

DO NOT SCALE FROM THIS PRINT

SEAF-XX-XX-X-XX-X-RA-XX-X-XR

No. OF POSITIONS
-20,-30,-40,-50 (PER ROW)

LEAD STYLE
-01

PLATING SPECIFICATION
-S: SELECTIVE GOLD, 30μ GOLD, MATTE TIN ON TAILS (USE SUB-IM-C-242-XX-S-X)
-L: LIGHT SELECTIVE GOLD, 10μ GOLD, MATTE TIN ON TAILS (USE SUB-IM-C-242-XX-L-X)

No. OF ROWS
-04,-06,*-08,*-10 (* = SEE NOTE 8)

PACKAGING (SEE NOTES 4, 7 & 14)
-TR: TAPE & REEL
-FR: FULL REEL QTY TAPE & REEL

PICK & PLACE OPTION
-BLANK: NO KAPTON PAD
-K: KAPTON PAD (SEE SHT 5, FIG 8)

OPTIONS
-GP: GUIDE POST HOLE
-LP: LATCH POST (USE WITH SEAC ONLY) (-06 ROW, ALL POS AND -08 ROW, 40 POS ONLY) (NOT AVAILABLE WITH -GP OPTION)

RIGHT ANGLE
-RA

SOLDER COMPOSITION (C) & STYLE
-1: 63% TIN / 37% LEAD CHARGE TAIL (USE SUB-IM-C-242-XX-XX-X-1)
-2: 95.5% TIN / 3.8 SILVER / 0.7% COPPER LEAD FREE CHARGE TAIL (USE SUB-IM-C-242-XX-XX-X-2)

