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TABLE 1

STYLE	"A"	"B"	BODY	GROUND PLANE	TERMINAL	MATED HEIGHT WITH QSH-01-DP
-01	.1680[4.267]	.1600[4.064]	QTH-30-01-D-XX	T-1G1-01-X	T-1S39-01-X	.197[5.00] REF
-02	.2861[7.267]	.2781[7.064]	QTH-30-02-D-XX	T-1G1-02-X	T-1S59-02-X	.315[8.00] REF

TABLE 2

No OF POSITIONS	COPLANARITY (INCLUDING GP)
-020 THRU -060	.004 [0.10]
-080 & -100	.006 [0.15]

TABLE 3

No OF POS	"D"	"E"
-020	.788 [20.00]	.728 [18.48]
-040	1.575 [40.01]	1.515 [38.48]
-060	2.363 [60.01]	2.303 [58.48]
-080	3.150 [80.01]	3.090 [78.49]
-100	3.938 [100.01]	3.878 [98.49]

QTH-XXX-XX-X-D-DP-XXX-X-XX

No OF POSITIONS
-020, -040, -060, ***-080, ***-100
(PER ROW)
***SEE NOTE 11

LEAD STYLE
-01: .1680[4.267]
*-02: .2861[7.264]
*-03: .4042[10.267]
*-04: .6001[15.243]
*-05: .7181[18.240]
*-06: .8361[21.237]
*-07: .9542[24.237]
*-08: 1.1511[29.238]
*-09: .5224[13.269]
*-10: .5618[14.270]

PLATING SPECIFICATION
-F: 3μ" SELECTIVE GOLD IN CONTACT
AREA, MATTE TIN ON TAIL
(USE T-1GXX-XX-F) (SEE NOTE 7)
-L: 10μ" SELECTIVE GOLD IN CONTACT
AREA, MATTE TIN ON TAIL
(USE T-1GXX-XX-L)
-H: 30μ" GOLD IN CONTACT AREA,
3μ" GOLD ON TAIL (USE T-1GXX-XX-G)
-C: 50μ" ELECTRO-POLISHED SELECTIVE
IN CONTACT AREA, MATTE TIN ON
TAIL (USE T-1GXX-XX-L)

ROW SPECIFICATION
-D: DOUBLE (USE QTH-30-01-D-XX)

No OF BANKS

* = RELEASED FOR ASO ONLY
(APPLICATION SPECIFIC ORDER)
** = -02 LEAD STYLE NOT RELEASED
FOR PRODUCTION

PACKAGING
BLANK: TRAY (SEE NOTES 14 & 15)
-TR: TAPE & REEL (SEE NOTES 15 & 16)
-FR: FULL REEL QTY TAPE & REEL
(SEE NOTES 15 & 16)
(-TR & -FR PACKAGING AVAILABLE FOR
60 POS MAX, 40 POS MAX FOR -GP
OPTION) (N/A ON -05 THRU -08)

PICK & PLACE OPTION
-K: POLYIMIDE FILM (USE K-DOT-.276-.375-.005)
(AVAILABLE ON -01 THRU -04 &
-09 AND -10 ONLY) (SEE FIG 4, SHT 2)

OPTION
-A: ALIGNMENT PINS
(SEE FIGS 1 & 3, SHT 2)
-LC: LOCKING CLIPS
(USE LC-08-TM-01, SEE FIG 2) (SEE NOTE 12)
** -GP: GUIDE POSTS OPTION
(AVAILABLE ON -01 & **-02 ONLY)
(USE QTH-30-XX-D-XX-GP) (SEE FIG 8, SHT 4)
-RT1: RETENTION OPTION (SEE FIG 9, SHT 4)
(ONLY AVAILABLE ON -01 LEAD STYLE)
(MUST USE -A OPTION)
(USE QTH-30-01-D-XX-A-RT1 & T-1R36-01-F)
(NOT AVAILABLE WITH -LC OR -GP)
(NOT AVAILABLE ON -080 & -100 POS)
-L: LATCHING OPTION (SEE FIG 10, SHT 5)
(ONLY AVAILABLE ON -01 LEAD STYLE)
(USE QTH-30-01-D-XX-L)
(NOT AVAILABLE WITH -LC, -GP, -FL, OR -RT1)
(40 POS MAX)
-FL: FRICTION LOCKS (SEE FIG 11, SHT 5)
(NOT AVAILABLE WITH -GP)
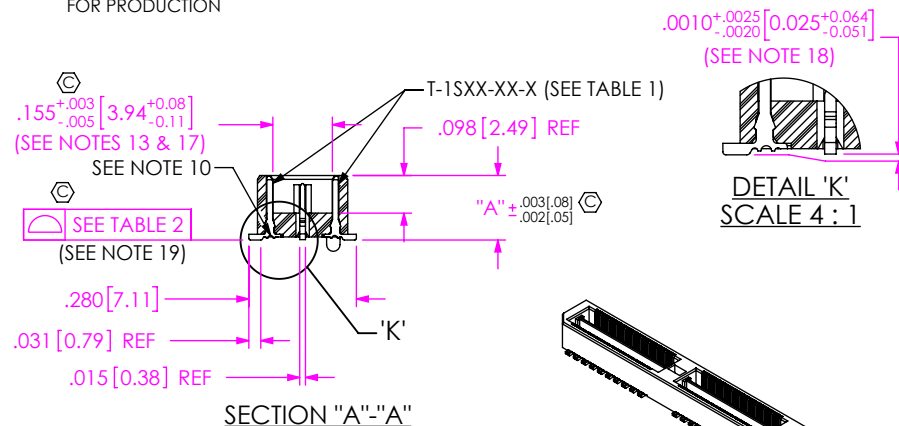
DIFFERENTIAL PAIRS

