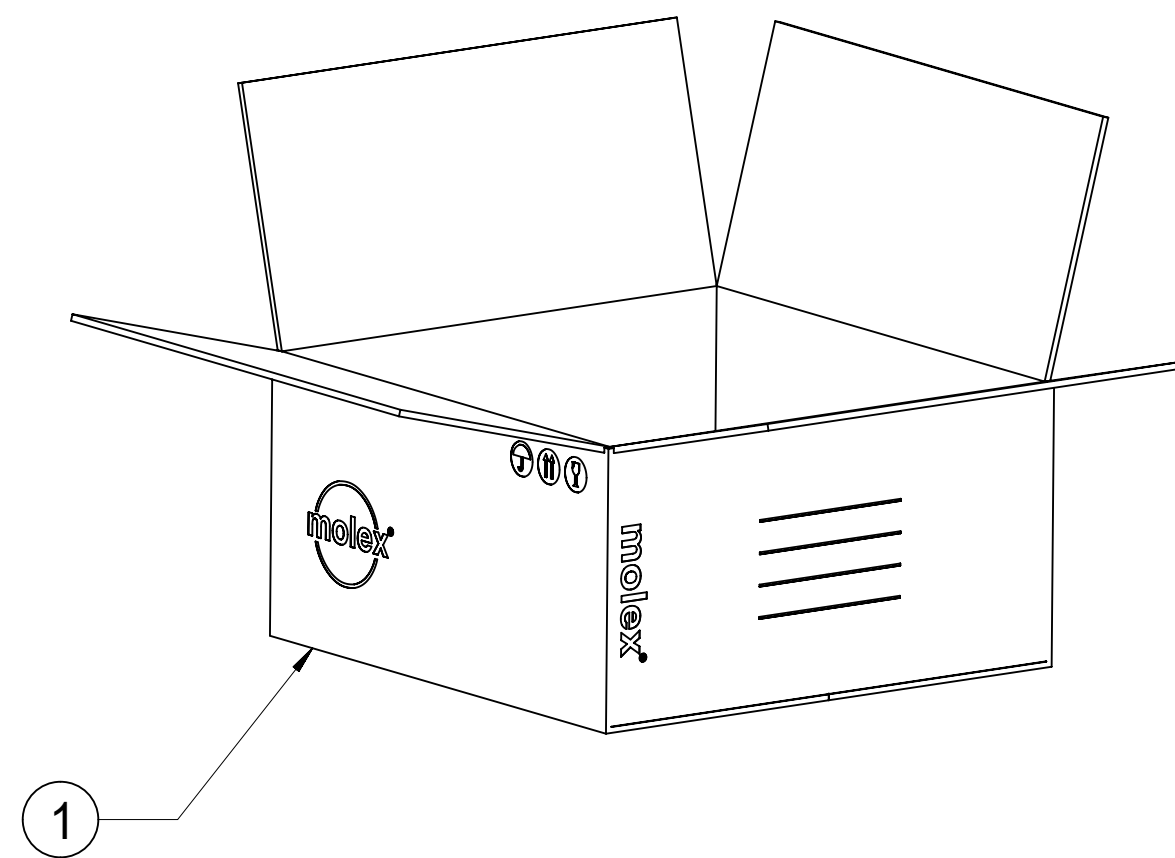
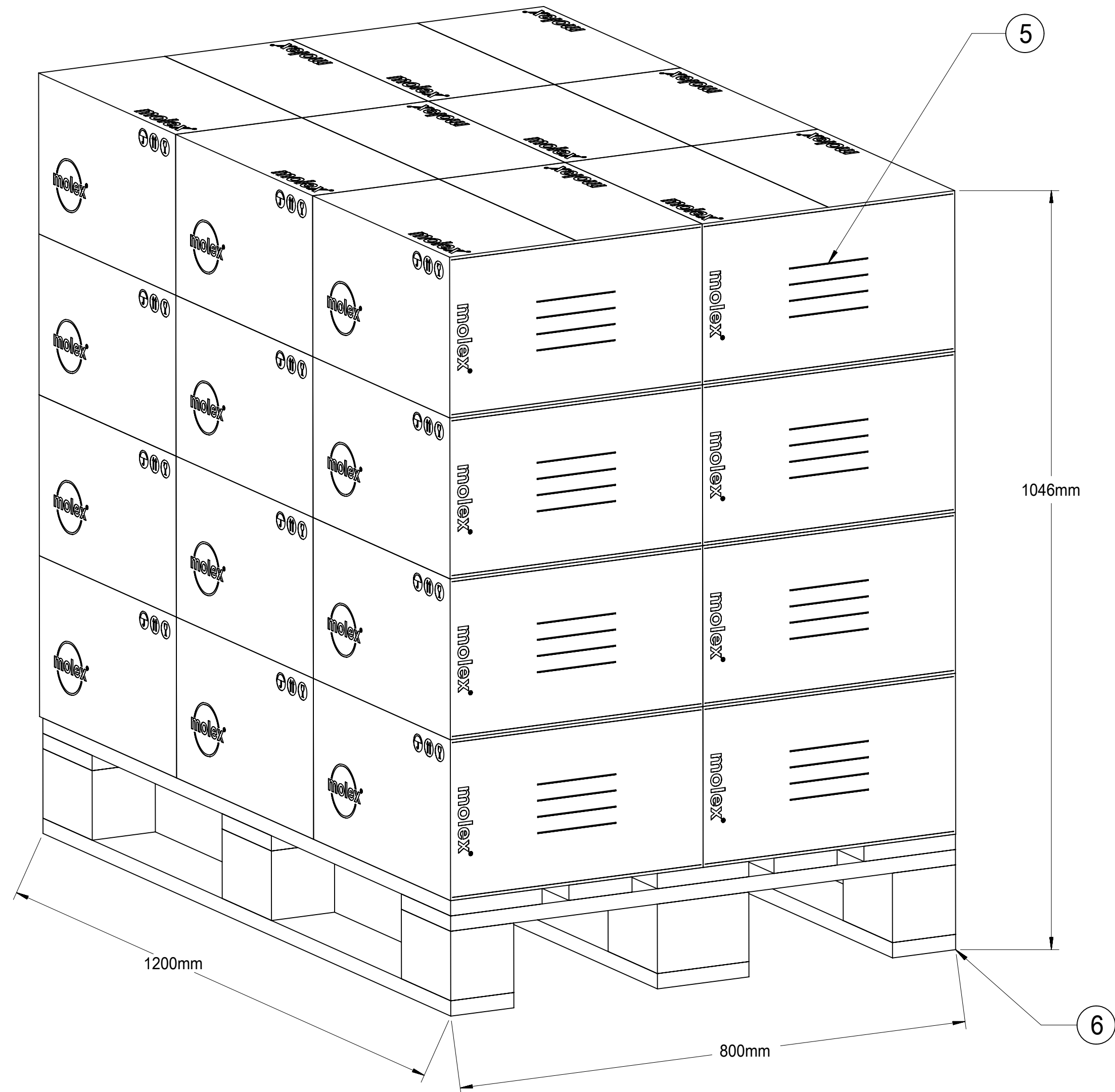
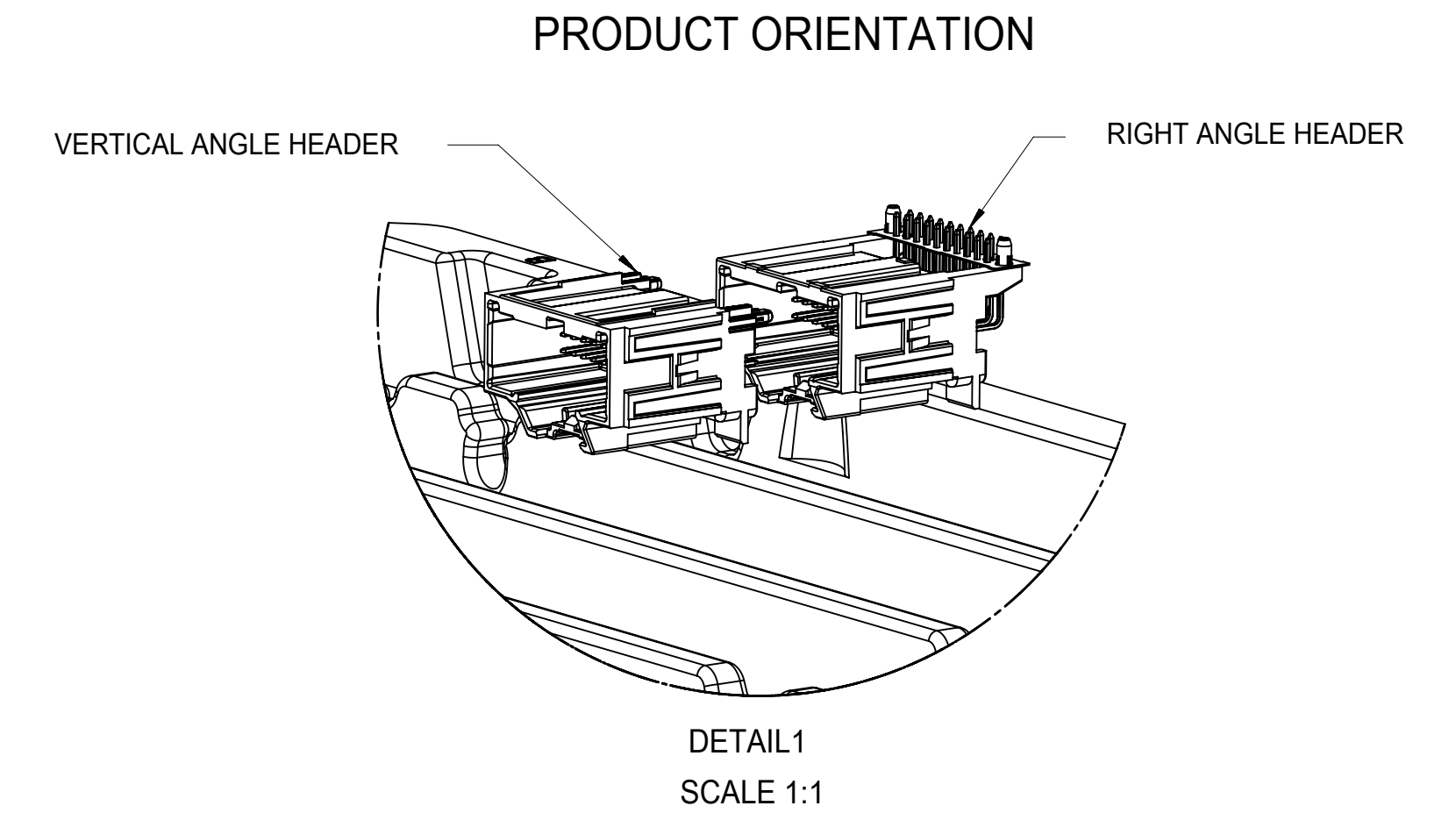
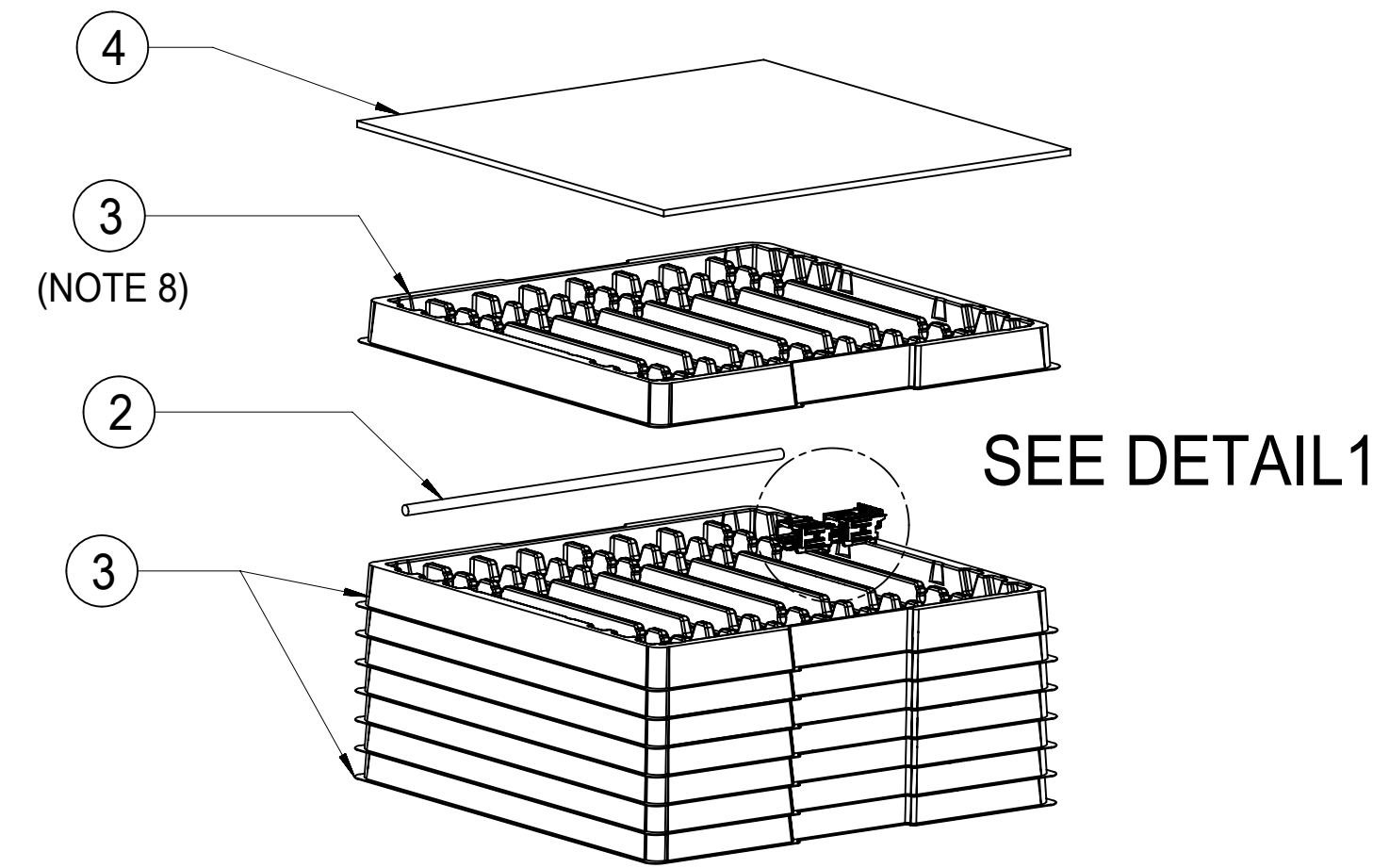