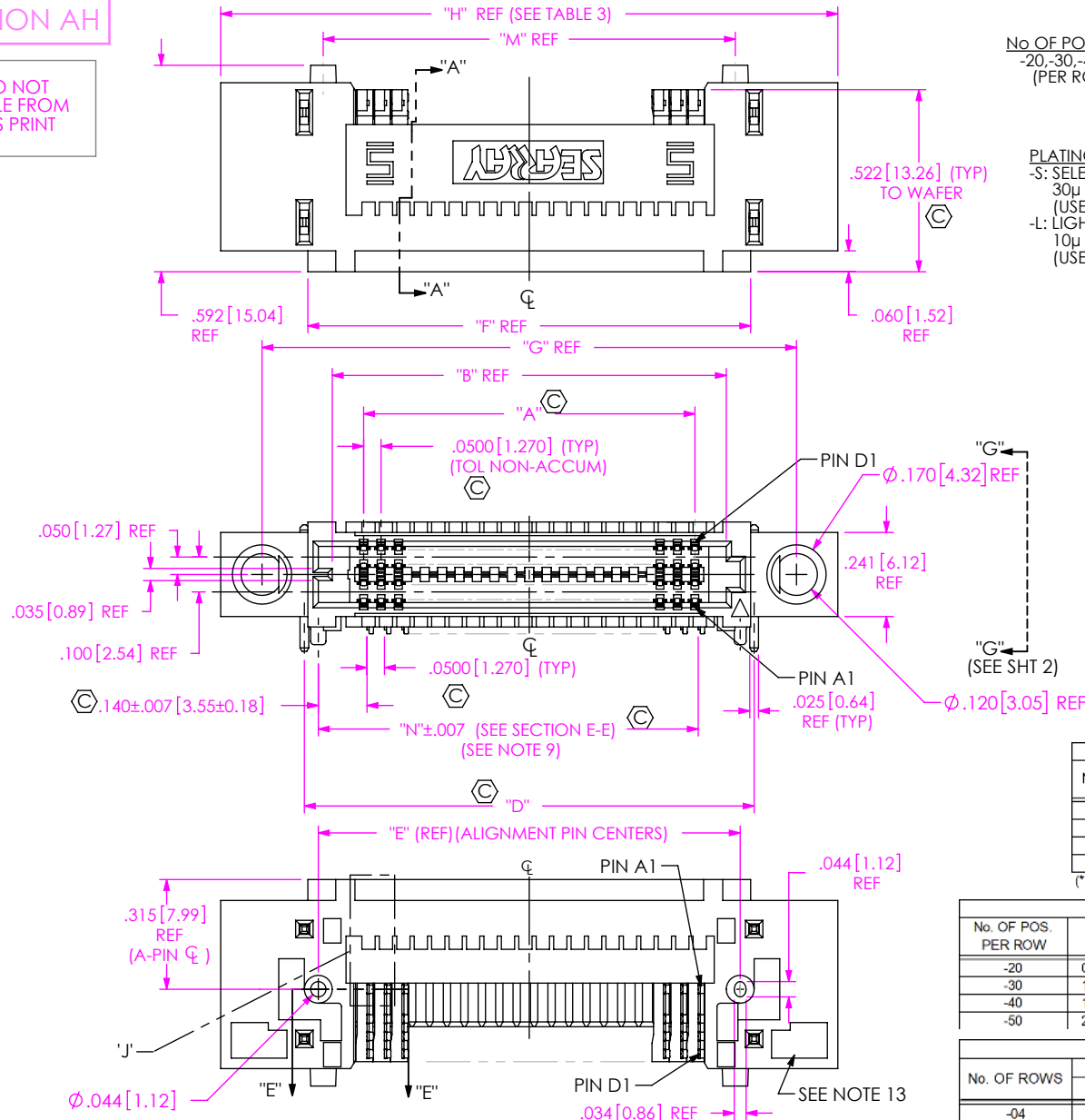


TABLE 3

STYLE	No. OF POS PER ROW	"G"	"H"	"J"
STANDARD WITH -GP OPTION	-20	1.533 [38.94]	1.770 [44.96]	N/A
	-30	2.033 [51.64]	2.270 [57.66]	
	-40	2.533 [64.34]	2.770 [70.36]	
	-50	3.033 [77.04]	3.270 [83.06]	
WITHOUT -GP OPTION	-20	N/A	1.370 [34.80]	N/A
	-30		1.870 [47.50]	
	-40		2.370 [60.20]	
	-50		2.870 [72.90]	
WITH -LP OPTION	-20	1.533 [38.94]	1.900 [48.26]	1.790 [45.47]
	-30	2.033 [51.64]	2.400 [60.96]	2.290 [58.17]
	-40	2.533 [64.34]	2.900 [73.66]	2.790 [70.10]
	-50	3.033 [77.04]	3.400 [86.36]	3.290 [83.57]

TABLE 2

No. OF ROWS	"BODY CALLOUT"	"SOCKET WAFER"	"WELD TAB"	"C"
-04	SEAF-XX-01-RA-04-XX	SUB-IM-C-242-01-04-XX	WT-28-01-T	0.315 [8.00]
-06	SEAF-XX-01-RA-06-XX	SUB-IM-C-242-01-06-XX	WT-28-02-T	0.415 [10.54]
*-08	SEAF-XX-01-RA-08-XX	SUB-IM-C-242-01-08-XX	WT-83-01-T	0.415 [10.54]
*-10	SEAF-XX-01-RA-10-XX	SUB-IM-C-242-01-10-XX	WT-83-02-T	0.415 [10.54]

(* = SEE NOTE 8)

TABLE 1

No. OF POS. PER ROW	"A"	"B"	"D"	"E"	"F"	"N"
-20	0.950 [24.13]	1.130 [28.70]	1.290 [32.77]	1.210 [30.73]	1.270 [32.26]	1.090 [27.69]
-30	1.450 [36.83]	1.630 [41.40]	1.790 [45.47]	1.710 [43.43]	1.770 [44.96]	1.590 [40.39]
-40	1.950 [49.53]	2.130 [54.10]	2.290 [58.17]	2.210 [56.13]	2.270 [57.66]	2.090 [53.09]
-50	2.450 [62.23]	2.630 [66.80]	2.790 [70.87]	2.710 [68.83]	2.770 [70.36]	2.590 [65.79]

TABLE 4

No. OF ROWS	"M"				"BACK STRAP"
	20 POS	30 POS	40 POS	50 POS	
-04	1.182 [30.02]	1.682 [42.72]	2.182 [55.42]	2.682 [68.12]	N/A
-06,*-08 & *-10	N/A	N/A	N/A	N/A	SEAF-XX-BS-XX-01

(* = SEE NOTE 8)

NOTES:
1. ϕ REPRESENTS A CRITICAL DIMENSION.
2. MINIMUM PUSH-OUT FORCE: .50 LBS[2.2N].
3. INSPECT DIMENSION AT FIRST POSITION WAFER LOCATION ONLY, FIRST AND LAST PIN.
4. TAPE & REEL IS STANDARD PACKAGING.
5. NOTE DELETED
6. NOTE DELETED
7. ATTACH LABEL-4X2 TO EACH REEL.
8. ON -08 & -10 ROW ASSEMBLIES, SEE FIG 10, SHEET 5 FOR CAT FIXTURE VIEW.
9. CHECK DIMENSION ON FIRST AND LAST ROW OF TAILS.
10. A 20-30°C TEMPERATURE DIFFERENCE MAY EXIST BETWEEN THIS HIGH-DENSITY COMPONENT AND THE BOARD SURFACE DURING REFLOW. SAMTEC RECOMMENDS A THERMAL STUDY BE PERFORMED TO UNDERSTAND THE TEMPERATURE GRADIENTS YOU MAY EXPERIENCE.
11. SOME RELAXATION/WARPING OF THE BACK STRAP IS ACCEPTABLE AFTER PROCESSING.
12. SEE SHEET 5 FOR PROCESSING INFORMATION.
13. VOID PATTERN MAY VARY BY ROW AND END OPTION.
14. ORDERS WILL BE PACKAGED ACCORDING TO THE SAMTEC PACKAGING EFFICIENCY STANDARDS (SPES) FOUND ON WWW.SAMTEC.COM