"D" REF
.7875[20.003] REF
9 EQ. SPCS
@ .059[1.50]
=.532[13.50] (TYP)
.020[0.50] REF
.059[1.50] REF
.155[3.94] REF
(SEE NOTE 13)
01
02
.047[1.19] REF
.644[16.36] REF
.008[0.20] REF
.235[5.97] REF

QTH-30-XX-D-XX-A
"A"
"A"
"B" REF
.038[0.95] REF
.745[18.92] REF
T-1G1-XX-X
"E" REF

Φ.035[0.89] REF
Φ.0375[0.953] REF

FIG 1
-A: ALIGNMENT PIN OPTION
(QTH-060-01-X-D-A SHOWN)
(FOR -01 & -02 LEAD STYLE ONLY)

.155 +.003/-.005 [3.94 +0.08/-0.11]
(SEE NOTES 13 & 17)
SEE NOTE 10
SEE TABLE 2
(SEE NOTE 19)
.280[7.11]
.031[0.79] REF
.015[0.38] REF

T-1SXX-XX-X (SEE TABLE 1)
.098[2.49] REF
"A" ±.003[.08]/.002[.05]
'K'

SECTION "A"-"A"

.0010 +.0025/-.0020 [0.025 +0.064/-0.051]
(SEE NOTE 18)

DETAIL 'K'
SCALE 4 : 1

NOTES:

1. Ⓒ REPRESENTS A CRITICAL DIMENSION.
2. MINIMUM PUSHOUT FORCE: 6 OZ FOR -01 & -02, 8 OZ FOR -03 THRU -09.
3. MINIMUM GROUND PLANE RETENTION: 1 LB.
4. PARTS TO BE MOLDED TO POSITION.
5. NOTE DELETED.
6. LEAD STYLES -03 THRU -08: TOP BODY (QTH) CANNOT HAVE -A OPTION.
7. -L PLATING CAN BE SUBSTITUTED FOR -F PLATING.
-G PLATED GROUND PLANE CAN BE SUSTITUTED FOR -F PLATED GROUND PLANE.
8. NOTE DELETED.
9. T-1R36 RETENTION TO BODY TO BE 1.0 LBF.
10. CUT OFF BURR NOT TO EXCEED .003[0.08] IN ANY DIRECTION, BURR PLUS TAB HEIGHT NOT TO EXCEED .006[0.15].
11. FOR NEW APPLICATIONS REQUIRING THESE POSITIONS, PLEASE CONTACT SAMTEC INTERCONNECT PROCESSING GROUP.
12. DUE TO THE HIGH AMOUNT OF INSERTION FORCE NEEDED, THE -LC OPTION IS NOT COMPATIBLE WITH AUTO PLACEMENT. SAMTEC RECOMMENDS MANUAL PLACEMENT FOR ALL ASSEMBLIES WITH THE -LC OPTION.
13. PIN CAN EXTEND PAST WALL .003[0.08] MAX.
14. TRAYS ARE STANDARD PACKAGING.
15. ORDERS WILL BE PACKAGED ACCORDING TO THE SAMTEC PACKAGING EFFICIENCY STANDARDS (SPES) FOUND ON WWW.SAMTEC.COM.
16. ATTACH LABEL -4x2 TO EACH REEL.
17. ANY CHANGES SHOULD ALSO BE APPLIED TO QTH, QTE, QTS, BTH, BTE, AND BTS.
18. DIMENSION MEASURED FROM A PLANE CREATED FROM THE SIGNAL PINS.
19. COPLANARITY INCLUDES SIGNAL PINS AND GROUND PLANES.