# Molex 34690-0201 PDF

深圳创唯电子有限公司

<http://www.molex-connect.com>

PACKAGING BILL OF MATERIAL				
ITEM NO.	MATERIAL NO.	DESCRIPTION	QTY/ PACK	QTY/ PALLET (MAX)
1	0967080015	SHIPPING CARTON	1	24
2	0313008990	CLOSURE PIN	A/R	A/R
3	0313008960	PLASTIC TRAY	8	192
4	0967200208	CORRUGATED PAD	1	24
5	--	ID LABEL	1	24
6	0982990038	PALLET	--	1



NOTES:

- 1) FOLD UP CARTON AND TAPE BOTTOM FLAPS CLOSED
  - 2) PACKAGE AS SHOWN AND PER CHARTS
  - 3) PACKAGE HEADERS INTO TRAY AS SHOWN IN DETAIL 1
  - 4) FILL TRAY WITH HEADERS PER QTY SHOWN IN PACKAGING DATA CHART BY MATERIAL NUMBER
  - 5) ASSEMBLE CLOSURE PIN TO TRAY IN THE INDICATED LOCATION PER THE PACKAGING DATA CHART BY MATERIAL NUMBER
  - 6) PLACE TRAY INTO CARTON
  - 7) REPEAT STEPS 3-6 FOR A TOTAL OF 7 FILLED TRAYS
  - 8) PLACE EMPTY TRAY ON TOP
  - 9) PLACE CORRUGATED PAD(S) ON TOP OF EMPTY TRAY TO FILL CARTON
  - 10) FOLD TOP CARTON FLAPS CLOSED AND TAPE
  - 11) APPLY ID LABEL TO CARTON AS REQUIRED
  - 12) WHEN QUANTITIES PERMIT, PLACE CARTONS ONTO PALLET
- MINIMUM NUMBER OF CARTON PER PALLET IS 6

QUALITY SYMBOLS ▽ = 0 ▽ = 0 ▽ = 0 ▽ = 0 ▽ = 0 ▽ = 0 ▽ = 0 ▽ = 0 ▽ = 0 ▽ = 0	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION									
	2019/02/22	2019/04/26	2019/04/27	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION UNITS	SCALE			
	DRWN BY	CHKD BY	APPR BY	ANGULAR TOL ± 1.0 °		mm	1:1			
	EC NO: 616217 DRWN: LLIU226 CHKD: BYANG05 REV APPR: DGHOPP	4 PLACES ±		JNORTHRO		DATE		PACKAGING ASSEMBLY STAC64 HEADERS VERTICAL AND RIGHT ANGLE  PACKAGING DESIGN DRAWING  SERIES: 31300 MATERIAL NUMBER: SEE TABLE CUSTOMER: GENERAL MARKET  DOCUMENT NUMBER: PK-31300-892 DOC TYPE: PDD DOC PART: 001 SHEET NUMBER: 1 OF 4		
		3 PLACES ±		P.PHELPS		DATE				
		2 PLACES ±		JNORTHRO		DATE				
		1 PLACE ±		JNORTHRO		DATE				
		0 PLACES ±		JNORTHRO		DATE				
	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		DRAWING SIZE	THIRD ANGLE PROJECTION						

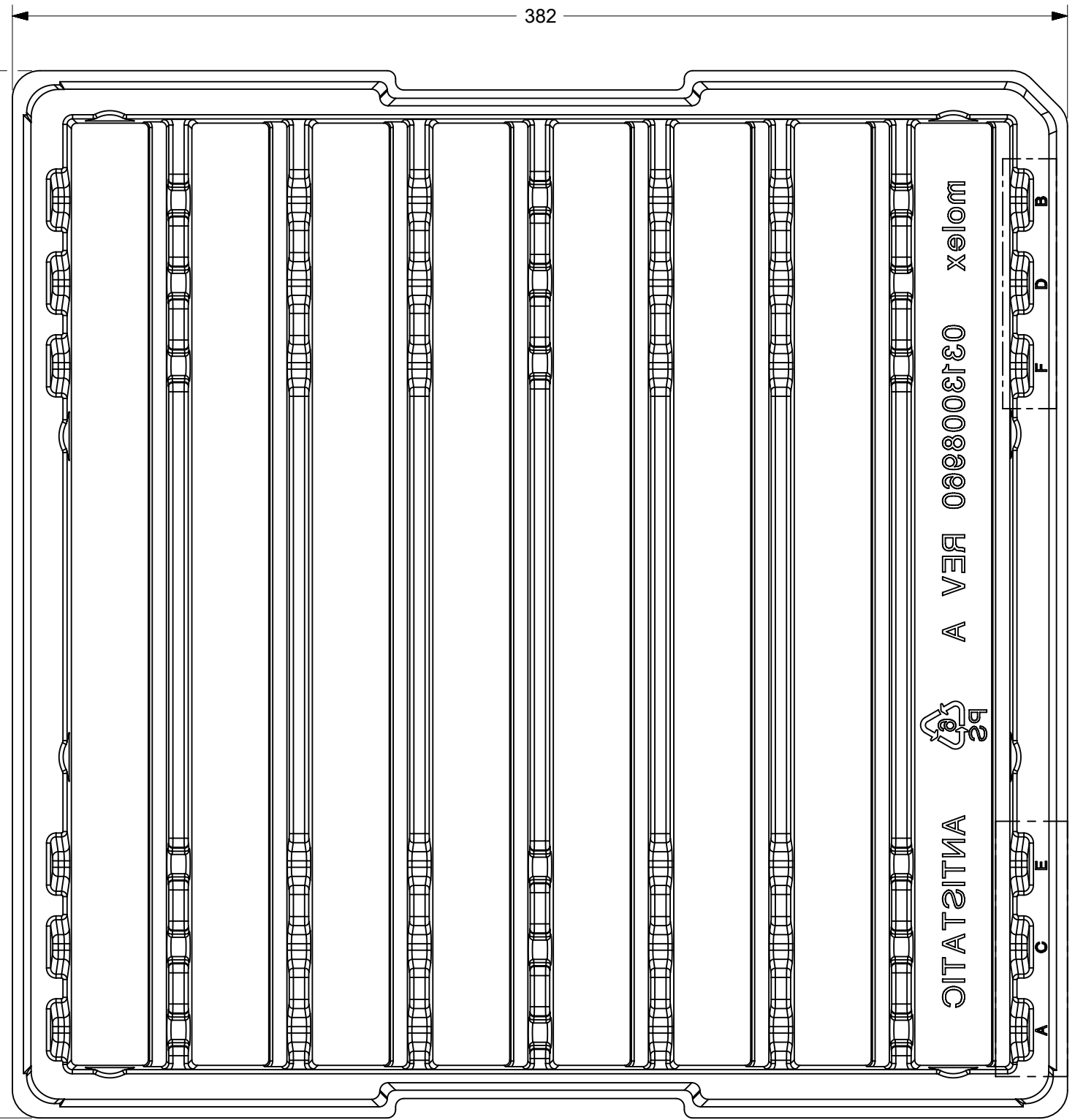
HEADER ASSEMBLY PACKAGING DATA BY MATERIAL NUMBER

MATERIAL NO.	ORIENTATION	DESCRIPTION	CIRCUITS	QTY/ TRAY	CLOSURE PIN LOCATION	QTY/ CARTON	QTY/ PALLET (MAX)
034690008*	VERTICAL	UNSEALED SINGLE BAY HEADER	8	144	NONE	1008	24192
034690012*	VERTICAL	UNSEALED SINGLE BAY HEADER	12	112	NONE	784	18816
034690016*	VERTICAL	UNSEALED SINGLE BAY HEADER	16	88	A	616	14784
034690020*	VERTICAL	UNSEALED SINGLE BAY HEADER	20	80	NONE	560	13440
034691008*	RIGHT ANGLE	UNSEALED SINGLE BAY HEADER	8	144	NONE	1008	24192
034691012*	RIGHT ANGLE	UNSEALED SINGLE BAY HEADER	12	112	NONE	784	18816
034691016*	RIGHT ANGLE	UNSEALED SINGLE BAY HEADER	16	88	A	616	14784
034691020*	RIGHT ANGLE	UNSEALED SINGLE BAY HEADER	20	80	NONE	560	13440
034695010*	VERTICAL	UNSEALED SINGLE BAY HEADER	10	80	NONE	560	13440
034696010*	RIGHT ANGLE	UNSEALED SINGLE BAY HEADER	10	80	NONE	560	13440
034696110*	RIGHT ANGLE	SINGLE BAY HEADER-NO PAP	10	80	NONE	560	13440
034773014*	RIGHT ANGLE	SINGLE BAY HYBRID HEADER	14	80	NONE	560	13440
034772014*	VERTICAL	SINGLE BAY HYBRID HEADER	14	80	NONE	560	13440
034691620*	RIGHT ANGLE	SINGLE BAY PAP HEADER	20	80	NONE	560	13440
034691616*	RIGHT ANGLE	SINGLE BAY PAP HEADER	16	88	A	616	14784
034691612*	RIGHT ANGLE	SINGLE BAY PAP HEADER	12	112	NONE	784	18816
034691608*	RIGHT ANGLE	SINGLE BAY PAP HEADER	8	144	NONE	1008	24192
034773114*	RIGHT ANGLE	SINGLE BAY HYBRID HEADER	14	80	NONE	560	13440
160120020*	RIGHT ANGLE	SINGLE BAY PAP HEADER	20	80	NONE	560	13440
160120016*	RIGHT ANGLE	SINGLE BAY PAP HEADER	16	88	A	616	14784
160120012*	RIGHT ANGLE	SINGLE BAY PAP HEADER	12	112	NONE	784	18816

HEADER ASSEMBLY PACKAGING DATA BY MATERIAL NUMBER

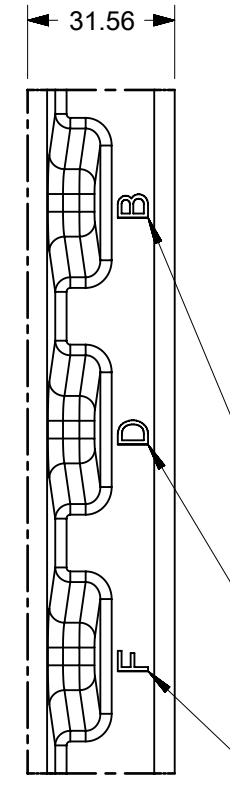
MATERIAL NO.	ORIENTATION	DESCRIPTION	CIRCUITS	QTY/ TRAY	CLOSURE PIN LOCATION	QTY/ CARTON	QTY/ PALLET (MAX)
0347082000	RIGHT ANGLE	2 BAY STACKED HEADER	20X20	40	NONE	280	6720
0347082001	RIGHT ANGLE	2 BAY STACKED HEADER	20x20	40	NONE	280	6720
0347082002	RIGHT ANGLE	2 BAY STACKED HEADER	20X20	40	NONE	280	6720
0347082003	RIGHT ANGLE	2 BAY STACKED HEADER	20X8	48	NONE	336	8064
0347082004	RIGHT ANGLE	2 BAY STACKED HEADER	20X12	48	NONE	336	8064
0347082005	RIGHT ANGLE	2 BAY STACKED HEADER	14X20	40	NONE	280	6720
0347082006	RIGHT ANGLE	2 BAY STACKED HEADER	16X20	40	A	280	6720
0347082007	RIGHT ANGLE	2 BAY STACKED HEADER	16X20	40	NONE	280	6720
0347082008	RIGHT ANGLE	2 BAY STACKED HEADER	20X20	40	NONE	280	6720
0347082009	RIGHT ANGLE	2 BAY STACKED HEADER	8X8	72	NONE	504	12096
0347082010	RIGHT ANGLE	2 BAY STACKED HEADER	12x10	48	NONE	336	8064
0347082011	RIGHT ANGLE	2 BAY STACKED HEADER	20X20	40	NONE	280	6720
0347082012	RIGHT ANGLE	2 BAY STACKED HEADER	10X20	40	NONE	280	6720
0347082013	RIGHT ANGLE	2 BAY STACKED HEADER	12X20	48	NONE	336	8064
0347082014	RIGHT ANGLE	2 BAY STACKED HEADER	14X20	40	NONE	280	6720
0347082015	RIGHT ANGLE	2 BAY STACKED HEADER	14X20	40	NONE	280	6720
0347082016	RIGHT ANGLE	2 BAY STACKED HEADER	12x20	48	NONE	336	8064
0347082017	RIGHT ANGLE	2 BAY STACKED HEADER	16X8	56	NONE	392	9408
0347082018	RIGHT ANGLE	2 BAY STACKED HEADER	12X16	48	A	336	8064
0347082019	RIGHT ANGLE	2 BAY STACKED HEADER	20X12	48	NONE	336	8064
0347082020	RIGHT ANGLE	2 BAY STACKED HEADER	10X16	40	A	280	6720
0347082021	RIGHT ANGLE	2 BAY STACKED HEADER	16X16	48	NONE	336	8064
0347082022	RIGHT ANGLE	2 BAY STACKED HEADER	20X10	40	NONE	280	6720
0347082023	RIGHT ANGLE	2 BAY STACKED HEADER	20X20	40	NONE	280	6720
0347082024	RIGHT ANGLE	2 BAY STACKED HEADER	8X10	48	A	336	8064
0347082025	RIGHT ANGLE	2 BAY STACKED HEADER	8X10	48	A	336	8064
0347082026	RIGHT ANGLE	2 BAY STACKED HEADER	16X20	40	B	280	6720
0347082027	RIGHT ANGLE	2 BAY STACKED HEADER	8X8	72	NONE	504	12096
0347082028	RIGHT ANGLE	2 BAY STACKED HEADER	16X8	56	NONE	392	9408
0347082029	RIGHT ANGLE	2 BAY STACKED HEADER	12X12	56	NONE	392	9408
0347082030	RIGHT ANGLE	2 BAY STACKED HEADER	10X10	40	NONE	280	6720
0347082040	RIGHT ANGLE	2 BAY STACKED HEADER	20X8	48	A	336	8064
0347082050	RIGHT ANGLE	2 BAY STACKED HEADER	20X16	40	NONE	280	6720
0347082060	RIGHT ANGLE	2 BAY STACKED HEADER	10X16	40	NONE	280	6720
0347082070	RIGHT ANGLE	2 BAY STACKED HEADER	16X12	48	A	336	8064
0347082080	RIGHT ANGLE	2 BAY STACKED HEADER	16X16	48	NONE	336	8064
0347082090	RIGHT ANGLE	2 BAY STACKED HEADER	16X16	48	NONE	336	8064
0347082031	RIGHT ANGLE	2 BAY STACKED HEADER	12X12	56	NONE	392	9408
0347082036	RIGHT ANGLE	2 BAY STACKED HEADER	16X8	56	NONE	392	9408
0347082045	RIGHT ANGLE	2 BAY STACKED HEADER	14X20	40	NONE	280	6720
0347082046	RIGHT ANGLE	2 BAY STACKED HEADER	14X20	40	NONE	280	6720