FIG 1
(SEAF-20-01-X-04-X-RA-GP)
(SOME DETAIL OMITTED FOR CLARITY)

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES.
TOLERANCES ARE:
DECIMALS ANGLES
.XX: ±.01 [.3] 2°
.XXX: ±.005 [.13]
.XXXX: ±.0020 [.051]

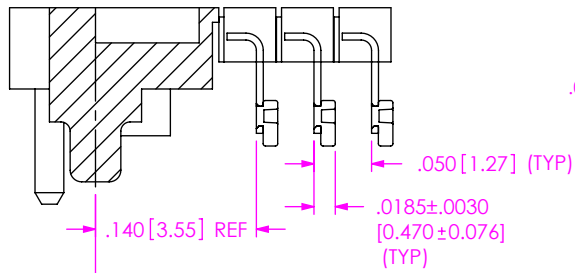
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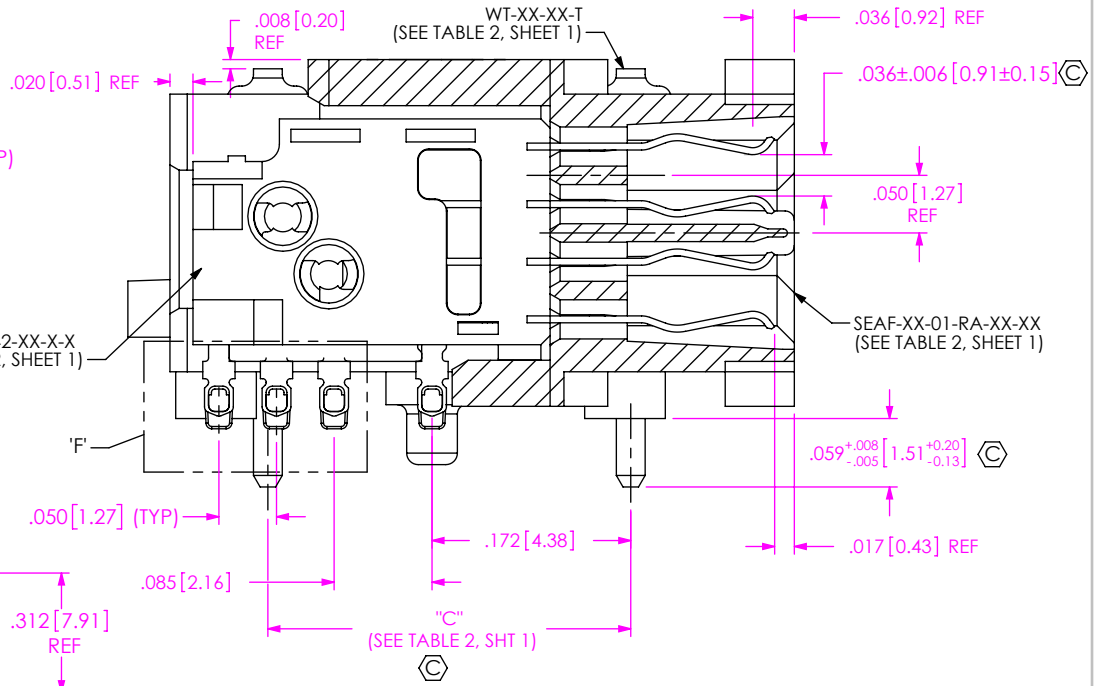
MATERIAL: DO NOT SCALE DRAWING SHEET SCALE: 2:1
INSULATOR: LCP COLOR: BLACK UL 94 V-0
CONTACT: COPPER ALLOY .006 THICK

