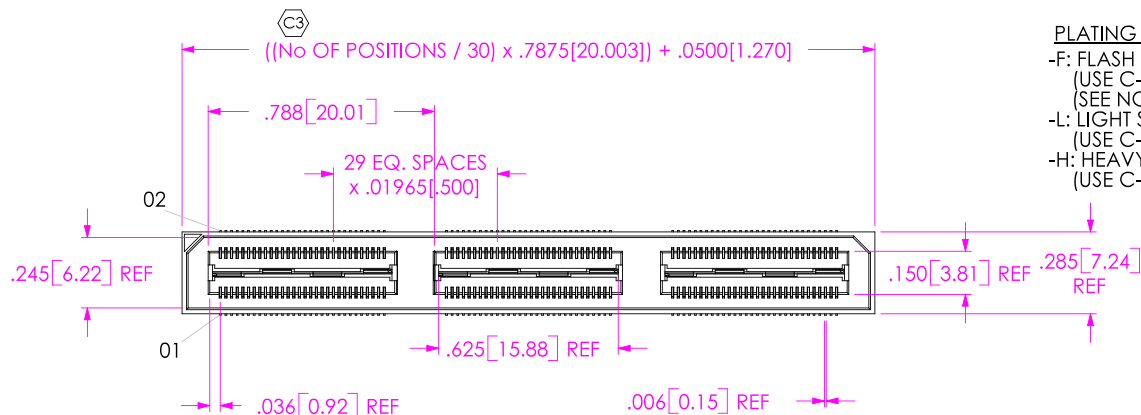
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FIG. 1

-LC: LOCKING CLIP OPTION SHOWN



QSH-XXX-01-X-D-XX

No OF POSITIONS

-030, -060, -090,
-120, -150
(PER ROW)

LEAD STYLE

-01: .1280[3.25]

PLATING SPECIFICATION

-F: FLASH SELECTIVE GOLD
(USE C-126-01-F, T-1G2-01-F)
(SEE NOTE 8)
-L: LIGHT SELECTIVE GOLD
(USE C-126-01-L, T-1G2-01-G)
-H: HEAVY GOLD
(USE C-126-01-H, T-1G2-01-G)

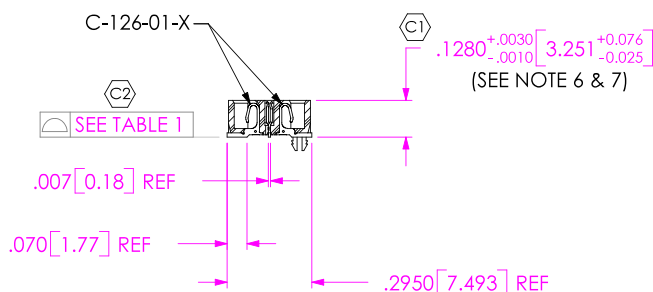
OPTION

-A: ALIGNMENT PINS
(USE QSH-30-01-D-XX-A,
SEE FIG. 2)
-LC: LOCKING CLIPS
(USE LC-08-T-01)
-GP: GUIDE POSTS
(USE QSH-30-01-D-XX-X-GP)
(SEE FIG. 4, SHEET 3)
(TAPE & REEL FOR -GP, 60 POS MAX)
-K: POLYAMIDE FILM PAD
(USE K-850-650, SEE FIG. 3)
-TR: TAPE & REEL (90 POS MAX)
-TY: TRAY PACKAGING
(NOT AVAILABLE WITH -TR) **M**
-FL: FRICTION LOCKS
(SEE FIG. 5, SHEET 3)
(NOT AVAILABLE WITH -GP)

ROW SPECIFICATION

-D: DOUBLE (USE QSH-30-01-D-XX)

No OF BANKS



SECTION "A"- "A"

NOTES:

1. C REPRESENTS A CRITICAL DIMENSION.
2. NOTE DELETED.
3. CONTACT RETENTION: 8 OZ. MINIMUM.
4. GROUND PLANE RETENTION: 8 OZ. MINIMUM.
5. BURR ALLOWANCE: .0015[.038] MAX.
6. MAX VARIANCE: .002[.05].
7. DIMENSION APPLIES TO CONTACT & GROUND PLANE.
8. -L PLATING CAN BE SUBSTITUTED FOR -F PLATING,
-G PLATED GROUND PLANE CAN BE SUBSTITUTED FOR -F PLATED GROUND PLANE.