CLOSURE PIN LOCATION REFERENCE

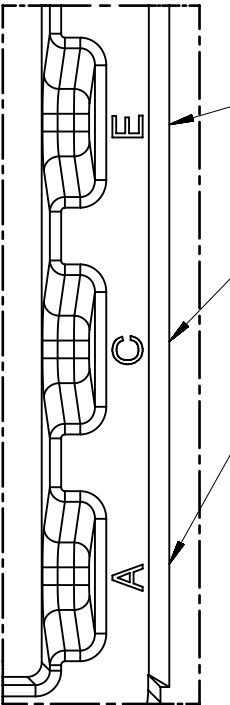


SEE DETAIL3

SEE DETAIL2



DETAIL3  
SCALE 1:1



DETAIL2  
SCALE 1:1

CLOSURE PIN POSITIONS

NOTE: CLOSURE PIN IS USED TO FILL IN EXCESSIVE VOID SPACE IN TRAY CHANNELS WHEN PARTS ARE LOADED

QUALITY SYMBOLS ◻ = 0 ◻ = 0 ◻ = 0 ◻ = 0 ◻ = 0 ◻ = 0 ◻ = 0 ◻ = 0 ◻ = 0 ◻ = 0 ◻ = 0 ◻ = 0	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		DIMENSION UNITS <b>mm</b>	SCALE <b>1:1</b>	
	GENERAL TOLERANCES (UNLESS SPECIFIED) ANGULAR TOL ± 1.0 ° 4 PLACES ± 3 PLACES ± 2 PLACES ± 1 PLACE ± 0 PLACES ±	DRWN BY: 2019/02/22 2019/04/26 2019/04/27	DATE: 2007/11/20	DRWN BY:	
EC NO: 616217 DRWN: LLJ026 CHKD: BYANG05 REV APPR: DCHOPP	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	APPR BY: JNORTHRO DATE: 2007/11/20	DRAWING SIZE: D	THIRD ANGLE PROJECTION	PACKAGING DESIGN DRAWING SERIES: 31300 MATERIAL NUMBER: SEE TABLE CUSTOMER: GENERAL MARKET
RELEASE STATUS: P1 RELEASE DATE: 2019/04/27 02:14:02	DOCUMENT NUMBER: PK-31300-892 DOC TYPE: PDD DOC PART: 001	SHEET NUMBER: 2 OF 4			

HEADER ASSEMBLY PACKAGING DATA BY MATERIAL NUMBER							
MATERIAL NO.	ORIENTATION	DESCRIPTION	CIRCUITS	QTY/ TRAY	CLOSURE PIN LOCATION	QTY/ CARTON	QTY/ PALLET (MAX)
0347072000	VERTICAL	2 BAY STACKED HEADER	20X20	40	NONE	280	6720
0347072001	VERTICAL	2 BAY STACKED HEADER	20X20	40	NONE	280	6720
0347072002	VERTICAL	2 BAY STACKED HEADER	20X20	40	NONE	280	6720
0347072004	VERTICAL	2 BAY STACKED HEADER	12X20	48	NONE	336	8064
0347072005	VERTICAL	2 BAY STACKED HEADER	12X10	48	NONE	336	8064
0347072006	VERTICAL	2 BAY STACKED HEADER	12X10	48	NONE	336	8064
0347072007	VERTICAL	2 BAY STACKED HEADER	10X20	40	NONE	280	6720
0347072012	VERTICAL	2 BAY STACKED HEADER	10X20	40	NONE	280	6720
0347072022	VERTICAL	2 BAY STACKED HEADER	20X10	40	NONE	280	6720
0347072023	VERTICAL	2 BAY STACKED HEADER	20X20	40	NONE	280	6720
0347072030	VERTICAL	2 BAY STACKED HEADER	10X10	40	NONE	280	6720
0347072040	VERTICAL	2 BAY STACKED HEADER	12X12	56	NONE	392	9408
0347072050	VERTICAL	2 BAY STACKED HEADER	20X16	40	A	280	6720
0347072060	VERTICAL	2 BAY STACKED HEADER	20X12	48	NONE	336	8064
0347072070	VERTICAL	2 BAY STACKED HEADER	16X8	56	NONE	392	9408
0347072080	VERTICAL	2 BAY STACKED HEADER	12X20	48	NONE	336	8064
0347072090	VERTICAL	2 BAY STACKED HEADER	16X16	48	NONE	336	8064
0347073010	VERTICAL	3 BAY STACKED HEADER	20X8X16	32	A	224	5376
0347073020	VERTICAL	3 BAY STACKED HEADER	16X8X20	32	A	224	5376
0347073021	VERTICAL	3 BAY STACKED HEADER	10X20X20	24	B	168	4032
0347073030	VERTICAL	3 BAY STACKED HEADER	12X20X20	24	D	168	4032
0347073040	VERTICAL	3 BAY STACKED HEADER	20X20X20	24	B	168	4032
0347073050	VERTICAL	3 BAY STACKED HEADER	16x16x16	32	NONE	224	5376
0347073060	VERTICAL	3 BAY STACKED HEADER	20X16X10	24	C	168	4032
0347073070	VERTICAL	3 BAY STACKED HEADER	10X10X10	24	B	168	4032
0347073090	VERTICAL	3 BAY STACKED HEADER	20X20X8	32	NONE	224	5376
0347074000	VERTICAL	4 BAY STACKED HEADER	20X20X20X20	16	D	112	2688
0347074010	VERTICAL	4 BAY STACKED HEADER	12X20X8X16	24	B	168	4032
0347073100	VERTICAL	3 BAY STACKED HEADER	14X20X20	24	B	168	4032
0347083006	RIGHT ANGLE	3 BAY STACKED HEADER	20X20X20	24	B	168	4032
0347083007	RIGHT ANGLE	3 BAY STACKED HEADER	20x12x20	24	D	168	4032

HEADER ASSEMBLY PACKAGING DATA BY MATERIAL NUMBER							
MATERIAL NO.	ORIENTATION	DESCRIPTION	CIRCUITS	QTY/ TRAY	CLOSURE PIN LOCATION	QTY/ CARTON	QTY/ PALLET (MAX)
0347083000	RIGHT ANGLE	3 BAY STACKED HEADER	16x16x8	32	B	224	5376
0347083001	RIGHT ANGLE	3 BAY STACKED HEADER	20x20x12	24	D	168	4032
0347083002	RIGHT ANGLE	3 BAY STACKED HEADER	20X20X14	24	B	168	4032
0347083003	RIGHT ANGLE	3 BAY STACKED HEADER	10x16x8	32	B	224	5376
0347083010	RIGHT ANGLE	3 BAY STACKED HEADER	20X20X16	24	C	168	4032
0347083020	RIGHT ANGLE	3 BAY STACKED HEADER	10X20X20	24	B	168	4032
0347083021	RIGHT ANGLE	3 BAY STACKED HEADER	10X20X20	24	B	168	4032
0347083022	RIGHT ANGLE	3 BAY STACKED HEADER	20X16X10	24	C	168	4032
0347083030	RIGHT ANGLE	3 BAY STACKED HEADER	16X12X10	32	NONE	224	5376
0347083040	RIGHT ANGLE	3 BAY STACKED HEADER	20X8X10	32	NONE	224	5376
0347083050	RIGHT ANGLE	3 BAY STACKED HEADER	10X16X16	24	D	168	4032
0347083060	RIGHT ANGLE	3 BAY STACKED HEADER	16X20X20	24	C	168	4032
0347083070	RIGHT ANGLE	3 BAY STACKED HEADER	20X20X10	24	B	168	4032
0347083080	RIGHT ANGLE	3 BAY STACKED HEADER	12X12X16	32	B	224	5376
0347083081	RIGHT ANGLE	3 BAY STACKED HEADER	20x12x20	24	D	168	4032
0347083082	RIGHT ANGLE	3 BAY STACKED HEADER	12X8x8	40	B	280	6720
0347083083	RIGHT ANGLE	3 BAY STACKED HEADER	8x16x16	32	B	224	5376
0347083084	RIGHT ANGLE	3 BAY STACKED HEADER	16x8x8	40	A	280	6720
0347083085	RIGHT ANGLE	3 BAY STACKED HEADER	20X20X20	24	B	168	4032
0347083086	RIGHT ANGLE	3 BAY STACKED HEADER	20X20x8	32	NONE	224	5376
0347083087	RIGHT ANGLE	3 BAY STACKED HEADER	20X16x8	32	A	224	5376
0347083088	RIGHT ANGLE	3 BAY STACKED HEADER	12X16X12	32	B	224	5376
0347083089	RIGHT ANGLE	3 BAY STACKED HEADER	16X16X20	24	D	168	4032
0347083090	RIGHT ANGLE	3 BAY STACKED HEADER	16X16X8	32	B	224	5376
0347083091	RIGHT ANGLE	3 BAY STACKED HEADER	20X12X16	32	NONE	224	5376
0347083092	RIGHT ANGLE	3 BAY STACKED HEADER	12X8X20	32	B	224	5376
0347083093	RIGHT ANGLE	3 BAY STACKED HEADER	16X16X8	32	B	224	5376
0347083094	RIGHT ANGLE	3 BAY STACKED HEADER	20X20x8	32	NONE	224	5376
0347083095	RIGHT ANGLE	3 BAY STACKED HEADER	20X16X12	32	NONE	224	5376
0347083096	RIGHT ANGLE	3 BAY STACKED HEADER	16X16X20	24	D	168	4032
0347083097	RIGHT ANGLE	3 BAY STACKED HEADER	16X12X20	32	NONE	224	5376
0347083098	RIGHT ANGLE	3 BAY STACKED HEADER	20X20X20	24	B	168	4032
0347083099	RIGHT ANGLE	3 BAY STACKED HEADER	10X20X10	24	B	168	4032
0347084000	RIGHT ANGLE	4 BAY STACKED HEADER	20X20X20X20	16	D	112	2688
0347084010	RIGHT ANGLE	4 BAY STACKED HEADER	12X12X16X8	24	D	168	4032
0347084011	RIGHT ANGLE	4 BAY STACKED HEADER	16x16x8x10	24	A	168	4032
0347084012	RIGHT ANGLE	4 BAY STACKED HEADER	8x20x12x12	24	C	168	4032
0347084013	RIGHT ANGLE	4 BAY STACKED HEADER	16x20x20x20	16	E	112	2688
0347084014	RIGHT ANGLE	4 BAY STACKED HEADER	8x20x20x10	16	F	112	2688
0347084015	RIGHT ANGLE	4 BAY STACKED HEADER	20x20x20x8	16	F	112	2688
0347084016	RIGHT ANGLE	4 BAY STACKED HEADER	20X20x20x12	16	F	112	2688
0347084017	RIGHT ANGLE	4 BAY STACKED HEADER	20X20X20X20	16	D	112	2688
0347084018	RIGHT ANGLE	4 BAY STACKED HEADER	20X20X20X16	16	E	112	2688
0347084020	RIGHT ANGLE	4 BAY STACKED HEADER	16X8X16X12	24	C	168	4032

<b>QUALITY SYMBOLS</b> 	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION	
	EC NO: 616217 DRWN: LLJ226 CHKD: BYANG05 REV APPR: DCHOPP	2019/02/22 2019/04/26 2019/04/27
	<b>GENERAL TOLERANCES (UNLESS SPECIFIED)</b> ANGULAR TOL ± 1.0 ° 4 PLACES ± 3 PLACES ± 2 PLACES ± 1 PLACE ± 0 PLACES ± DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	DIMENSION UNITS: mm SCALE: 1:1 DRWN BY: JNORTHRO DATE: 2007/11/20 CHKD BY: P.PHELPS DATE: 2007/11/20 APPR BY: JNORTHRO DATE: 2007/11/20 DRAWING SIZE: D THIRD ANGLE PROJECTION
<b>PACKAGING ASSEMBLY STAC64 HEADERS VERTICAL AND RIGHT ANGLE</b>		
<b>PACKAGING DESIGN DRAWING</b>		
SERIES: 31300	MATERIAL NUMBER: SEE TABLE	CUSTOMER: GENERAL MARKET
DOCUMENT NUMBER: PK-31300-892	DOC TYPE: PDD	DOC PART SHEET NUMBER: 001 3 OF 4