DESCRIPTION:
SEAF-RA ASSEMBLY
DWG. NO.
SEAF-XX-XX-X-XX-X-RA-XX-X-XR
BY: C. PIERCE 12/15/2007 SHEET 1 OF 5

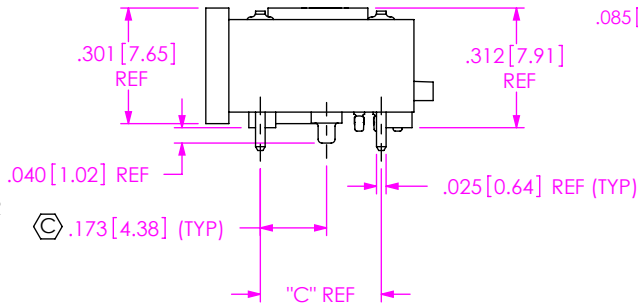
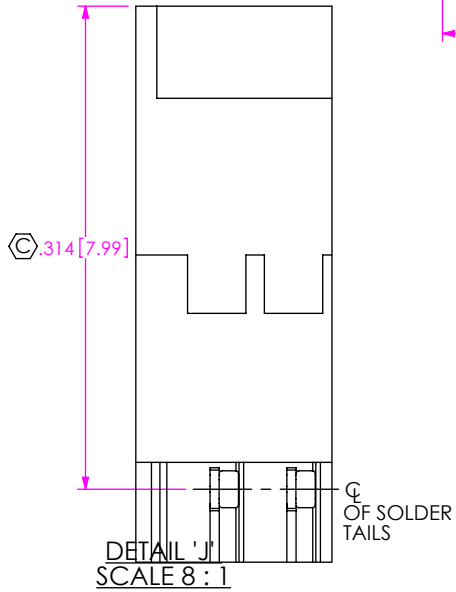


SECTION "E"-"E"
SCALE 6:1

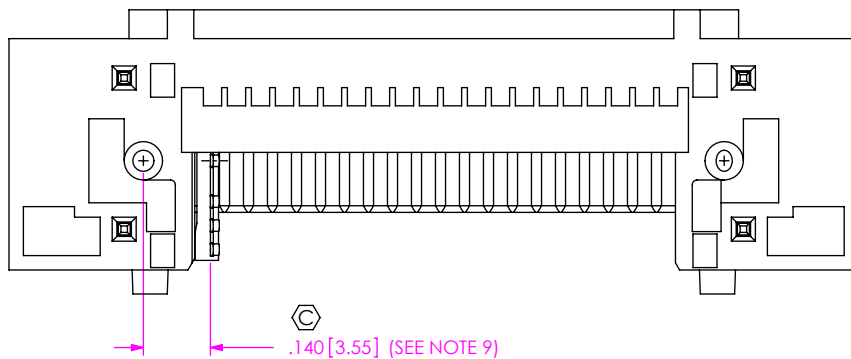
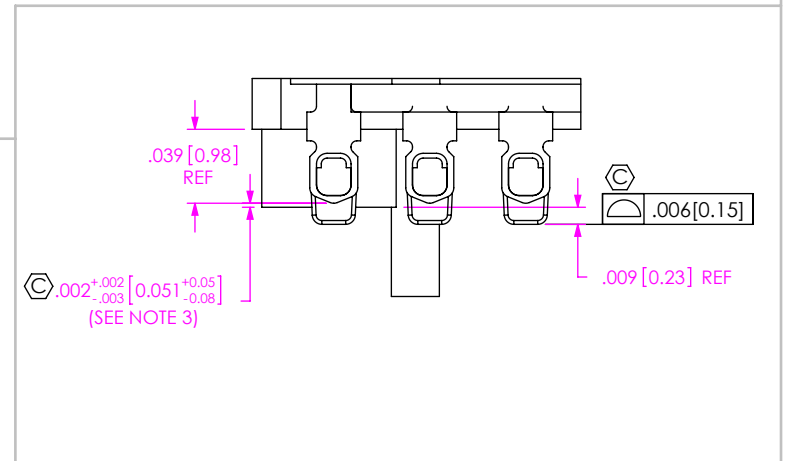
SUB-IM-C-242-XX-X-X
(SEE TABLE 2, SHEET 1)



SECTION "A"-"A"
SCALE 6:1



VIEW "G"-"G"



IN-PROCESS VIEW
(SEAF-20-01-X-04-X-RA-GP SHOWN)
(FILL FIRST WAFER TO DIMENSIONS SHOWN)

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SHEET SCALE: 2:1

DESCRIPTION:
SEAF-RA ASSEMBLY

DWG. NO.
SEAF-XX-XX-X-XX-X-RA-XX-X-XR

BY: C. PIERCE 12/15/2007 SHEET 2 OF 5

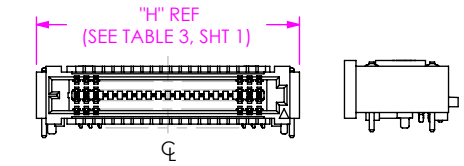
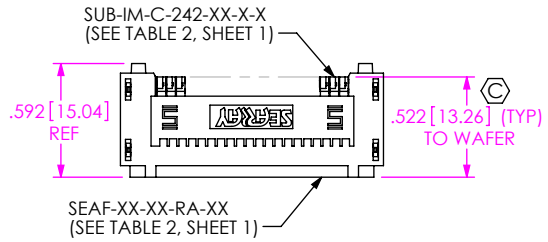