.055[1.40]

QTH-30-XX-D-XX
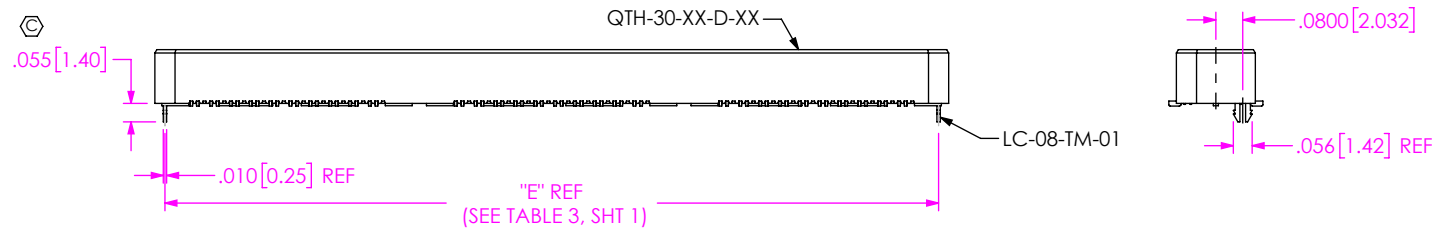
.0800[2.032]

LC-08-TM-01

.056[1.42] REF

.010[0.25] REF

"E" REF
(SEE TABLE 3, SHT 1)

FIG 2
-LC: LOCKING CLIP OPTION
(QTH-060-01-X-D-LC SHOWN)
(DIFFERENT AS SHOWN, OTHERWISE SAME AS FIG 1)

QTH-30-02-D-XX (SEE NOTE 6)

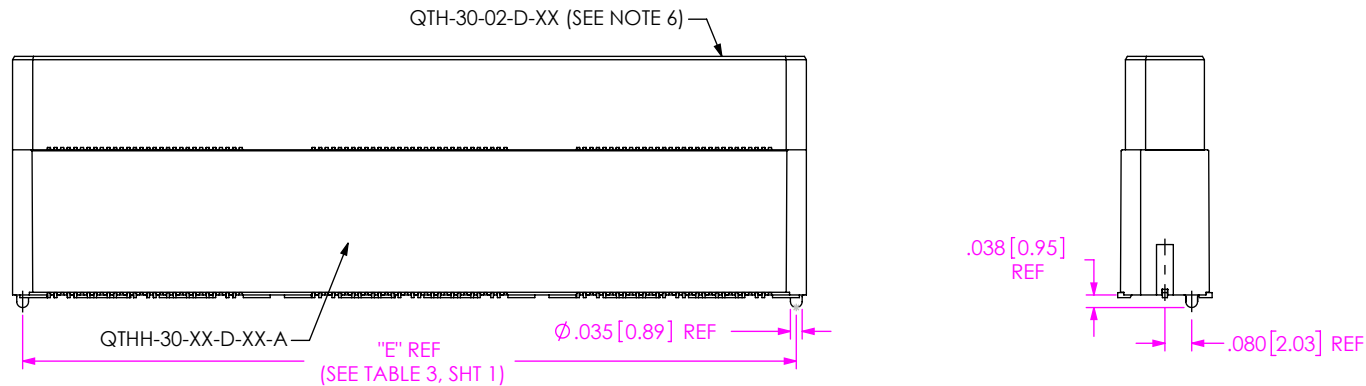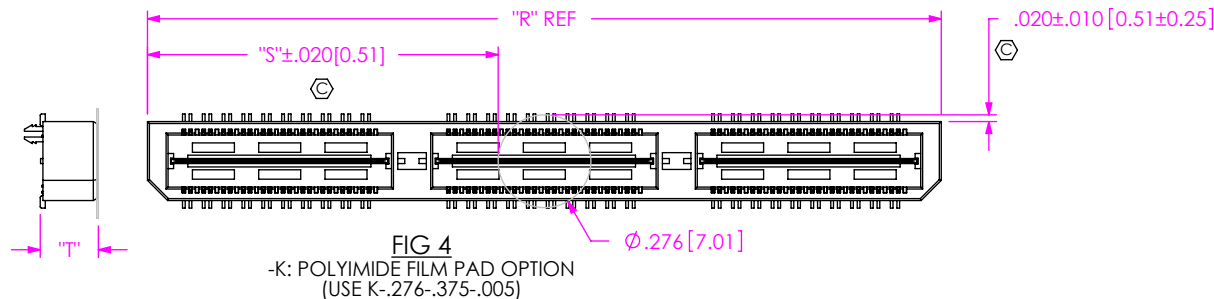QTHH-30-XX-D-XX-A

.038[0.95] REF

Ø.035[0.89] REF

.080[2.03] REF

"E" REF
(SEE TABLE 3, SHT 1)

FIG 3
-A: ALIGNMENT PIN OPTION
(QTH-060-05-X-D-DP-A SHOWN)
(FOR -03 THRU -08 LEAD STYLE ONLY)
(SEE TABLE 4, SHT 3)
(DIFFERENT AS SHOWN, OTHERWISE SAME AS FIG 1)

TABLE 5								
No OF POS	"R"				"S"			
	-A, -LC, -FL	-GP	-RT1	-L	-A, -LC, -FL	-GP	-RT1	-L
-020	.788 [20.00]	1.305 [33.15]	1.438 [36.53]	.906 [23.00]	.256 [6.50]	.515 [13.07]	.581 [14.76]	.315 [7.99]
-040	1.575 [40.01]	2.093 [53.15]	2.226 [56.53]	1.693 [43.00]	.650 [16.50]	.908 [23.07]	.975 [24.76]	.709 [18.00]
-060	2.363 [60.01]	2.880 [73.15]	3.013 [76.53]	2.481 [63.00]	1.043 [26.50]	1.302 [33.07]	1.369 [34.76]	1.103 [28.00]
-080	3.150 [80.01]	3.668 [93.15]	N/A	N/A	1.437 [36.50]	1.696 [43.07]	N/A	N/A
-100	3.938 [100.01]	4.455 [113.16]	N/A	N/A	1.831 [46.50]	2.090 [53.07]	N/A	N/A