HEADER ASSEMBLY PACKAGING DATA BY MATERIAL NUMBER

MATERIAL NO.	ORIENTATION	DESCRIPTION	CIRCUITS	QTY/ TRAY	CLOSURE PIN LOCATION	QTY/ CARTON	QTY/ PALLET (MAX)
0347084030	RIGHT ANGLE	4 BAY STACKED HEADER	16X20X12X20	16	F	112	2688
0347084040	RIGHT ANGLE	4 BAY STACKED HEADER	20X12X20X12	16	F	112	2688
0347082043	RIGHT ANGLE	2-BAY STAC64 RIGHT ANGLE HEADER	20X20	40	NONE	280	6720
0347082044	RIGHT ANGLE	2-BAY STAC64 RIGHT ANGLE HEADER	10X10	40	NONE	280	6720
0347084050	RIGHT ANGLE	4 BAY STACKED HEADER	20X16X8X10	24	NONE	168	4032
0347084060	RIGHT ANGLE	4 BAY STACKED HEADER	20X20x20x12	16	F	112	2688
0347084070	RIGHT ANGLE	4 BAY STACKED HEADER	12x20x20x20	16	F	112	2688
0347084080	RIGHT ANGLE	4 BAY STACKED HEADER	20x8x20x12	24	A	168	4032
0347084090	RIGHT ANGLE	4 BAY STACKED HEADER	12x20x20x20	16	F	112	2688
0349972000	RIGHT ANGLE	2 BAY PAP LG PIN STK HRD	20X20	40	NONE	280	6720
0349972001	RIGHT ANGLE	2 BAY PAP LG PIN STK HRD	20X8	48	A	336	8064
0349972002	RIGHT ANGLE	2 BAY PAP LG PIN STK HRD	20X12	48	NONE	336	8064
0349972003	RIGHT ANGLE	2 BAY PAP LG PIN STK HRD	8x10	48	A	336	8064
0349972004	RIGHT ANGLE	2 BAY PAP LG PIN STK HRD	12x8	64	NONE	448	10752
0349972005	RIGHT ANGLE	2 BAY PAP LG PIN STK HRD	20X20	40	NONE	280	6720
0349972006	RIGHT ANGLE	2 BAY PAP LG PIN STK HRD	20X10	40	NONE	280	6720
0349972009	RIGHT ANGLE	2 BAY PAP LG PIN STK HRD	20X12	48	NONE	336	8064
0349972010	RIGHT ANGLE	2 BAY PAP LG PIN STK HRD	20X8	48	A	336	8064
0349972011	RIGHT ANGLE	2 BAY PAP LG PIN STK HRD	20X8	48	A	336	8064
0349972012	RIGHT ANGLE	2 BAY PAP LG PIN STK HRD	12X12	56	NONE	392	9408
0349972013	RIGHT ANGLE	2 BAY PAP LG PIN STK HRD	20X20	40	NONE	280	6720
0349972014	RIGHT ANGLE	2 BAY STACKED HEADER	10X10	40	NONE	280	6720
0349972019	RIGHT ANGLE	2 BAY PAP LG PIN STK HRD	12X20	48	NONE	336	8064
0349973000	RIGHT ANGLE	3 BAY PAP LG PIN STK HRD	16X16X8	32	B	224	5376
0349973001	RIGHT ANGLE	3 BAY PAP LG PIN STK HRD	12X12X16	32	B	224	5376
0349973002	RIGHT ANGLE	3 BAY PAP LG PIN STK HRD	16X12X20	32	NONE	224	5376
0349973003	RIGHT ANGLE	3 BAY PAP LG PIN STK HRD	16X20X12	32	NONE	224	5376
0349973005	RIGHT ANGLE	3 BAY PAP LG PIN STK HRD	16X20X12	32	NONE	224	5376
0349973007	RIGHT ANGLE	3 BAY PAP LG PIN STK HRD	20X20X20	24	B	168	4032
0349973009	RIGHT ANGLE	3 BAY PAP LG PIN STK HRD	20X20X20	24	B	168	4032
0349973010	RIGHT ANGLE	3 BAY PAP LG PIN STK HRD	12X16X20	32	NONE	224	5376
0349973012	RIGHT ANGLE	3 BAY STACKED HEADER	20X20X8	32	NONE	224	5376
0349973013	RIGHT ANGLE	3 BAY PAP LG PIN STK HRD	20X20X20	24	B	168	4032
0349974000	RIGHT ANGLE	4 BAY PAP LG PIN STK HRD	16X16X8X10	24	A	168	4032
0349974004	RIGHT ANGLE	4 BAY PAP LG PIN STK HRD	12X12X16X16	24	B	168	4032
0349375000	RIGHT ANGLE	3 BAY PAP LG PIN STK HRD	16X16X8	32	B	224	5376
346903204	VERTICAL	STAC64 20CKT DELETE CAP POL A	20	80	NONE	560	13440
346903205	VERTICAL	STAC64 20CKT DELETE CAP POL B	20	80	NONE	560	13440
346903206	VERTICAL	STAC64 20CKT DELETE CAP POL C	20	80	NONE	560	13440
346903207	VERTICAL	STAC64 20CKT DELETE CAP POL D	20	80	NONE	560	13440
346903126	VERTICAL	STAC64 12CKT DELETE CAP POL A	12	112	NONE	784	18816
346903127	VERTICAL	STAC64 12CKT DELETE CAP POL B	12	112	NONE	784	18816
346903128	VERTICAL	STAC64 12CKT DELETE CAP POL C	12	112	NONE	784	18816
346903084	VERTICAL	STAC64 8CKT DELETE CAP POL A	8	144	NONE	1008	24192
346903085	VERTICAL	STAC64 8CKT DELETE CAP POL B	8	144	NONE	1008	24192
346903086	VERTICAL	STAC64 8CKT DELETE CAP POL C	8	144	NONE	1008	24192

<b>QUALITY SYMBOLS</b> 	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION									
	2019/02/22	2019/04/26	2019/04/27	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION UNITS	SCALE			
	DRWN: LLIJ226	CHKD: BYANG05	REV: DCHOPP	ANGULAR TOL ± 1.0 °		mm	1:1			
	EC NO: 616217			4 PLACES ±		JNORTHRO	2007/11/20	PACKAGING ASSEMBLY STAC64 HEADERS VERTICAL AND RIGHT ANGLE		
	DRWN: LLIJ226			3 PLACES ±		CHKD BY	DATE			
	CHKD: BYANG05			2 PLACES ±		P.PHELPS	2007/11/20	PACKAGING DESIGN DRAWING		
	REV: DCHOPP			1 PLACE ±		APPR BY	DATE			
				0 PLACES ±		JNORTHRO	2007/11/20	SERIES: 31300 MATERIAL NUMBER: SEE TABLE CUSTOMER: GENERAL MARKET		
				DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		DRAWING SIZE	THIRD ANGLE PROJECTION			
						D		DOCUMENT NUMBER: PK-31300-892 DOC TYPE: PDD DOC PART: 001 SHEET NUMBER: 4 OF 4		



# PRODUCT SPECIFICATION

## 1.0 SCOPE

This product specification covers the 2.54 mm (0.100 inch) centerline (pitch) dual row STAC64 unsealed wire to board connection system terminated with 22 to 20 AWG wire using crimp technology.

## 2.0 PRODUCT DESCRIPTION

### 2.1 PRODUCT NAME AND SERIES NUMBERS

Product Name	Series
20 Way Right Angle Header Assembly	34691
16 Way Right Angle Header Assembly	34691
12 Way Right Angle Header Assembly	34691
8 Way Right Angle Header Assembly	34691
NextGEN 20 Way Right Angle Header Assembly	160120
NextGEN 16 Way Right Angle Header Assembly	160120
NextGEN 12 Way Right Angle Header Assembly	160120
NextGEN 8 Way Right Angle Header Assembly	160120
20 Way Vertical Header Assembly	34690
16 Way Vertical Header Assembly	34690
12 Way Vertical Header Assembly	34690
8 Way Vertical Header Assembly	34690
Vertical Header Stacked Assemblies	34707
Right Angle Header Stacked Assemblies	34708
NextGEN Right Angle Header Stacked Assemblies	160136
20 Way Receptacle Connector Assembly	34729
16 Way Receptacle Connector Assembly	34729
12 Way Receptacle Connector Assembly	34729
8 Way Receptacle Connector Assembly	34729

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DOCUMENT NUMBER: <b>PS-34729-020</b>	CREATED / REVISED BY: <b>JAROD FISCHER</b>	CHECKED BY: <b>TREVOR MACHUGA</b>	APPROVED BY: <b>RON BAUMAN</b>



# PRODUCT SPECIFICATION

## 2.2 ASSOCIATED TERMINALS

Product Description	Vendor Part Number
Molex CTX Large Grip CTX Female Receptacle Terminal (20ga)	34803-3212
Molex CTX Small Grip Female Receptacle Terminal (22ga)	34803-3211

## 2.2 DIMENSIONS, MATERIALS, PLATINGS AND MARKINGS

Harness Housings: 30% glass fiber polyester  
 TPAs: 30% glass fiber polyester  
 Header Housing: 30% glass fiber SPS  
 Pins: Copper alloy C26000  
 Tin Plating: Overall Tin with Nickel under-plate

## 2.3 SAFETY AGENCY APPROVALS

UL File Number	Not Applicable
CSA File Number	Not Applicable
TUV License number	Not Applicable

## 3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

Description	Document Number
8,12,16, & 20 way right angle sales drawing (charted)	SD-34691-100
8,12,16,& 20 way vertical sales drawing (charted)	SD-34690-100
8-20 way harness sales drawing (charted)	CU5T-14489-DA
Female 'CTX' Terminal Molex Sales Drawing (charted)	SD-502306-001
Tray packaging specification	PK-31300-892
Tube packaging specification	PK-31301-063
Carton packaging specification	PK-31301-201
Application specification	AS-34729-020

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# PRODUCT SPECIFICATION

## 4.0 RATINGS

### 4.1 VOLTAGE

500 VDC MAXIMUM; Per GMW3191, All measured isolation resistances shall be >100MΩ  
 14 VDC MAXIMUM; Per NDS24012, An initial leak current of ≤ 10μA and a post endurance leak current of ≤ 1mA.

### 4.2 CURRENT AND APPLICABLE WIRES

Current is dependent on connector size, ambient temperature, blade size and related factors. Actual maximum current rating is application dependent and should be evaluated for each use.

The current listed below is expected to cause a 40°C average temperature rise in a fully populated 20 circuit connection system per RSA 36-05-019 Rev. G requirement.

AWG	Amperes	Wire range Insulation Diameter
20	6.1	1.40 - 1.90 mm (0.055 - 0.075 inch)
22	5.8	1.50 - 1.65 mm (0.059 - 0.065 inch)

### 4.3 TEMPERATURE

Operating: - 40 C° to + 105 C°  
 Non-operating: - 40 C° to + 105 C°

## 5.0 PERFORMANCE

### 5.1 ELECTRICAL PERFORMANCE

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
1	<b>Contact Resistance (Low Level)</b>	Mate connectors: limiting the open circuit voltage of <b>20 mV</b> and a maximum current of <b>100 mA</b> .	<b>6 milliohms MAXIMUM</b>
2	<b>Contact Resistance @ Rated Current (Voltage Drop)</b>	Mate connectors: apply a <b>5 ampere/ 1.0 mm<sup>2</sup></b> current	<b>10 milliohms MAXIMUM</b>
3	<b>Isolation Resistance</b>	Apply a voltage of <b>500 VDC</b> between adjacent terminals and between terminals to ground.	<b>100 Meg ohms MINIMUM</b>
4	<b>Temperature Rise (via Current Cycling)</b>	Mate terminals: measure the temperature rise at the rated current after: <b>1008</b> hours of bench top testing ( <b>45 minutes ON</b> and <b>15 minutes OFF</b> per hour)	Temperature rise over Ambient: <b>+40 C° MAXIMUM</b>

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# PRODUCT SPECIFICATION

5	<b>Dielectric Strength</b>	Apply an AC rms voltage of 1000V at 60 Hz across each adjacent cavity and between the terminals to ground	No dielectric breakdown or flash-over shall occur between cavities or between the cavities and the outside of a connector at any time during the test.
6	<b>Connector Current Capability (Electrical)</b>	<p>Mate connectors per durability; Expose to <b>504</b> cycles of 45 minutes ON and 15 minutes OFF at 6.1 amps (20awg) and 5.8 amps (22awg) for 105°C.</p> <p>Perform <b>Contact Resistance @ Rated Current (Voltage Drop)</b></p> <p>Expose to a second set of <b>504</b> cycles of 45 minutes ON and 15 minutes OFF at 6.1 amps (20awg) and 5.8 amps (22awg) for 105°C.</p> <p>Record <b>Contact Resistance (Low Level)</b> at least once a day, at the 30<sup>th</sup>. Minute of the ON cycle</p> <p>Perform <b>Contact Resistance @ Rated Current (Voltage Drop)</b></p>	<p><b>First 504 Cycles:</b> The temperature measured on each connection shall not exceed 105°C</p> <p><b>Voltage Drop</b> 20 milliohms MAXIMUM</p> <p><b>Second 504 Cycles:</b> The value shall not exceed a Delta Temperature of 70°C</p> <p><b>Dry Circuit Resistance</b> 10 milliohms MAXIMUM</p> <p><b>Voltage Drop</b> 20 milliohms MAXIMUM</p>
7	<b>Connector Current Capability (Mechanical)</b>	<p>Subject connectors to <b>Connector Current Capability (Electrical)</b>.</p> <p>Perform <b>Terminal Retention Force (in Housing)</b> for 20awg and 22awg</p>	<p>TPA in Final-Lock <b>80 Newtons</b> MINIMUM</p> <p>22awg wire breakage can occur at less than 80N*</p>
8	<b>Connector - Connector Leak Current</b>	<p>A pair of mated connectors shall be left in a Humidity Chamber for <b>1 hour at 60 ± 5 °C and 90 - 95 %RH</b>. During the humidity exposure, power adjacent terminals to <b>14 VDC</b>. Measure Initial Leak Current after 1 hour while still in chamber.</p> <p>After humidity exposure, power adjacent terminals to <b>14 VDC</b> and measure post endurance leak current</p>	<p><b>Initial Leak Current</b> Less than 10µA</p> <p><b>Post Endurance Leak Current</b> Less than 1mA</p>