FIG 2
(SEAF-20-01-X-04-X-RA SHOWN)
(SAME AS FIG 1 EXCEPT AS NOTED)
(SOME DETAIL REMOVED FOR CLARITY)

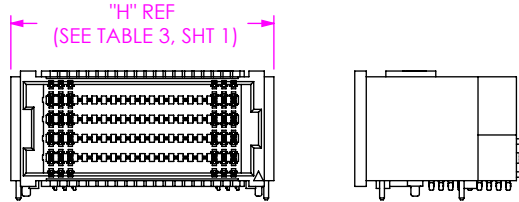
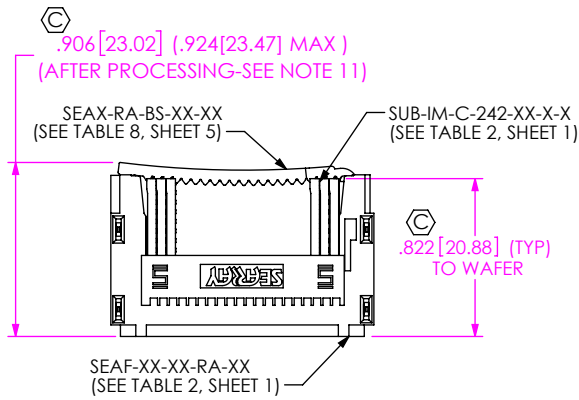


FIG 9
(SEAF-20-01-X-10-X-RA SHOWN)
(SAME AS FIG 4 EXCEPT AS NOTED)
(SOME DETAIL REMOVED FOR CLARITY)

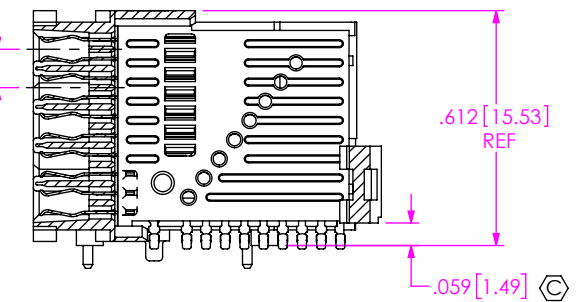
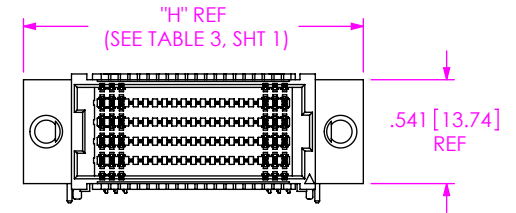
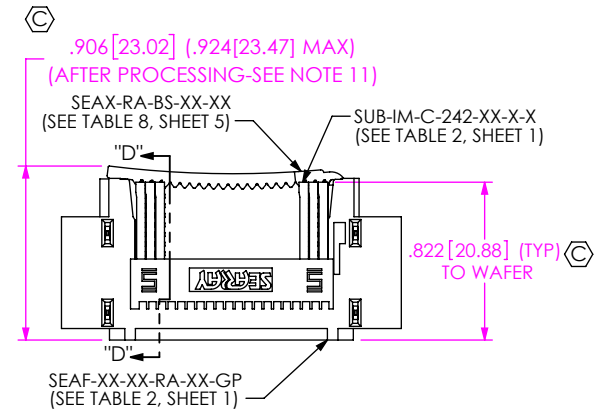


FIG 4
(SEAF-20-01-X-10-X-RA-GP)
(SAME AS FIG 1 EXCEPT AS NOTED)
(SOME DETAIL REMOVED FOR CLARITY)