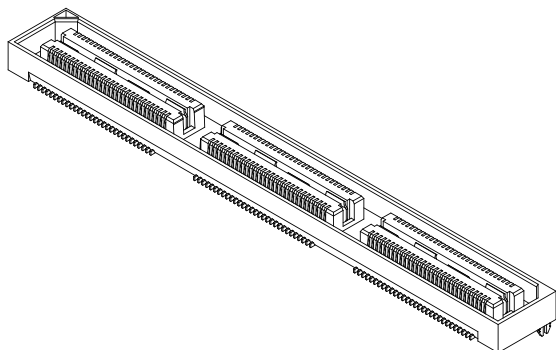


TABLE 1	
No OF POS	COPLANARITY INCLUDING GROUND PLANE
-030 THRU -060	.0040[.102]
-090 THRU -150	.0060[.152]

UNLESS OTHERWISE SPECIFIED,
DIMENSIONS ARE IN INCHES.

TOLERANCES ARE:

DECIMALS ANGLES
.XX: $\pm .01[.3]$ 2°
.XXX: $\pm .005[.13]$
.XXXX: $\pm .0020[.051]$

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MATERIAL:

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SHEET SCALE: 1:5:1

INSULATOR: BLACK LCP
CONTACT & GROUND PLANE: PHOS BRONZE

DESCRIPTION:

.5mm DOUBLE ROW HS SOCKET ASSEMBLY

DWG. NO.

QSH-XXX-01-X-D-XX

BY: DEAN P 05/21/1999 SHEET 1 OF 3

F:\DWG\MISC\MTG\QSH-XXX-01-X-D-XX-MKT.SLDDRW

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FIG. 2
-A: ALIGNMENT PIN OPTION