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<b>9</b>	<b>Connector - Connector Overcurrent Loading</b>	Pass the following current for the specified time below through only one circuit that is arbitrarily selected: (20awg)		Housing shall not start burning
		<u>Current (Amps)</u>	<u>Time</u>	
		<b>16.5</b>	<b>60 Minutes</b>	
		<b>20.2</b>	<b>200 Seconds</b>	
		<b>22.5</b>	<b>5 Seconds</b>	
<b>30</b>	<b>1 Second</b>			

## 5.2 MECHANICAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
<b>1</b>	<b>Connector Mate/ Unmate Forces</b>	Mate and Unmate connector (male to female) at a rate of <b>50 ± 6 mm (2 ± ¼ inch)</b> per minute.	Mate <b>75 Newtons MAXIMUM</b>
			Unmate w/o latch <b>75 Newtons MAXIMUM</b>
			Unmate w/latch <b>120 Newtons MINIMUM</b>
<b>2</b>	<b>Terminal Retention Force (in Housing)</b>	Axial pullout force on the terminal in the housing at a rate of <b>50 ± 6 mm (2 ± ¼ inch)</b> per minute.	TPA in Pre-Lock <b>60 Newtons MINIMUM</b>
			TPA in Final-Lock <b>80 Newtons MINIMUM</b>
<b>3</b>	<b>Terminal Insertion Force (into Housing)</b>	Apply an axial insertion force on the terminal at a rate of <b>50 ± 6 mm (2 ± ¼ inch)</b> per minute.	<b>6 Newtons MAXIMUM</b>
<b>4</b>	<b>Connector Audible Feedback</b>	The connector lock must provide audible feedback during connector mating at a rate of <b>50 ± 6 mm (2 ± ¼ inch)</b> per minute.	<b>7dB over Ambient (C scale)</b>
<b>5</b>	<b>Polarization Feature Effectiveness</b>	Connector must be polarized to prevent mating with similar connectors - <b>0° Misorientation for all possible header and receptacle configurations</b>	<b>120 Newtons MINIMUM</b>
			<u><b>110 Newton Minimum</b></u> 12 Ckt: Pol C to Pol A
<b>6</b>	<b>Terminal Position Assurance (TPA) Insertion Force (into housing)</b>	The TPA is designed to resist seating during shipment and must be actuated by the operator in order to fully seat.  The force to either insert the TPA from the preload (as shipped) position to the final position or extract the TPA from final to preload at a rate of <b>50 ± 6 mm (2 ± ¼ inch)</b> per minute.	<b>TPA Insertion w/o terminals: 180 Newtons MINIMUM</b>
			<b>TPA Insertion with terminals: 20 Newtons MAXIMUM</b>
			<b>TPA Extraction – 1<sup>st</sup> Cycle: 15 Newtons MAXIMUM</b>
			<b>TPA Extraction – 2<sup>nd</sup> Cycle: 20 Newtons MINIMUM</b>

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7	<b>Terminal Position Assurance (TPA) Extraction Force (in housing)</b>	The force to completely extract the TPA from preload (as shipped) position at a rate of <b>50 ± 6 mm (2 ± ¼ inch)</b> per minute.	<b>50 Newtons MINIMUM</b>
8	<b>Header Pin Retention Force (in Vertical &amp; Right Angle Housing)</b>	Axial pushout force on the terminal in the housing at a rate of <b>50 ± 6 mm (2 ± ¼ inch)</b> per minute.	<b>15 Newtons MINIMUM</b>
9	<b>Insertion / Removal Feeling</b>	Insert and remove the terminal or the connector, while checking the correctness of the insertion/removal feeling	Connector shall be free of detrimental cracking, rust, play, flaw, deformation, and other defects. Terminal shall be free of catching and / or other abnormality.
10	<b>Force-to-Seat Header to PCB (No Solder)</b>	The force to completely seat the Header to the PCB traveling a distance of 1.3mm	<b>100 N Max</b>
11	<b>Force-to-Remove Header from PCB (No Solder)</b>	The force to completely remove the Header from the PCB without solder	<b>10 N Min</b>
12	<b>Pry Resistance</b>	A pair of connectors shall have one of them secured and the other inserted. Under these conditions, they shall be pried axially, rectangularity, front and rear and right and left around the top with a force of 78 N After prying the connectors to two stages of fitting, pull them out. This is one cycle.  Subject connectors to 10 cycles and Perform <b>Contact Resistance @ Rated Current (Voltage Drop)</b> and <b>Connector Mate/Unmate Forces</b> (with latch only)	While being tested, the connectors shall not have any problem in being made electrically alive  <b>Voltage Drop</b> <b>10 milliohms MAXIMUM</b>  Mate <b>78 Newtons MAXIMUM</b>  Unmate w/latch <b>110 Newtons MINIMUM</b>
13	<b>Pry Resistance II</b>	Pull the female connector wire at a 45° angle in the direction which minimizes the male and female terminal contact at a speed of 5mm/min to 100N. Then decrease the pulling load at the same speed to 0N (No Force)	There shall be no interruptions in the waveform
14	<b>Connector Drop Test</b>	<b>System Assembly (Mated &amp; Fully populated)</b> – Subject the assembly to a fall of 1 meter on each face, except for electrical wire side, onto a concrete floor	No damage or incipient rupture shall be observed.

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		<b>Connector Assembly (Unmated &amp; Fully Populated)</b> - Subject the assembly to a fall of 1 meter on each face, except for electrical wire side, onto a concrete floor	No damage or incipient rupture shall be observed.
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## 5.3 ENVIROMENTAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT						
1	<b>Durability</b>	Mate connectors up to <b>10</b> cycles prior to environmental tests.	<b>20</b> milliohms MAXIMUM						
2	<b>Thermal Shock (Electrical)</b>	Mate connectors per durability; expose to <b>600</b> cycles of: <table border="0"> <tr> <td><u>Temperature C°</u></td> <td><u>Duration (Minutes)</u></td> </tr> <tr> <td><b>-40 +0/-3</b></td> <td><b>30</b></td> </tr> <tr> <td><b>+105 +3/-0</b></td> <td><b>30</b></td> </tr> </table> Perform <b>Contact Resistance (Low Level)</b>	<u>Temperature C°</u>	<u>Duration (Minutes)</u>	<b>-40 +0/-3</b>	<b>30</b>	<b>+105 +3/-0</b>	<b>30</b>	<b>Dry Circuit Resistance</b> <b>10</b> milliohms MAXIMUM & Discontinuity < <b>1</b> microsecond
<u>Temperature C°</u>	<u>Duration (Minutes)</u>								
<b>-40 +0/-3</b>	<b>30</b>								
<b>+105 +3/-0</b>	<b>30</b>								
3	<b>Thermal Shock (Physical)</b>	Mate connectors per durability; expose to <b>300</b> cycles of: <table border="0"> <tr> <td><u>Temperature C°</u></td> <td><u>Duration (Minutes)</u></td> </tr> <tr> <td><b>-40 +0/-3</b></td> <td><b>30</b></td> </tr> <tr> <td><b>+105 +3/-0</b></td> <td><b>30</b></td> </tr> </table> Apply a voltage of <b>500</b> VDC per Isolation Resistance	<u>Temperature C°</u>	<u>Duration (Minutes)</u>	<b>-40 +0/-3</b>	<b>30</b>	<b>+105 +3/-0</b>	<b>30</b>	<b>100</b> Meg ohms MINIMUM
		<u>Temperature C°</u>	<u>Duration (Minutes)</u>						
<b>-40 +0/-3</b>	<b>30</b>								
<b>+105 +3/-0</b>	<b>30</b>								
		Apply an AC rms voltage of 1000V at 60 Hz per Dielectric Strength	No dielectric breakdown or flash-over shall occur between cavities or between the cavities and the outside of a connector at any time during the test.						
4	<b>Thermal Shock (Mechanical)</b>	Mate connectors per durability; expose to <b>1000</b> cycles of: <table border="0"> <tr> <td><u>Temperature C°</u></td> <td><u>Duration (Minutes)</u></td> </tr> <tr> <td><b>-40 +0/-3</b></td> <td><b>30</b></td> </tr> <tr> <td><b>+105 +3/-0</b></td> <td><b>30</b></td> </tr> </table> Unmate connector per Connector Mate/Unmate Forces	<u>Temperature C°</u>	<u>Duration (Minutes)</u>	<b>-40 +0/-3</b>	<b>30</b>	<b>+105 +3/-0</b>	<b>30</b>	Unmate w/latch <b>85</b> Newtons MINIMUM
<u>Temperature C°</u>	<u>Duration (Minutes)</u>								
<b>-40 +0/-3</b>	<b>30</b>								
<b>+105 +3/-0</b>	<b>30</b>								

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# PRODUCT SPECIFICATION

		<p>Mate connectors per durability; expose to <b>1000</b> cycles of:</p> <table border="1"> <thead> <tr> <th>Temperature C°</th> <th>Duration (Minutes)</th> </tr> </thead> <tbody> <tr> <td>-40 +0/-3</td> <td>30</td> </tr> <tr> <td>+105 +3/-0</td> <td>30</td> </tr> </tbody> </table> <p>Extract terminal from housing per Terminal Retention Force (in Housing)</p>	Temperature C°	Duration (Minutes)	-40 +0/-3	30	+105 +3/-0	30	<p>TPA in Final-Lock <b>85 Newtons MINIMUM</b></p>
Temperature C°	Duration (Minutes)								
-40 +0/-3	30								
+105 +3/-0	30								
5	<p><b>Random Vibration / Mechanical Shock (Not Coupled to Engine - Electrical)</b></p>	<p>Mate connectors per durability. Perform <b>Contact Resistance (Low Level)</b></p> <p>Connector assembly shall be subject to the following vibration profile:</p> <p><b>Mechanical Shock:</b> Acceleration: 25 Gs Nominal Shock Duration: 15ms Nominal Shock Shape: Half Sine Number of shocks per axis: 792</p> <p><b>Random Vibration with Thermal Cycling</b> Temperature Range: -40/+105°C Test Duration: 24h for each X,Y,Z axis of the parts RMS Acceleration = <b>20.9m/s^2</b></p> <p>Perform <b>Contact Resistance (Low Level)</b></p> <p>Perform <b>Contact Resistance @ Rated Current (Voltage Drop)</b></p>	<p><b>Dry Circuit Resistance</b> <b>6 milliohms MAXIMUM</b></p> <p>No instantaneous disconnection of 7 Ω or more for 1 μs Max</p> <p>No instantaneous disconnection of 7 Ω or more for 1 μs Max</p> <p><b>Dry Circuit Resistance</b> <b>15 milliohms MAXIMUM</b> <b>Voltage Drop</b> <b>15 milliohms MAXIMUM</b></p>						
6	<p><b>Random Vibration with Thermal Cycling / Mechanical Shock (Not Coupled to Engine - Electrical)</b></p>	<p>Mate connectors per durability. Perform <b>Contact Resistance (Low Level)</b></p> <p>Condition parts for 48h at the maximum temperature of 4h@-40 and 6.5h@105°C.</p> <p>Subject connectors to 16h vibration per axis in all 3 axes. Perform <b>Contact Resistance (Low Level)</b> Maintain for 12h at 85°C and 75% humidity</p> <p>Perform <b>Contact Resistance (Low Level)</b></p> <p>Perform <b>Contact Resistance @ Rated Current (Voltage Drop)</b></p>	<p><b>Dry Circuit Resistance</b> <b>6 milliohms MAXIMUM</b></p> <p><b>Delta Dry Circuit Resistance</b> <b>5 milliohms MAXIMUM</b></p> <p><b>Delta Final Dry Circuit Resistance</b> <b>7 milliohms MAXIMUM</b> <b>Voltage Drop</b> <b>10 milliohms MAXIMUM</b></p>						