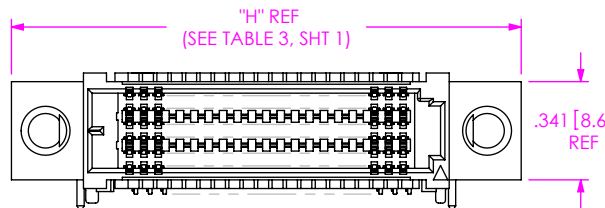
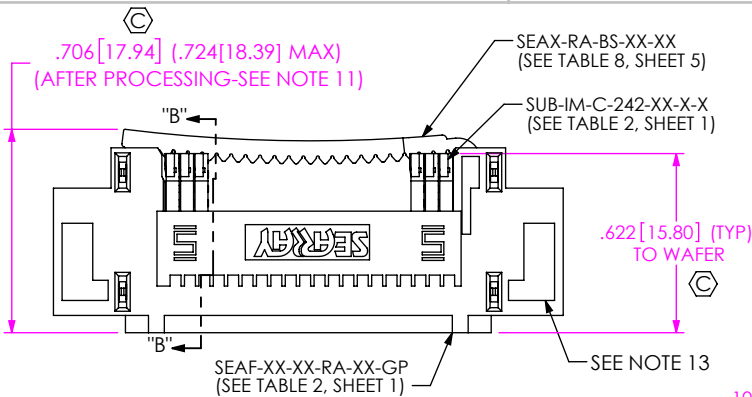
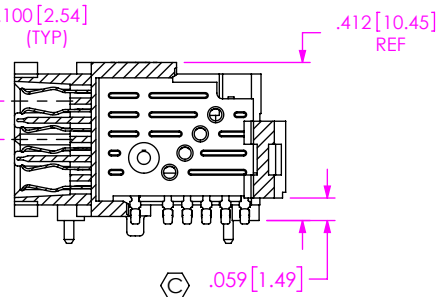


FIG 3
(SEAF-20-01-X-06-X-RA-GP)
(SAME AS FIG 1 EXCEPT AS NOTED)
(SOME DETAIL REMOVED FOR CLARITY)



SECTION "B"-"B"
SCALE 2 : 1

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SHEET SCALE: 1:1

DESCRIPTION:
SEAF-RA ASSEMBLY

DWG. NO.
SEAF-XX-XX-X-XX-X-RA-XX-X-XR

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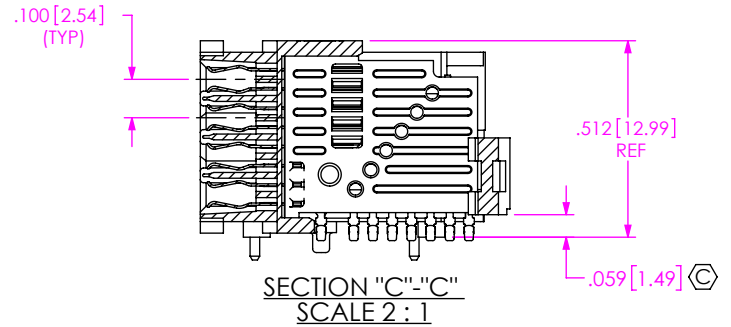
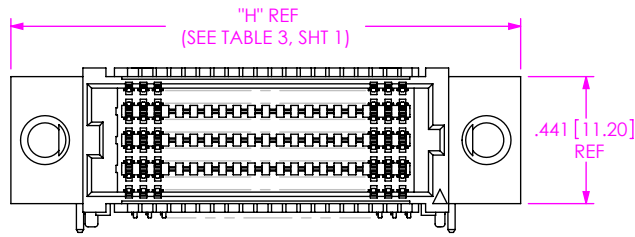
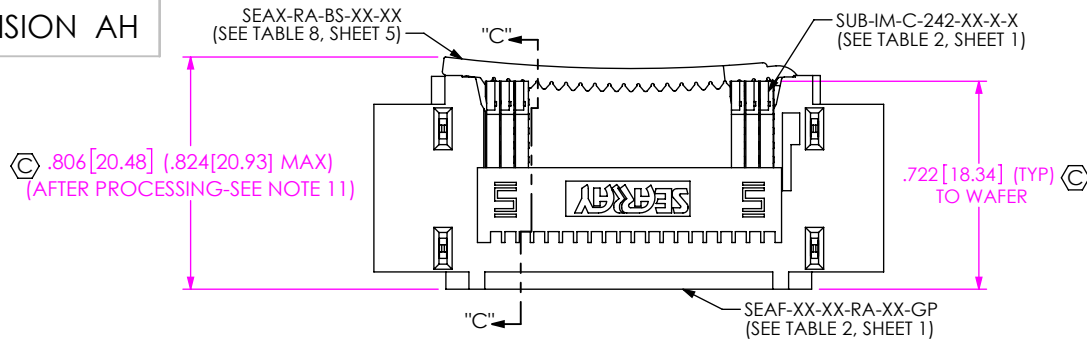


FIG 5
(SEAF-20-01-X-08-X-RA-GP)
(SAME AS FIG 1 EXCEPT AS NOTED)
(SOME DETAIL REMOVED FOR CLARITY)