TABLE 6	
STYLE	"T"
-01	.173[4.39]
-02	.291[7.39]
-03	.409[10.39]
-04	.605[15.37]
-09	.527[13.39]
-10	.566[14.39]

"R" REF

.020±.010 [0.51±0.25]

"S"±.020[0.51]

Ø.276 [7.01]

"T"

FIG 4
-K: POLYIMIDE FILM PAD OPTION
(USE K-.276-.375-.005)

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DO NOT SCALE DRAWING

SHEET SCALE: 1.75:1

DESCRIPTION:
.5mm DIFFERENTIAL PAIRS TERMINAL ASSEMBLY

DWG. NO.
QTH-XXX-XX-X-D-DP-XXX-X-XX

BY: KEVIN B   09-14-2010   SHEET 2 OF 5

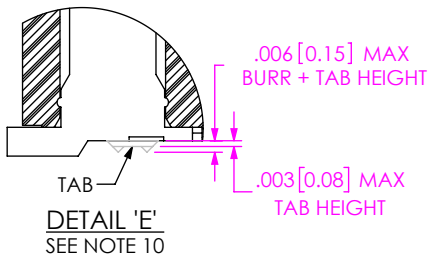DETAIL 'E'
SEE NOTE 10

TAB

.006 [0.15] MAX BURR + TAB HEIGHT

.003 [0.08] MAX TAB HEIGHT

TABLE 4

STYLE	SEE FIGURE	"C" OVERALL HEIGHT	GROUND PLANE	TERMINAL	TOP BODY (SEE NOTE 6)	BOTTOM SPACER BODY (-LC OR NONE)	BOTTOM SPACER BODY (-A)	MATED HEIGHT WITH QSH-01
-03	5	.4043 [10.269]	T-1G1-03-X	T-1S60-03-X	QTH-30-02-D-XX	QTHH-30-01-D-XX	QTHH-30-01-D-XX-A	.433 [11.00] REF
-04	5	.6001 [15.243]	T-1G1-04-X	T-1S60-04-X	QTH-30-02-D-XX	QTHH-30-01-D-XX	QTHH-30-01-D-XX-A	.630 [16.00] REF
-05	6	.7181 [18.240]	T-1G1-05-X	T-1S60-05-X	QTH-30-02-D-XX	QTHH-30-03-D-XX	QTHH-30-03-D-XX-A	.748 [19.00] REF
-06	6	.8361 [21.237]	T-1G1-06-X	T-1S60-06-X	QTH-30-02-D-XX	QTHH-30-03-D-XX	QTHH-30-03-D-XX-A	.866 [22.00] REF
-07	7	.9542 [24.237]	T-1G17-01-X	T-1S61-21-X	QTH-30-02-D-XX	QTHH-30-04-D-XX	QTHH-30-04-D-XX-A	.984 [24.99] REF
-08	7	1.1511 [29.238]	T-1G17-02-X	T-1S61-22-X	QTH-30-02-D-XX	QTHH-30-04-D-XX	QTHH-30-04-D-XX-A	1.181 [30.00] REF
-09	5	.5224 [13.269]	T-1G1-09-X	T-1S60-09-X	QTH-30-02-D-XX	QTHH-30-01-D-XX	QTHH-30-01-D-XX-A	.551 [14.00] REF
-10	5	.5618 [14.270]	T-1G1-10-X	T-1S60-10-X	QTH-30-02-D-XX	QTHH-30-01-D-XX	QTHH-30-01-D-XX-A	.591 [15.01] REF

"B"

QTH-30-02-D-XX (SEE NOTE 6)

.278 [7.07] REF

.118 [3.00] REF

"B"