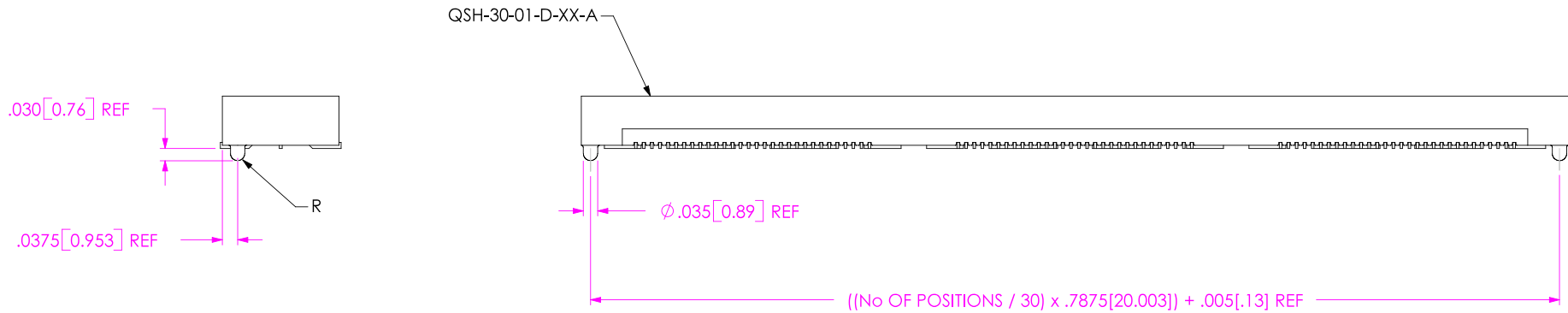
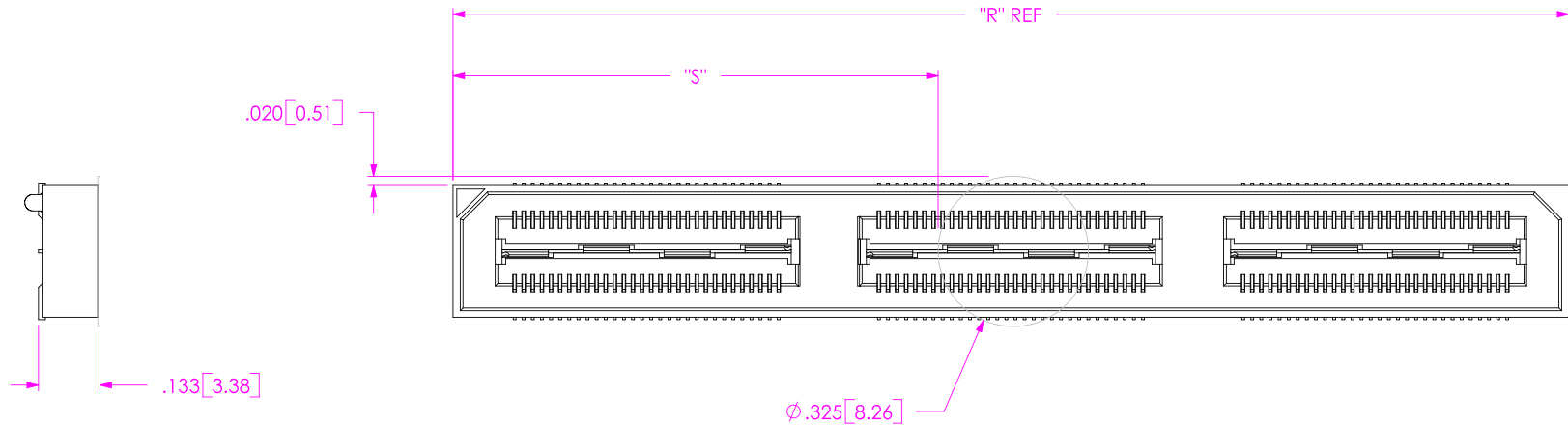


FIG. 3
-K: POLYAMIDE FILM PAD
[USE K-850-650]



NOTE: "R" = ((No OF POSITIONS / 30) x .7875[20.003]) + .050[1.27]
"S" = (("R" - .325[8.26]) / 2) ±.020[.51]

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	DESCRIPTION: .5mm DOUBLE ROW HS SOCKET ASSEMBLY	
	DWG. NO. QSH-XXX-01-X-D-XX	
	BY: DEAN P 05/21/1999 SHEET 2 OF 3	

FIG. 4
-GP: GUIDE POSTS
(SAME AS FIG. 1, UNLESS OTHERWISE STATED)