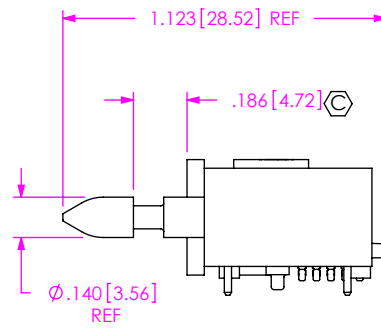
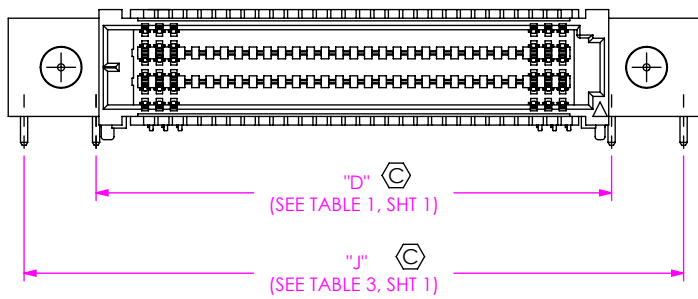
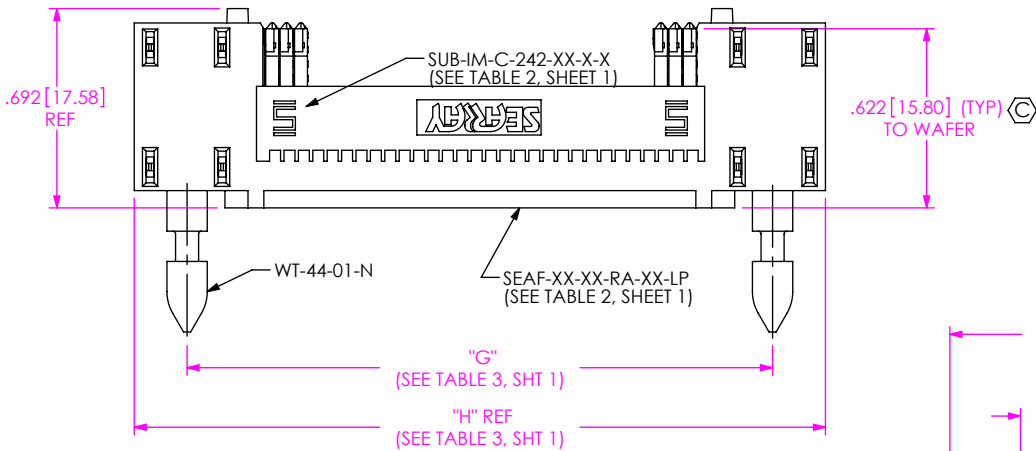


FIG 6
(SEAF-30-01-X-06-X-RA-LP)
(SOME DETAIL OMITTED FOR CLARITY)
(SAME AS FIG 3 EXCEPT AS SHOWN)

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	<p>DESCRIPTION: SEAF-RA ASSEMBLY</p>	
	<p>DWG. NO. SEAF-XX-XX-X-XX-X-RA-XX-X-XR</p>	
<p>BY: C. PIERCE 12/15/2007</p>		<p>SHEET 4 OF 5</p>

ROWS	TABLE 5																
	"L"		"P" ϕ		"K" NO -GP OPTION				"K" WITH -GP OPTION				"K" WITH -LP OPTION				"Q"
				20 POS	30 POS	40 POS	50 POS	20 POS	30 POS	40 POS	50 POS	20 POS	30 POS	40 POS	50 POS		
-04	.276	[7.01]	.295	[7.49]	.538 [13.65]	.788 [20.00]	1.038 [26.35]	1.288 [32.70]	.738 [18.73]	.988 [25.08]	1.238 [31.43]	1.488 [37.78]	N/A	N/A	N/A	N/A	.124 [3.15]
-06	.376	[9.55]	.295	[7.49]	.538 [13.65]	.788 [20.00]	1.040 [26.40]	1.288 [32.70]	.738 [18.73]	.988 [25.08]	1.238 [31.43]	1.488 [37.78]	.803 [20.38]	1.053 [26.73]	1.303 [33.08]	1.553 [39.43]	.124 [3.15]
-08	.483	[12.27]	.649	[16.48]	.361 [9.16]	.611 [15.51]	.861 [21.86]	1.111 [28.21]	.561 [14.24]	.811 [20.59]	1.061 [26.94]	1.311 [33.29]	.626 [15.89]	.876 [22.24]	1.126 [28.59]	1.376 [34.94]	.030 [0.76]
-10	.583	[14.81]	.649	[16.48]	.361 [9.16]	.611 [15.51]	.861 [21.86]	1.111 [28.21]	.561 [14.24]	.811 [20.59]	1.061 [26.94]	1.311 [33.29]	N/A	N/A	N/A	N/A	.030 [0.76]