T-1G1-XX-X

QTHH-30-01-D-XX

.265 [6.73] REF

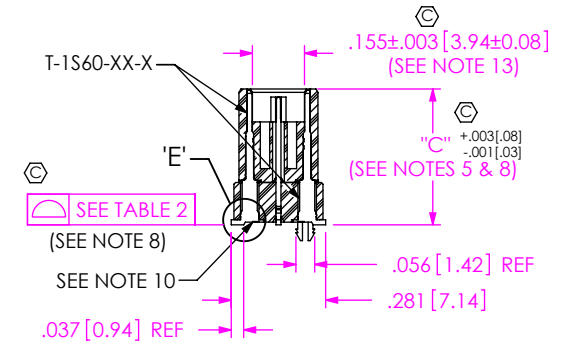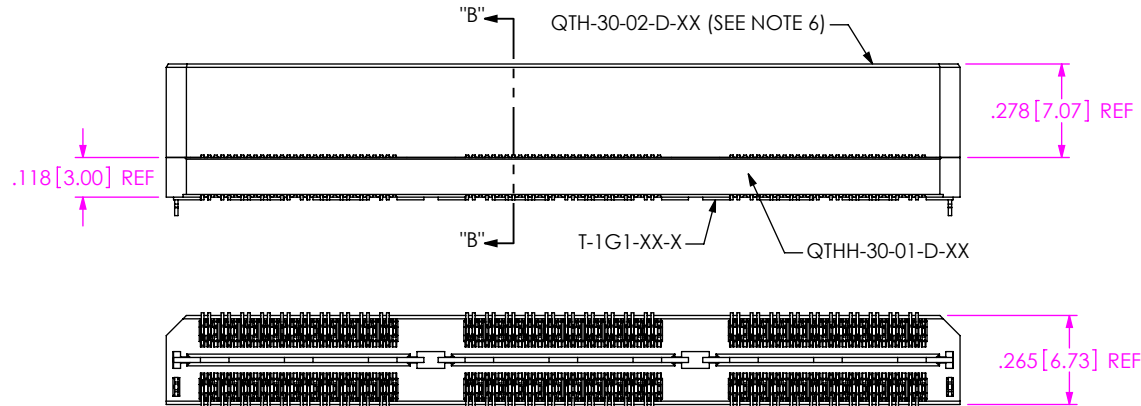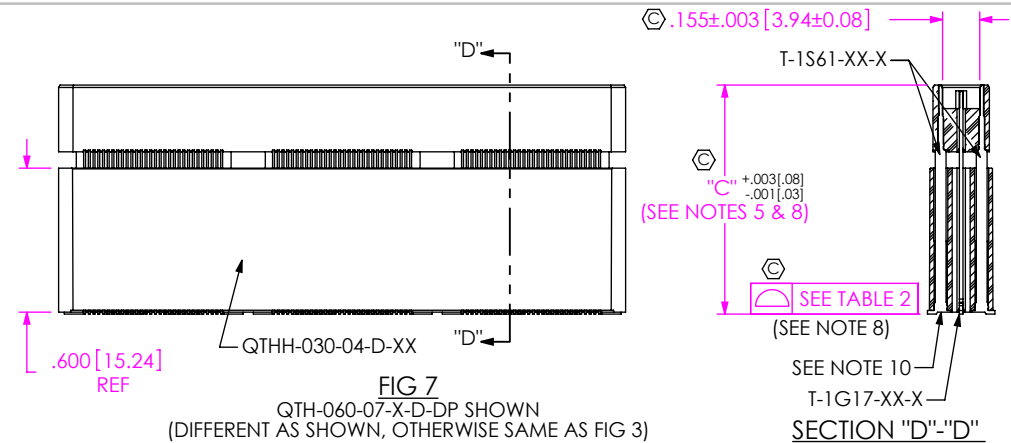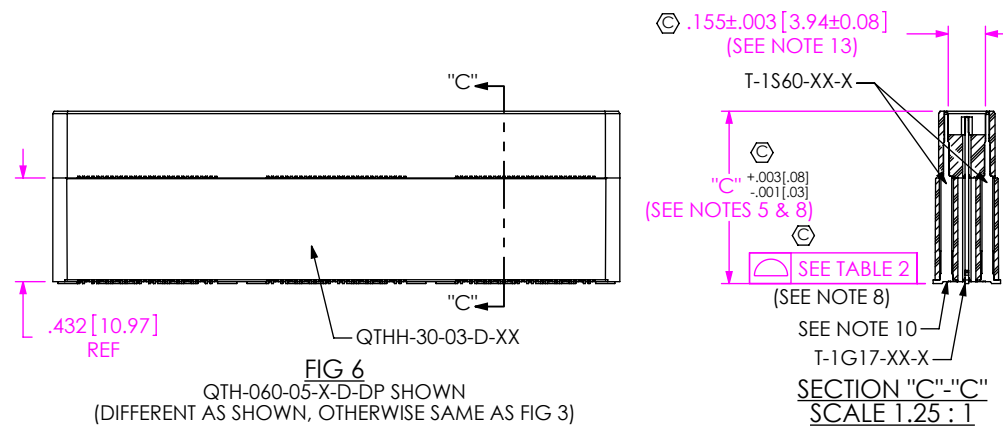**FIG 5**
QTH-060-03-X-D-DP-LC SHOWN
(DIFFERENT AS SHOWN, OTHERWISE SAME AS FIG 1)

.155±.003 [3.94±0.08] (SEE NOTE 13)

T-1S60-XX-X

'E'

SEE TABLE 2
(SEE NOTE 8)

SEE NOTE 10

"C" +.003[.08] -.001[.03] (SEE NOTES 5 & 8)

.056 [1.42] REF

.281 [7.14]

.037 [0.94] REF

SECTION "B"-"B"

"C"

.432 [10.97] REF

QTHH-30-03-D-XX

"C"

FIG 6
QTH-060-05-X-D-DP SHOWN
(DIFFERENT AS SHOWN, OTHERWISE SAME AS FIG 3)