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# PRODUCT SPECIFICATION

		Perform Unmate portion only of <b>Connector Mate/Unmate Forces</b>	Unmate w/latch <b>100 Newtons MINIMUM</b>
7	<b>Temperature/ Humidity Cycling (Electrical)</b>	Mate connectors per durability. Subject connector system to <b>10</b> cycles of: <b>60% RH 4 hours @ 23 C°; 97% RH 10 hours @ 55 C°, 2 hour @ -40 C°; 2 hours @ 105 C°</b> Perform <b>Contact Resistance (Low Level)</b> Perform <b>Contact Resistance @ Rated Current (Voltage Drop)</b>	<b>Dry Circuit Resistance</b> <b>10 milliohms MAXIMUM</b> <b>Voltage Drop</b> <b>10 milliohms MAXIMUM</b>
8	<b>Temperature/ Humidity Cycling (Physical)</b>	Mate connectors per durability. Subject connector system to <b>10</b> cycles of: <b>60% RH 4 hours @ 23 C°; 97% RH 10 hours @ 55 C°, 2 hour @ -40 C°; 2 hours @ 105 C°</b> Apply a voltage of <b>500 VDC</b> per Isolation Resistance	<b>100 Meg ohms MINIMUM</b>
		Apply an AC rms voltage of 1000V at 60 Hz per Dielectric Strength	No dielectric breakdown or flash-over shall occur between cavities or between the cavities and the outside of a connector at any time during the test.
9	<b>Temperature/ Humidity Cycling (Mechanical)</b>	Mate connectors per durability. Subject connector system to <b>10</b> cycles of: <b>60% RH 4 hours @ 23 C°; 97% RH 10 hours @ 55 C°, 2 hour @ -40 C°; 2 hours @ 105 C°</b> Unmate connector per Connector Mate/Unmate Forces	Unmate w/latch <b>85 Newtons MINIMUM</b>
		Mate connectors per durability. Subject connector system to <b>10</b> cycles of: <b>60% RH 4 hours @ 23 C°; 97% RH 10 hours @ 55 C°, 2 hour @ -40 C°; 2 hours @ 105 C°</b> Extract terminal from housing per Terminal Retention Force (in Housing)	TPA in Final-Lock <b>85 Newtons MINIMUM</b>
10	<b>High Temperature Exposure (Electrical)</b>	Mate connectors per durability. Subject connector system to <b>105 C°</b> for <b>1008</b> hours. Perform <b>Contact Resistance (Low Level)</b> Perform <b>Contact Resistance @ Rated Current (Voltage Drop)</b>	<b>Dry Circuit Resistance</b> <b>10 milliohms MAXIMUM</b> <b>Voltage Drop</b> <b>10 milliohms MAXIMUM</b>
11	<b>High Temperature Exposure (Physical)</b>	Mate connectors per durability. Subject connector system to <b>105 C°</b> for <b>1008</b> hours. Apply a voltage of <b>500 VDC</b> per Isolation Resistance post 1008 hours	<b>100 Meg ohms MINIMUM</b>

REVISION:	ECR/ECN INFORMATION:	TITLE:	SHEET No.
<b>D1</b>	EC No: <b>UAU2015-0402</b> DATE: <b>2014 / 09 / 11</b>	<b>8-20 CKT CTX CONNECTION ASSEMBLY</b>	<b>9 of 12</b>
DOCUMENT NUMBER:	CREATED / REVISED BY:	CHECKED BY:	APPROVED BY:
<b>PS-34729-020</b>	<b>JAROD FISCHER</b>	<b>TREVOR MACHUGA</b>	<b>RON BAUMAN</b>



# PRODUCT SPECIFICATION

		Apply an AC rms voltage of 1000V at 60 Hz per Dielectric Strength	No dielectric breakdown or flash-over shall occur between cavities or between the cavities and the outside of a connector at any time during the test.																		
12	High Temperature Exposure (Mechanical)	Mate connectors per durability. Subject connector system to <b>105 C°</b> for <b>1008</b> hours. Apply a force of <b>98N</b> to wire bundle and pull on wire bundle in the following directions: <b>Straight, +45° Vertical, -45° Vertical, +45° Horizontal, &amp; -45° Horizontal</b>	No breakage or electrical discontinuities at <b>98N or less</b>																		
		Mate connectors per durability. Subject connector system to <b>105 C°</b> for <b>1008</b> hours. Extract terminal from housing per Terminal Retention Force (in Housing)	TPA in Final-Lock <b>85 Newtons MINIMUM</b>																		
13	Chemical Resistance (Electrical)	Perform <b>Contact Resistance (Low Level)</b> .  Expose connectors to the following fluids for the specified duration of soak and dry time:	No deformation or cracks shall be observed in connector  <b><u>Delta Dry Circuit Resistance</u></b> <b>6 milliohms MAXIMUM</b> <b><u>Voltage Drop</u></b> <b>8 milliohms MAXIMUM</b>																		
		<table border="1"> <thead> <tr> <th>Resistance To Fluids:</th> <th>Time / Temp. in Fluid</th> <th>Time / Temp. Drying</th> </tr> </thead> <tbody> <tr> <td><b>Automatic Transmission Oil:</b></td> <td>15 Seconds @ 23°C</td> <td>24 Hours @ 105°C</td> </tr> <tr> <td><b>Zinc Chloride:</b></td> <td>15 Seconds @ 23°C</td> <td>24 Hours @ 23°C</td> </tr> <tr> <td><b>Fuel:</b></td> <td>7 Days @ 23°C</td> <td>7 Days @ 23°C</td> </tr> <tr> <td><b>Engine Coolant:</b></td> <td>5 Minutes @ 23°C</td> <td>48 Hours @ 50°C</td> </tr> <tr> <td><b>Windshield Washer Fluid:</b></td> <td>5 Minutes @ 23°C</td> <td>48 Hours @ 50°C</td> </tr> </tbody> </table>		Resistance To Fluids:	Time / Temp. in Fluid	Time / Temp. Drying	<b>Automatic Transmission Oil:</b>	15 Seconds @ 23°C	24 Hours @ 105°C	<b>Zinc Chloride:</b>	15 Seconds @ 23°C	24 Hours @ 23°C	<b>Fuel:</b>	7 Days @ 23°C	7 Days @ 23°C	<b>Engine Coolant:</b>	5 Minutes @ 23°C	48 Hours @ 50°C	<b>Windshield Washer Fluid:</b>	5 Minutes @ 23°C	48 Hours @ 50°C
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		<b>Windshield Washer Fluid:</b>		5 Minutes @ 23°C	48 Hours @ 50°C																
		Perform <b>Contact Resistance (Low Level)</b> and <b>Contact Resistance @ Rated Current (Voltage Drop)</b> .																			

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# PRODUCT SPECIFICATION

<p>14</p>	<p><b>Chemical Resistance (Mechanical)</b></p>	<p>Expose connectors to the following fluids for the specified duration of soak and dry time:</p> <table border="1"> <thead> <tr> <th>Resistance To Fluids:</th> <th>Time / Temp. in Fluid</th> <th>Time / Temp. Drying</th> </tr> </thead> <tbody> <tr> <td><b>Automatic Transmission Oil:</b></td> <td>15 Seconds @ 23°C</td> <td>24 Hours @ 105°C</td> </tr> <tr> <td><b>Zinc Chloride:</b></td> <td>15 Seconds @ 23°C</td> <td>24 Hours @ 23°C</td> </tr> <tr> <td><b>Fuel:</b></td> <td>7 Days @ 23°C</td> <td>7 Days @ 23°C</td> </tr> <tr> <td><b>Engine Coolant:</b></td> <td>5 Minutes @ 23°C</td> <td>48 Hours @ 50°C</td> </tr> <tr> <td><b>Windshield Washer Fluid:</b></td> <td>5 Minutes @ 23°C</td> <td>48 Hours @ 50°C</td> </tr> </tbody> </table> <p>Unmate connector per Connector Mate/ Unmate Forces. (Hand Evaluation) Extract terminal from housing per Terminal Retention Force (in Housing)</p>	Resistance To Fluids:	Time / Temp. in Fluid	Time / Temp. Drying	<b>Automatic Transmission Oil:</b>	15 Seconds @ 23°C	24 Hours @ 105°C	<b>Zinc Chloride:</b>	15 Seconds @ 23°C	24 Hours @ 23°C	<b>Fuel:</b>	7 Days @ 23°C	7 Days @ 23°C	<b>Engine Coolant:</b>	5 Minutes @ 23°C	48 Hours @ 50°C	<b>Windshield Washer Fluid:</b>	5 Minutes @ 23°C	48 Hours @ 50°C	<p>No deformation or cracks shall be observed in connector</p> <p>Unmate w/latch (hand evaluation) shall show no signs of functional degradation.</p> <p>TPA in Final-Lock <b>80 Newtons MINIMUM</b></p>
Resistance To Fluids:	Time / Temp. in Fluid	Time / Temp. Drying																			
<b>Automatic Transmission Oil:</b>	15 Seconds @ 23°C	24 Hours @ 105°C																			
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<p>15</p>	<p><b>Chemical Resistance (Physical)</b></p>	<p>Expose connectors to the following fluids for the specified duration of soak and dry time:</p> <table border="1"> <thead> <tr> <th>Resistance To Fluids:</th> <th>Time / Temp. in Fluid</th> <th>Time / Temp. Drying</th> </tr> </thead> <tbody> <tr> <td><b>Automatic Transmission Oil:</b></td> <td>15 Seconds @ 23°C</td> <td>24 Hours @ 105°C</td> </tr> <tr> <td><b>Zinc Chloride:</b></td> <td>15 Seconds @ 23°C</td> <td>24 Hours @ 23°C</td> </tr> <tr> <td><b>Fuel:</b></td> <td>7 Days @ 23°C</td> <td>7 Days @ 23°C</td> </tr> <tr> <td><b>Engine Coolant:</b></td> <td>5 Minutes @ 23°C</td> <td>48 Hours @ 50°C</td> </tr> <tr> <td><b>Windshield Washer Fluid:</b></td> <td>5 Minutes @ 23°C</td> <td>48 Hours @ 50°C</td> </tr> </tbody> </table> <p>Apply a voltage of <b>500 VDC</b> per Isolation Resistance post 1008 hours</p> <p>Apply an AC rms voltage of 1000V at 60 Hz per Dielectric Strength</p>	Resistance To Fluids:	Time / Temp. in Fluid	Time / Temp. Drying	<b>Automatic Transmission Oil:</b>	15 Seconds @ 23°C	24 Hours @ 105°C	<b>Zinc Chloride:</b>	15 Seconds @ 23°C	24 Hours @ 23°C	<b>Fuel:</b>	7 Days @ 23°C	7 Days @ 23°C	<b>Engine Coolant:</b>	5 Minutes @ 23°C	48 Hours @ 50°C	<b>Windshield Washer Fluid:</b>	5 Minutes @ 23°C	48 Hours @ 50°C	<p>No deformation or cracks shall be observed in connector</p> <p><b>100 Meg ohms MINIMUM</b></p> <p><b>NOT MET</b> Zinc Chloride and Engine Coolant</p> <p>No dielectric breakdown or flash-over shall occur between cavities or between the cavities and the outside of a connector at any time during the test.</p>
Resistance To Fluids:	Time / Temp. in Fluid	Time / Temp. Drying																			
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# PRODUCT SPECIFICATION

16	<b>Solderability</b>	Steam-age samples for 8 hours (Category 3), set at ambient for at least one hour, and its pins were dipped in ROL1 flux and 63/37 tin lead solder at <b>234°C</b> per procedure of <b>SMES-152</b> Paragraph 5.3.4 Dip Coated. Criteria for passing visual was SMES-152 Rev E Paragraph 5.4.1.	Solder coverage: <b>95% MINIMUM</b> (per <b>SMES-152</b> )
17	<b>IR Process Soldering</b>	Molex IR Profile: <b>ES-40000-5013</b> Maximum Temperature: <b>260°C</b>	Dimensional: Conformance to Sales Drawing requirements & Visual: SEE SECTION 8.0 OTHER INFORMATION

## 6.0 PACKAGING

Parts shall be packaged to protect against damage during handling, transit and storage. TPAs may become seated during transit, please refer to PS-34646-001 for more information.

## 7.0 GAGES AND FIXTURES

All applicable gages and fixtures are referenced in the appropriate control plans.

## 8.0 OTHER INFORMATION

Products conform to the following environmental ratings:

**Temperature:** 105°C

**Vibration:** On-Body

**Sealing:** Un-Sealed

To ensure compliance with our product validation, it is imperative that our product meet the print dimensions. Any non-conformance with the true position of the PCB pins or mating interface will create performance failures that include; PCB installation, increased mate/unmate forces and electrical discontinuities.

To this effect, Molex does not recommend or endorse the ganging of individual Stac64 header assemblies by our distribution partners or customers. We have developed a repeatable and efficient method of producing 2, 3, and 4 bay header assemblies that meet the print requirements to optimize product performance.

For IR Reflow applications, part numbers 34691-6XXX (Plastic pin alignment plate or "PAP") headers should be used. The use of part numbers 34691-0XXX (Mylar PAP) has been reported to cause soldering issues.

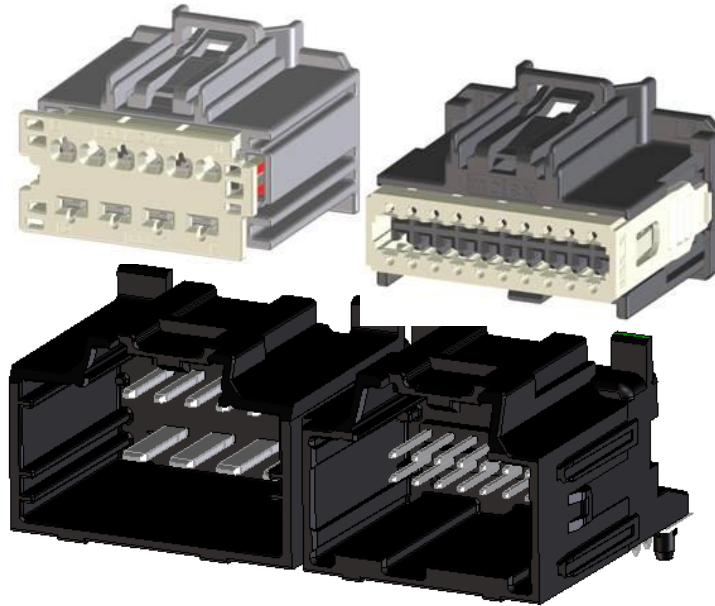
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# APPLICATION SPECIFICATION

## STAC64 SYSTEM APPLICATION GUIDE

**1.0 SCOPE** THIS INSTRUCTION MANUAL CONTAINS SUPPLEMENTAL INFORMATION PERTAINING TO THE MOLEX STAC64 UNSEALED DUAL ROW 0.64 SERIES 34729, STAC64 UNSEALED DUAL ROW HYBRID 2.8-1.5 SERIES 31372, STAC64 UNSEALED DUAL ROW HYBRID 2.8-0.64 SERIES 34969, AND THE STAC64 HEADERS SERIES 34690/34691/34695/34696/34772/34773



### Table of Contents

- Section 1: Product Introduction
- Section 2: Product Summary
- Section 3: Connector Assembly
- Section 4: Connector Mating
- Section 5: Service Instructions

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# APPLICATION SPECIFICATION

## 2.0 PRODUCT DESCRIPTION

### FEATURES AND SPECIFICATIONS



*Stackable connection system provides single and multi-pocket PCB solutions, offering a diverse range of circuit sizes and greatly reduces time-to-market by completely eliminating custom tooling*

To address the growing electronic device requirements within today's vehicles, Molex has developed a modular 0.64, 1.50 and 2.80mm (.025, .059 and .110") terminal header system. The Stac64 connection system allows OEM and device manufacturers greater design flexibility to support both low-level signal requirements as well as power applications upwards of 30.0A. The Stac64 system allows automotive manufacturers to use header assemblies as stand-alone components, to gang multiple headers together to support a large range of signal and power needs for devices and modules.