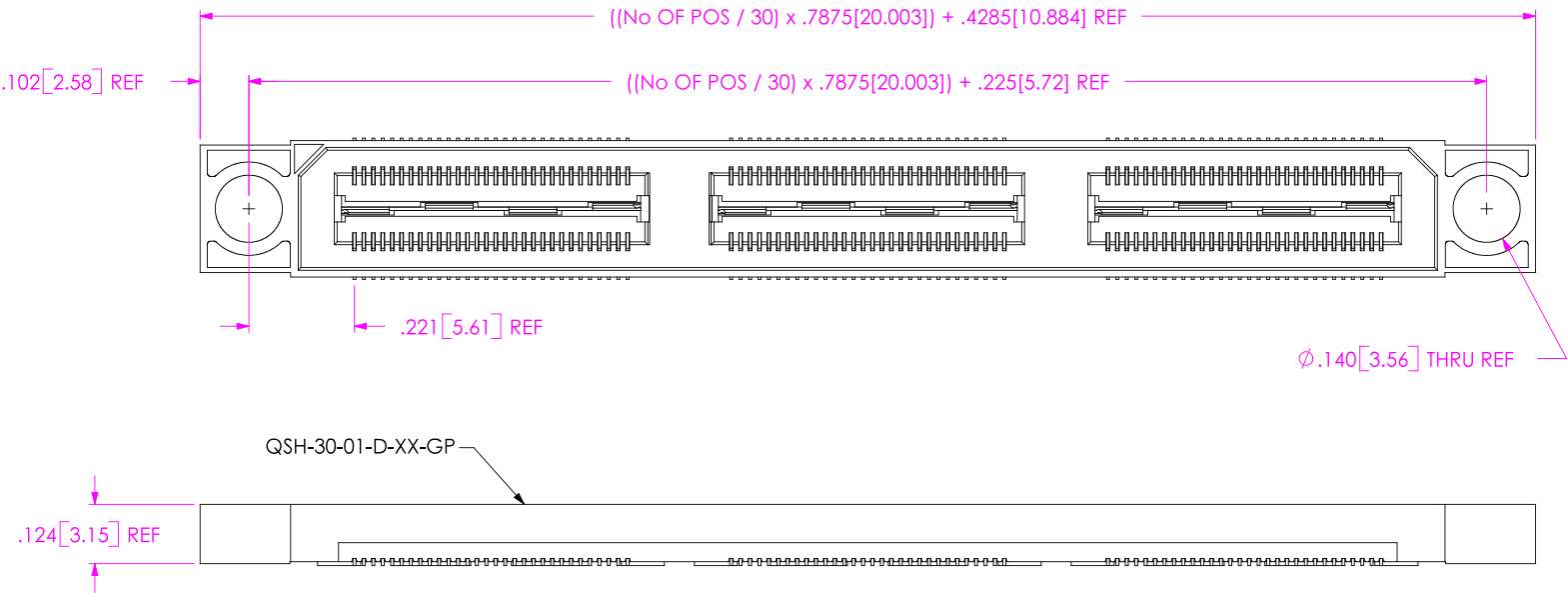
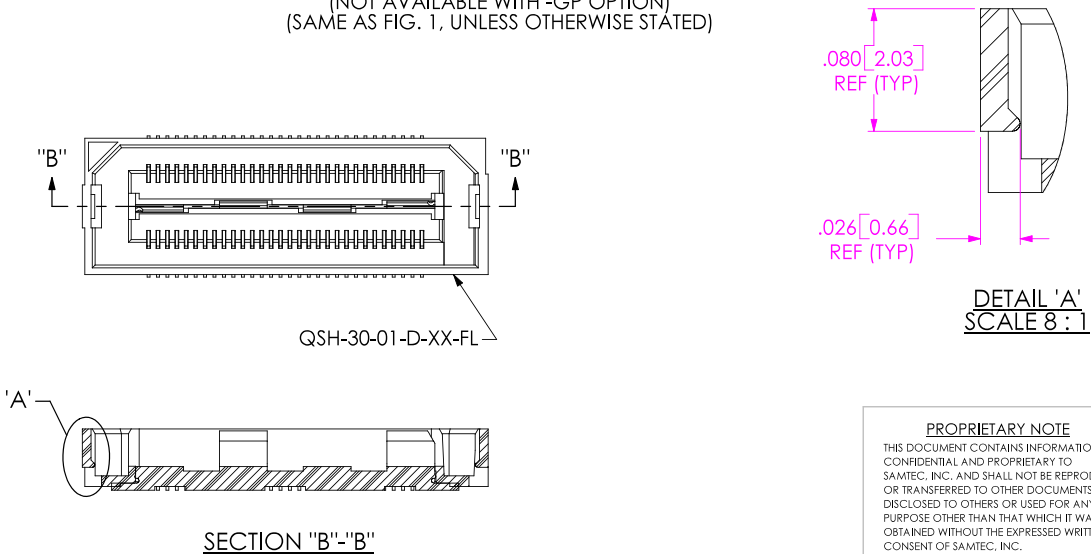


FIG. 5
-FL: FRICTION LOCKS
(NOT AVAILABLE WITH -GP OPTION)
(SAME AS FIG. 1, UNLESS OTHERWISE STATED)



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SHEET SCALE: 2.5:1

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