.155±.003 [3.94±0.08] (SEE NOTE 13)

T-1S60-XX-X

"C" +.003[.08] -.001[.03] (SEE NOTES 5 & 8)

SEE TABLE 2
(SEE NOTE 8)

SEE NOTE 10

T-1G17-XX-X

SECTION "C"-"C"
SCALE 1.25 : 1

"D"

.600 [15.24] REF

QTHH-030-04-D-XX

"D"

FIG 7
QTH-060-07-X-D-DP SHOWN
(DIFFERENT AS SHOWN, OTHERWISE SAME AS FIG 3)

.155±.003 [3.94±0.08]

T-1S61-XX-X

"C" +.003[.08] -.001[.03] (SEE NOTES 5 & 8)

SEE TABLE 2
(SEE NOTE 8)

SEE NOTE 10

T-1G17-XX-X

SECTION "D"-"D"

DO NOT SCALE DRAWING

SHEET SCALE: 1.75:1

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e-Mail info@SAMTEC.com   code 55322

DESCRIPTION:
.5mm DIFFERENTIAL PAIRS TERMINAL ASSEMBLY

DWG. NO.
QTH-XXX-XX-X-D-DP-XXX-X-XX
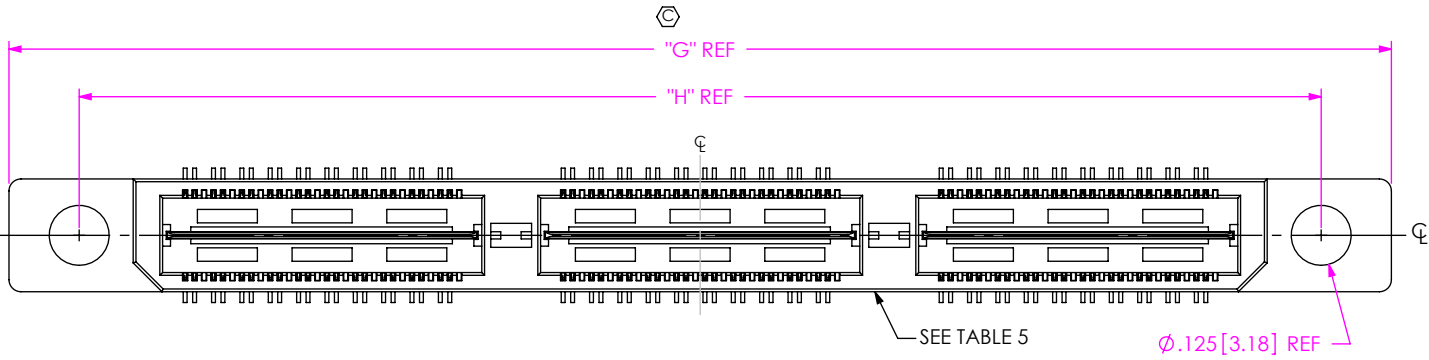
BY: KEVIN B   09-14-2010   SHEET 3 OF 5

c:\enterprisevault\DWG\MISC\MKTG\QTH-XXX-XX-X-D-DP-XXX-X-XX-MKT.SLDDRW

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"G" REF

"H" REF

"F" REF

.295 [7.49]

SEE TABLE 5

Ø.125 [3.18] REF

FIG 8
-GP: GUIDE POST OPTION
(QTH-060-01-X-D-DP-GP SHOWN)
(FOR -01 & -02 LEAD STYLE ONLY)
(DIFFERENT AS SHOWN, OTHERWISE SAME AS FIG 1)

TABLE 8		
No OF POS	"G"	"H"
-020	1.305 [33.15]	1.013 [25.73]
-040	2.093 [53.15]	1.801 [45.73]
-060	2.880 [73.15]	2.588 [65.74]
-080	3.668 [93.15]	3.376 [85.74]
-100	4.455 [113.16]	4.163 [105.74]
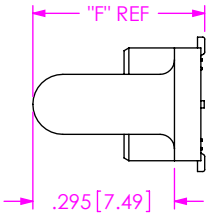
TABLE 7		
STYLE	"F"	BODY
-01	.3630 [9.220]	QTH-30-01-D-XX-X-GP
*-02	.4811 [12.220]	QTH-30-02-D-XX-X-GP

(* = NOT ENGINEERING APPROVED)