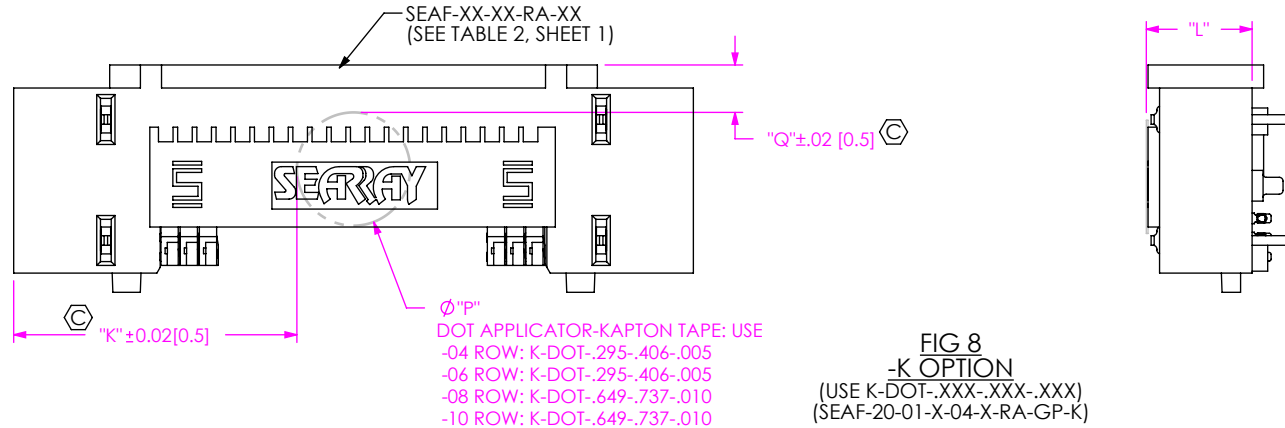


FIG 8
-K OPTION
(USE K-DOT-.XXX-.XXX-.XXX)
(SEAF-20-01-X-04-X-RA-GP-K)

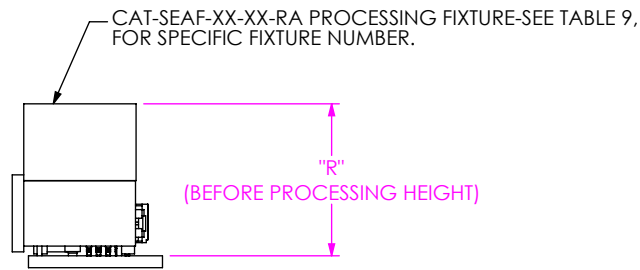


FIG 10
SEAF-RA PROCESSING FIXTURE
(USE CAT-SEAF-XX-XX-RA FIXTURE)

TABLE 7	
ROW	"R"
-08	.892 [22.66]
-10	.992 [25.20]

NOTE:
FIG 10, DIMENSION "R" INDICATES CONNECTOR/FIXTURE HEIGHT ON PCB. TO GUARANTEE ENOUGH REFLOW OVEN WORKING SPACE, DIMENSION "R", PCB THICKNESS, AND THE HEIGHT OF THE COMPONENTS ON THE OPPOSITE SIDE OF THE BOARD NEED TO BE CONSIDERED.

TABLE 9		
SEARAY™ FIXTURE TOOLS		
PART NUMBER	POSITIONS	ROW
CAT-SEAF-20-01-RA	20	-08 AND -10
CAT-SEAF-30-01-RA	30	-08 AND -10
CAT-SEAF-40-01-RA	40	-08 AND -10
CAT-SEAF-50-01-RA	50	-08 AND -10

TABLE 8	
No. OF POSITIONS	"BACKSTRAP"
-20	SEAX-RA-BS-20-01
-30	SEAX-RA-BS-30-01
-40	SEAX-RA-BS-40-01
-50	SEAX-RA-BS-50-01

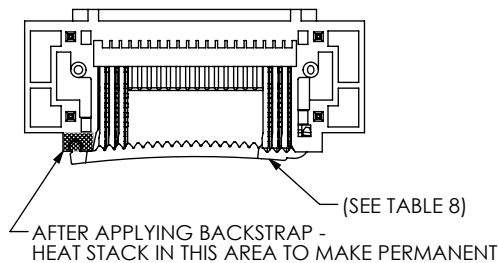


FIG 11
HEAT STAKING BACKSTRAP

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DESCRIPTION:
SEAF-RA ASSEMBLY
DWG. NO.
SEAF-XX-XX-X-XX-X-RA-XX-X-XR
BY: C. PIERCE 12/15/2007 SHEET 5 OF 5