The standard product line based on the 0.64mm (.025") pitch terminal includes: 8-, 12-, 16- and 20-circuit connectors in both vertical and right-angle headers supporting low-level signal requirements. An

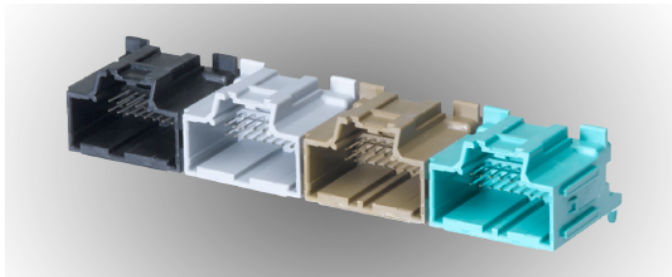
additional 10-circuit 'power pocket' version, supporting power applications for 1.50 and 2.80mm (.059 and .110") pitch terminal systems, is available in vertical and right-angle configurations. This Stac64 is a standard product system based on USCAR-2 Class II mechanical and electrical performance characteristics for unsealed connector applications. The connectors mate to existing wire-harness connectors designed to the USCAR/EWCAP industry footprints.

The Stac64 standard product offering is currently tooled at high cavitation and is fully validated at the single-pocket level. This greatly reduces time-to-market by completely eliminating the need for additional tooling. For additional information visit: <http://www.molex.com/link/stac64.html>.

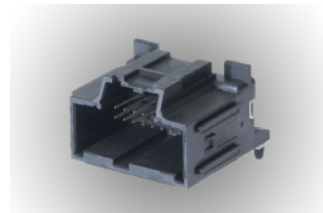
- 34690 Single Bay Vertical Headers
- 34691 Single Bay Right Angle
- 34695 Single Bay Hybrid Vertical Headers
- 34696 Single Bay Hybrid Right Angle Headers
- 34707 Ganged Multi-Bay Vertical Headers
- 34708 Ganged Multi-Bay Right Angle Headers
- 34729 8-20 Circuit Receptacle Connectors
- 31372 10 Circuit Hybrid Receptacle Assembly
- 34803 CTX64 Female Receptacle Terminals
- 33012 MX150 Female Receptacle Terminals

#### Features and Benefits

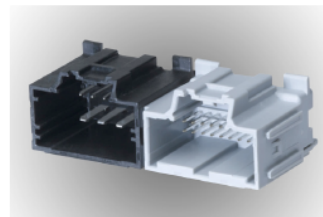
- Stackable connection system of readily available PCB headers ensure reduced time-to-market: engineering and validation times reduced significantly, no tooling necessary to produce custom multi-bay headers
- The 20-circuit-header housings are molded in standard USCAR color schemes for additional polarizations to match harness connector color-coding scheme for visual aid in assembly
- Pre-assembled, linear Mylar PC tail alignment strip for right-angle headers reduces PCB packaging complexity and provides space savings
- Modular-housing design with standard dovetail features molded into the housings allows headers to be ganged together in large assemblies to meet growing terminal quantity requirements
- PCB alignment posts ensure all terminals are properly aligned into PCB through-holes during assembly and retain header to PCB during assembly and solder processing
- PCB stand-offs molded into housings provide additional trace-routing real estate under the headers
- High temperature thermoplastic housings withstand infra red (IR) and wave lead-free solder processing per ES-40000-5013 Molex specification
- Pre-assembled TPA to receptacle housing shipped as single assembly provide applied labor and cost savings



80-Circuit Right-Angle Ganged Header



20-Circuit Right-Angle Single-Bay Header - Polarization A



30-Circuit Ganged Vertical Header - With Power-Pocket Option

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# APPLICATION SPECIFICATION

## 3.0 REFERENCE DOCUMENTS

STAC64 RECEPTACLE SALES DRAWING (CTX64)	SD-34729-020
STAC 10CKT HYBRID RECEPTACLE SALES DRAWING	SD-31372-900
STAC 14CKT HYBRID RECEPTACLE SALES DRAWING (CTX64)	SD-34969-010
STAC64 HEADER SALES DRAWING (VERTICAL)	SD-34690-100
STAC64 HEADER SALES DRAWING (RIGHT ANGLE)	SD-34691-100
STAC 10CKT HYBRID HEADER SALES DRAWING (VERTICAL)	SD-34695-100
STAC 10CKT HYBRID HEADER SALES DRAWING (RIGHT ANGLE)	SD-34696-100
STAC 14CKT HYBRID HEADER SALES DRAWING (VERTICAL)	SD-34772-010
STAC 14CKT HYBRID HEADER SALES DRAWING (RIGHT ANGLE)	SD-34773-010
STAC 10CKT HYBRID CONNECTOR PRODUCT SPECIFICATION	PS-31372-100
STAC 14CKT HYBRID CONNECTOR PRODUCT SPECIFICATION	PS-34969-100
STAC64 CONNECTOR PRODUCT SPECIFICATION	PS-34691-100
STAC HYBRID HEADER PRODUCT SPECIFICATION	PS-34696-100
STAC64 CONNECTOR PACKAGE DRAWING (BULK)	PK-34729-020
STAC 10CKT HYBRID CONNECTOR PACKAGE DRAWING (BULK)	PK-31372-931
STAC 14CKT HYBRID CONNECTOR PACKAGE DRAWING (BULK)	PK-31301-211
MX150 APPLITCATION TOOLING SPECIFICATION	ATS-638131500
CTX64 APPLITCATION TOOLING SPECIFICATION	ATS-638135700

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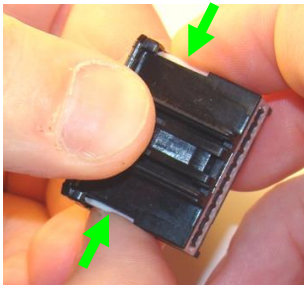
# APPLICATION SPECIFICATION

A. Connectors shown in “As Shipped”  
 Connector TPA shown in “as shipped” condition (pre-lock). The TPA must remain in the pre-lock position until all circuits are loaded.

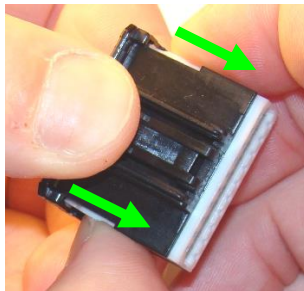


B. TPA “lift to pre-lock”  
 TPA must be in pre-lock position to populate the connector. If during shipping the Connector TPA moves from it’s pre-lock position. Simply squeeze both sides of the TPA and slide it up the TPA will snap into pre-lock position.

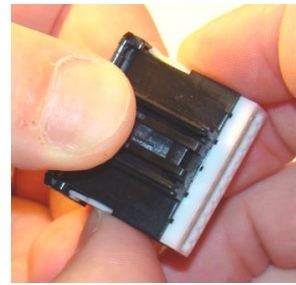
***If the TPA or housing is damaged in any way do not use the connector!!!***



**Squeeze**



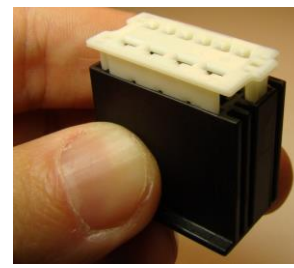
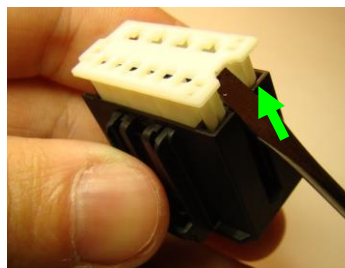
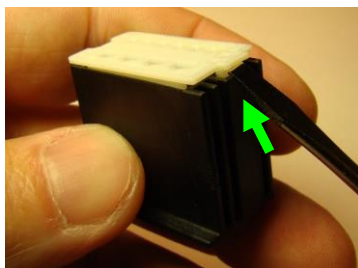
**Squeeze & Slide**



**Click TPA in Pre-lock**

B.(continued)TPA “lift to pre-lock” HYBRID  
 TPA must be in pre-lock position to populate the connector. Slide a small screwdriver Under the edge of the TPA on one side. Using the blade of the screwdriver gently push TPA upwards. Repeat this on the opposite side, TPA will snap into pre-lock position.

***If the TPA or housing is damaged in any way do not use the connector!!!***



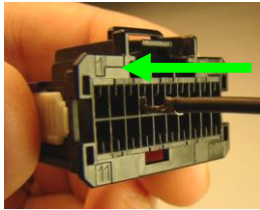
**TPA in Pre-lock**

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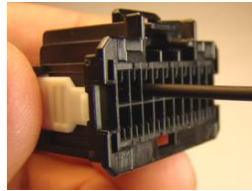


# APPLICATION SPECIFICATION

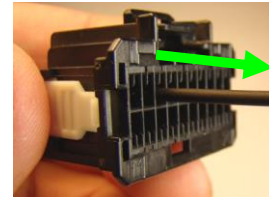
- C. Terminal Installation:  
 With TPA still in pre-lock position, orient terminal to rear of connector as shown below. Grip the wire no less than 1.25 inches from the terminal insulation crimp and insert through appropriate circuit opening. If resistance is encountered, retract the terminal and adjust the angle of insertion. Continue inserting the terminal until it stops and locks up on the lock finger with an audible click.



**PUSH**



**CLICK**



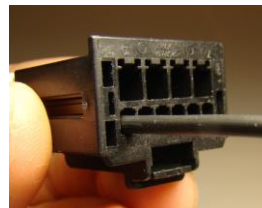
**PULL**

***TPA must be in Pre-Lock Position to Populate Connector***

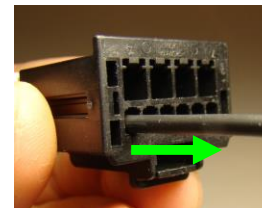
- C. (continued) Terminal Installation: 1.5mm terminals is the same as above



**PUSH**



**CLICK**



**PULL**

***TPA must be in Pre-Lock Position to Populate Connector***

- C. (continued) Terminal Installation: for 2.8 terminals is the same as above.



2.8mm terminal  
**PUSH**



**CLICK**



**PULL**

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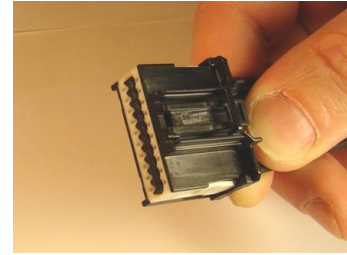
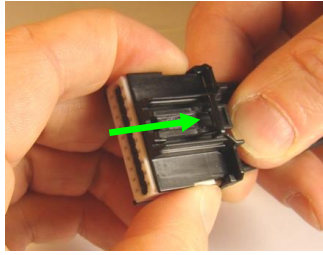
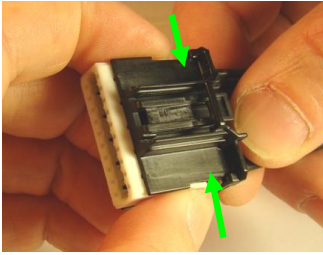


# APPLICATION SPECIFICATION

## D. Seating the TPA

With the receptacle terminals fully installed, the TPA can be seated into its final lock position by squeezing both sides of the TPA evenly, then sliding the TPA toward the housing until it comes to a stop flush to the top of the connector housing.

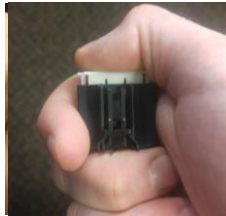
***Push uniformly on TPA sides to fully seat.***



## D. Seating the TPA HYBRID Connector

With the receptacle terminals fully installed, the TPA can be seated into its final lock position by applying an even force to the TPA surface until it comes to a stop, with an audible click.