"J" REF

QTH-30-01-D-XX-A-RT1

"K"
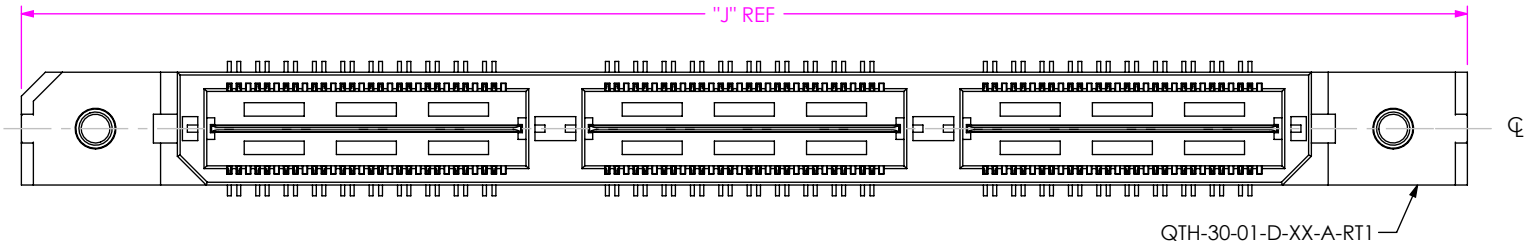
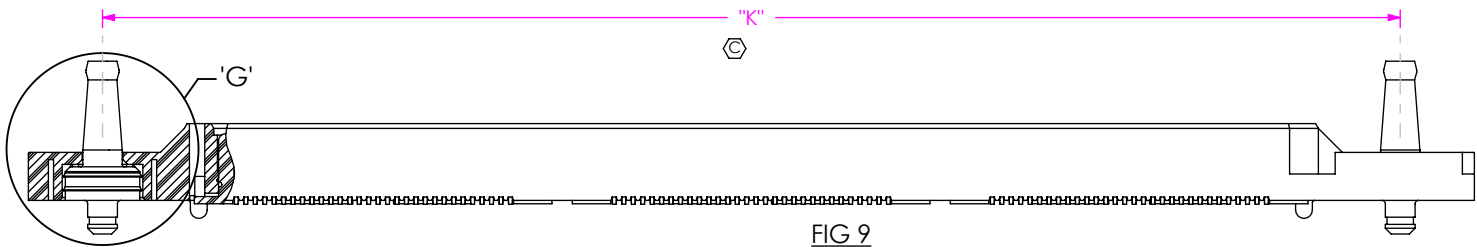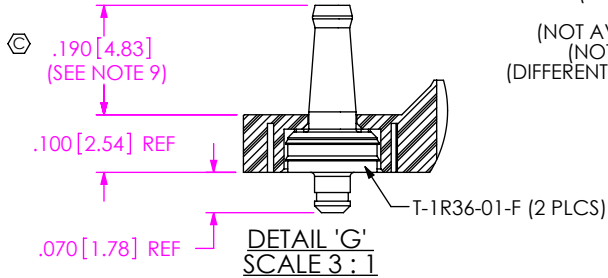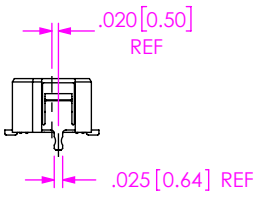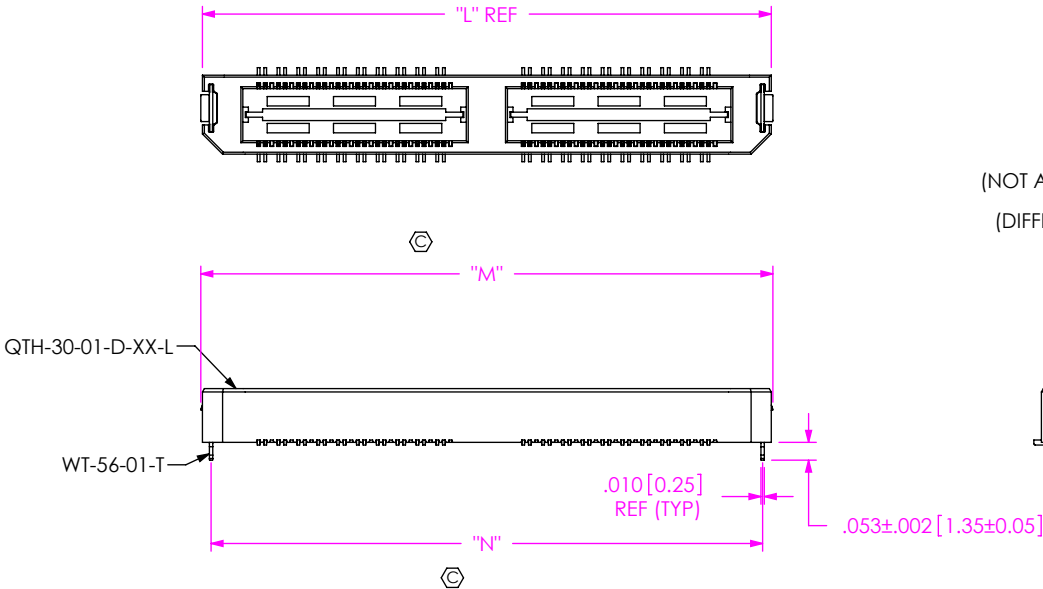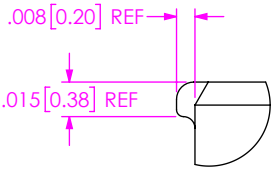| TABLE 9		
No OF POS	"J"	"K"
-020	1.438 [36.53]	1.129 [28.68]
-040	2.226 [56.53]	1.917 [48.68]
-060	3.013 [76.53]	2.704 [68.68]
-080	N/A	N/A
-100	N/A	N/A

.069 [1.76] REF

Ø.062 [1.57] REF

'G'
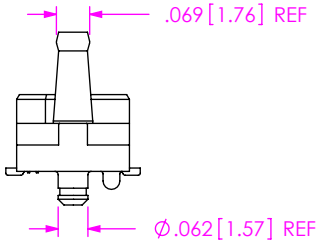
FIG 9
-RT1: RETENTION OPTION
(QTH-060-01-X-D-DP-A-RT1 SHOWN)
(FOR -01 LEAD STYLE ONLY)
(NOT AVAILABLE WITH -LC OR -GP OPTIONS)
(NOT AVAILABLE ON -080 & -100 POS)
(DIFFERENT AS SHOWN, OTHERWISE SAME AS FIG 1)

.190 [4.83]
(SEE NOTE 9)

.100 [2.54] REF

.070 [1.78] REF

T-1R36-01-F (2 PLCS)

DETAIL 'G'
SCALE 3 : 1

c:\enterprisevault\DWG\MISC\MKTG\QTH-XXX-XX-X-D-DP-XXX-X-XX-MKT.SLDDRW

DO NOT SCALE DRAWING

SHEET SCALE: 2.5:1

DESCRIPTION:
.5mm DIFFERENTIAL PAIRS TERMINAL ASSEMBLY

DWG. NO.
QTH-XXX-XX-X-D-DP-XXX-X-XX
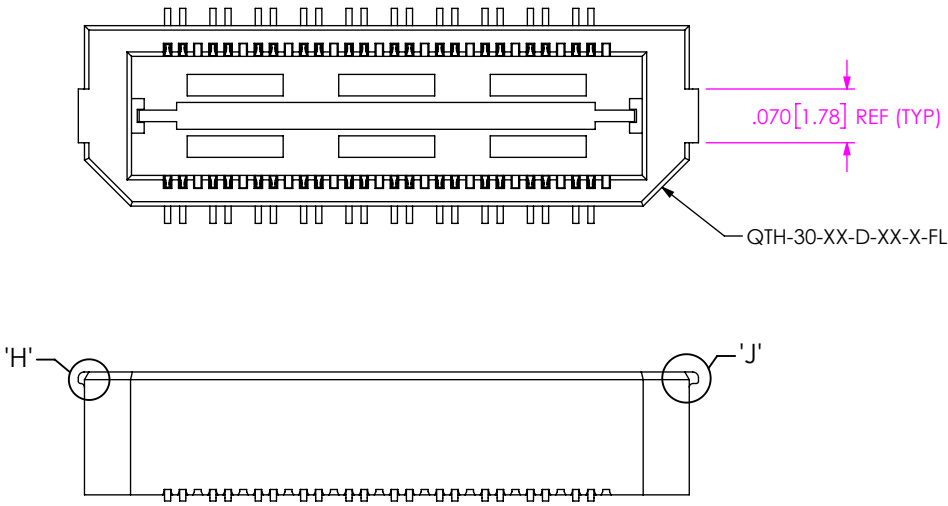
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"L" REF

FIG 10
-L: LATCHING OPTION
(QTH-040-01-X-DP-L SHOWN)
(AVAILABLE ON -01 LEAD STYLE ONLY)
(NOT AVAILABLE WITH -LC, -GP, -FL, OR -RT1 OPTIONS)
(40 POS MAX)
(DIFFERENT AS SHOWN, OTHERWISE SAME AS FIG 1)

QTH-30-01-D-XX-L

WT-56-01-T

"M"

.020 [0.50]
REF

.010 [0.25]
REF (TYP)

.025 [0.64] REF

"N"

.053±.002 [1.35±0.05]

TABLE 10			
No OF POS	"L"	"M"	"N"
-020	.906 [23.01]	.915 [23.24]	.854 [21.69]
-040	1.694 [43.01]	1.703 [43.24]	1.642 [41.69]
*-060	2.481 [63.02]	2.490 [63.25]	2.429 [61.70]
-080	N/A	N/A	N/A
-100	N/A	N/A	N/A

* = NOT RELEASED

.070 [1.78] REF (TYP)

QTH-30-XX-D-XX-X-FL

.008 [0.20] REF

.015 [0.38] REF

DETAIL 'H'
SCALE 12 : 1

.012 [0.30] REF

.015 [0.38] REF

DETAIL 'J'
SCALE 12 : 1

'H'

'J'

FIG 11
-FL: FRICTION LOCKS
(NOT AVAILABLE WITH -GP OPTION)
(DIFFERENT AS SHOWN, OTHERWISE SAME AS FIG 1)

DO NOT SCALE DRAWING

SHEET SCALE: 2.5:1

SAMTEC

DESCRIPTION:
.5mm DIFFERENTIAL PAIRS TERMINAL ASSEMBLY

DWG. NO.
QTH-XXX-XX-X-D-DP-XXX-X-XX

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