***Push uniformly on TPA main surface only to fully seat.***



**CLICK**

***Note: If the TPA push down force exceeds 40N and doesn't click, check if terminals are fully seated, and make adjustments if needed. Then retry to seat the TPA.***

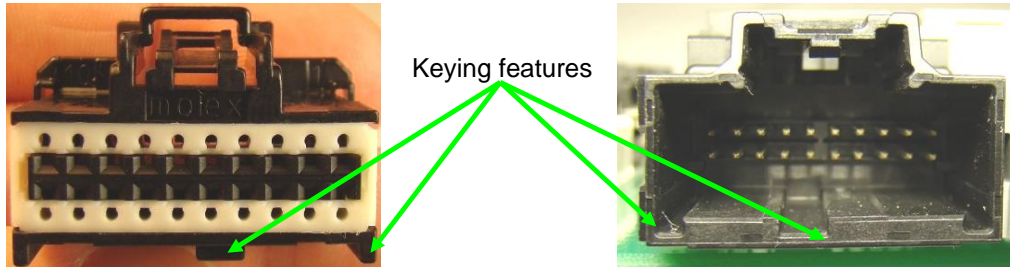
REVISION: <b>B3</b>	ECR/ECN INFORMATION: EC No: 115620 DATE: 2017 / 04 / 11	TITLE: <b><u>STAC64 SYSTEM APPLICATION GUIDE</u></b>	SHEET No. <b>6 of 17</b>
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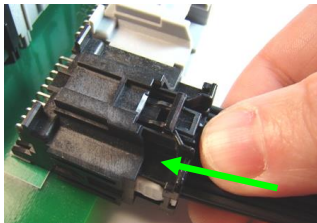
# APPLICATION SPECIFICATION

## A. Connector Mating

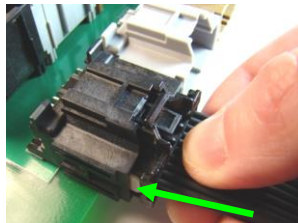
Note and align connector keying features, from receptacle connector to Mating header.



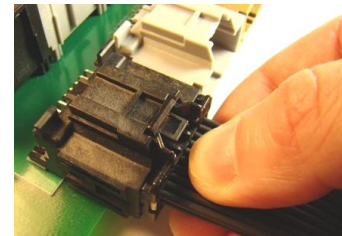
B. Begin mating procedure by sliding the receptacle connector assembly into the header assembly, press firmly until you hear an audible click.



**PUSH**



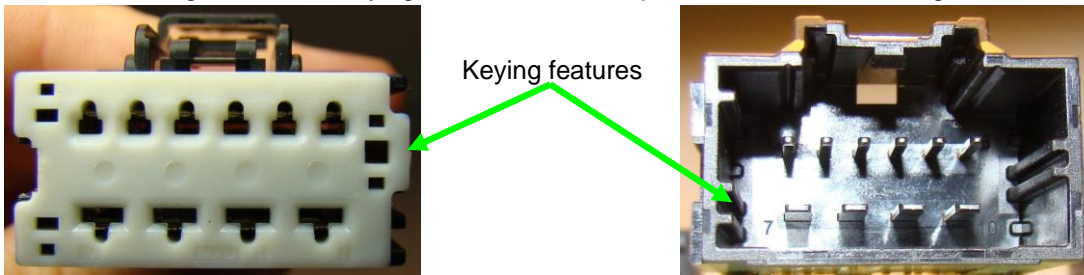
**CLICK**



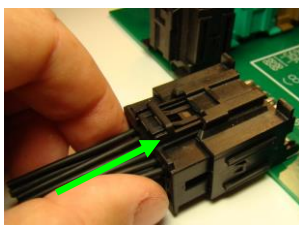
**PULL**

## A. Connector Mating HYBRID Connector

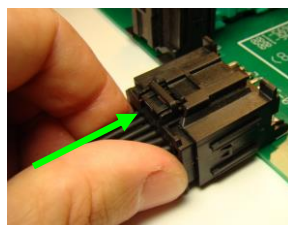
Note and align connector keying features, from receptacle connector to Mating header.



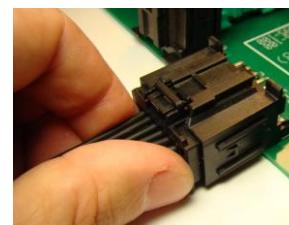
B. Begin mating procedure by sliding the receptacle connector assembly into the header assembly, press firmly until you hear an audible click.



**PUSH**



**CLICK**



**PULL**

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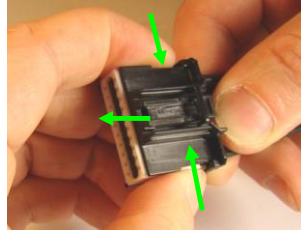
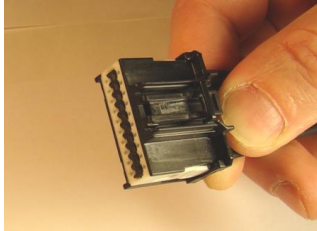




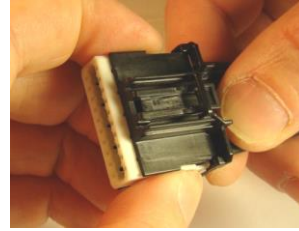
# APPLICATION SPECIFICATION

## A. Terminal servicing

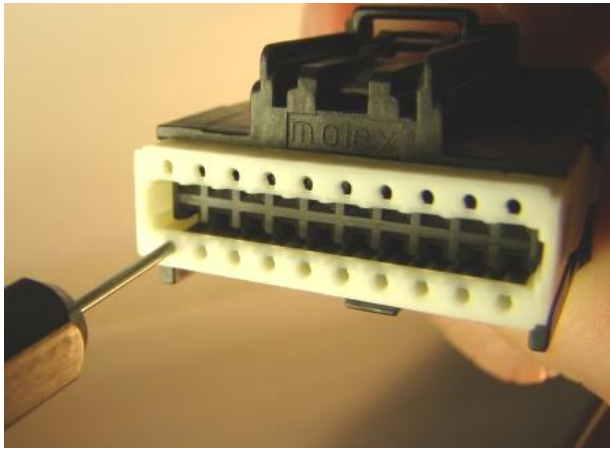
Squeeze and slide the TPA away from the housing. TPA will snap into the pre-lock position. With the TPA in pre-lock use the designated service tool, push through the service hole to disengage the lock finger. Push straight until reaching a hard stop. Once the Lock finger is disengaged, gently pull on the wire to release the terminal.



Squeeze and slide

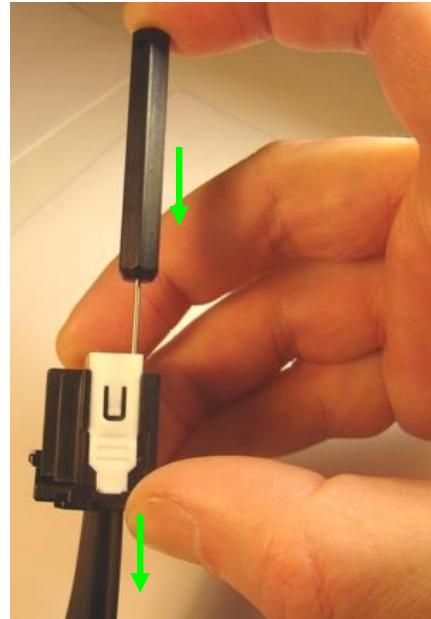


TPA in pre-lock



Servicing terminal

CTX64 Servicing Tool: 63813-5700



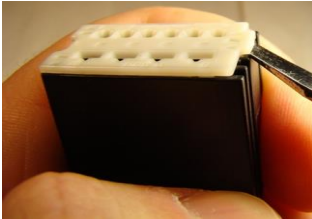
REVISION: <b>B3</b>	ECR/ECN INFORMATION: EC No: 115620 DATE: 2017 / 04 / 11	TITLE: <b>STAC64 SYSTEM APPLICATION GUIDE</b>	SHEET No. <b>8 of 17</b>
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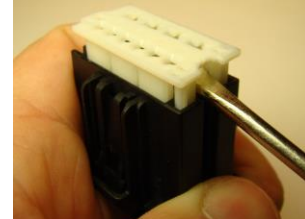
# APPLICATION SPECIFICATION

## A. Terminal servicing HYBRID

Slide small screwdriver under the edge of the TPA on one side. Then using the blade of screwdriver, gently push TPA upwards. Repeat step 1 on opposite side.. TPA will snap into the pre-lock position.



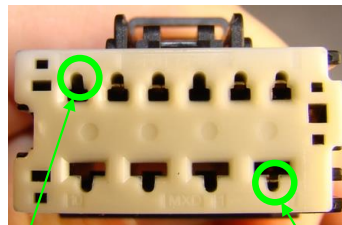
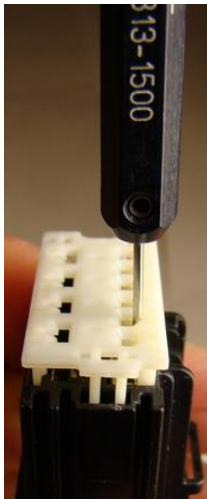
Step 1



TPA in pre-lock

## A. Terminal servicing (continued)

With the TPA in pre-lock use the designated service tool Molex P/N 63813-1500, push through the service hole to disengage the lock finger. Push straight until reaching a hard stop. Once the Lock finger is disengaged, gently pull on the wire to release the terminal.



1.5mm

Service holes

2.8mm



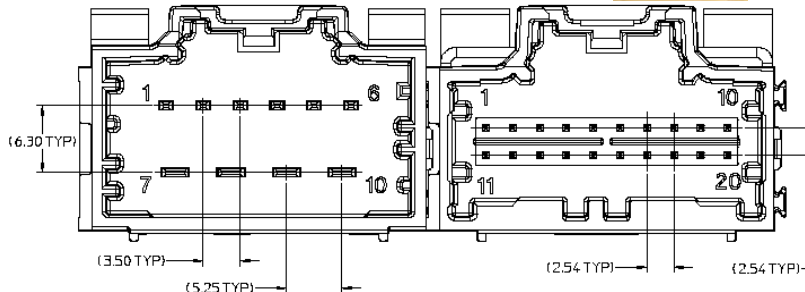
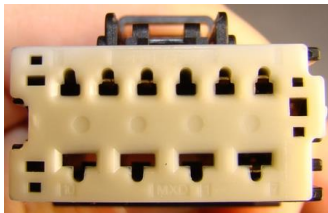
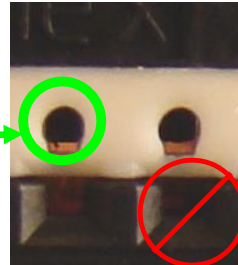
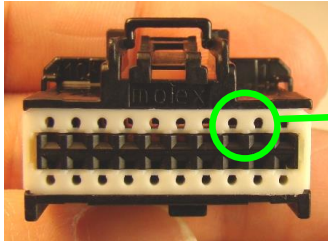
REVISION: <b>B3</b>	ECR/ECN INFORMATION: EC No: 115620 DATE: 2017 / 04 / 11	TITLE: <b>STAC64 SYSTEM APPLICATION GUIDE</b>	SHEET No. <b>9 of 17</b>
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# APPLICATION SPECIFICATION

## B. Electrical probing, continuity checking

The preferred method of probing; use the Probe opening for receptacle terminal to check for electrical continuity.



## C. Electrical continuity check list

**Never probe in terminal contact area**

Use the designated access point.

### Probe pin recommendations:

1. When testing the connector for continuity it is imperative that you do not damage the terminals!
2. Pogo pins should be checked for damage or sticking several times a shift. This should assure containment if an issue is found.
3. First a visual inspection of all the pins for damage should be performed.
4. Next a testing block should be used to depress all the pogo pins up into the barrel. If there is a bent or sticking pin, it should remain stuck in the barrel of the pogo pin. A damaged or stuck pin should be replaced before any additional testing is performed.

### Probing damage can occur:

1. If a sharp ended probe is inserted into the contact of the terminal it may damage the plating and increase contact resistance
2. If an oversized diameter probe is inserted into the terminal, this will overstress the beam in the terminal. This will create an environment for intermittent connections, and increased contact resistance.
3. If a probe is inserted into the connector on an angle or off center it may damage the terminal, and or the connector.

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# APPLICATION SPECIFICATION

## B. Electrical Continuity Checking

The preferred method of probing receptacles can be found on the following two sheets.

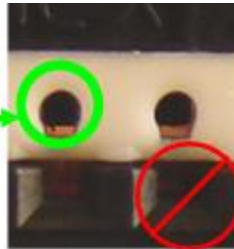
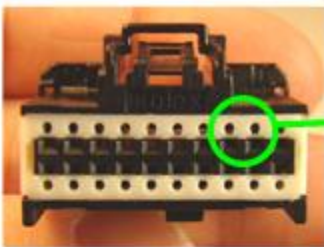
Electrical Continuity Checklist:

### Probe Pin Recommendations:

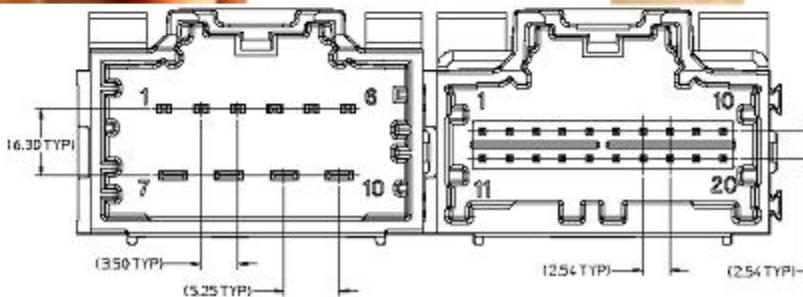
1. When testing the connector for continuity it is imperative that you do not damage the terminals
2. Pogo pins should be checked for damage or sticking several times per shift. This should assure containment if an issue is found.
  - a. First a visual inspection of all the pins for damage should be performed
  - b. Then a testing block should be used to depress all the pogo pins into the barrel. If there is a bent or sticking pin, it should remain stick in the barrel of the pogo pin. A damaged or stuck pin needs to be replaced before any additional testing is performed

### Probing Damage Can Occur

1. If a sharp probe is inserted into the contact of the terminal it may damage the plating and increase contact resistance
2. If an oversized diameter probe is inserted into the terminal, this will overstress the beam in the terminal. This will create an environment for intermittent connections, and increased contact resistance
3. If a probe is inserted into the connector on an angle or off center it may damage the terminal and/or the connector



**Never probe in terminal contact area**  
Use the designated access point.

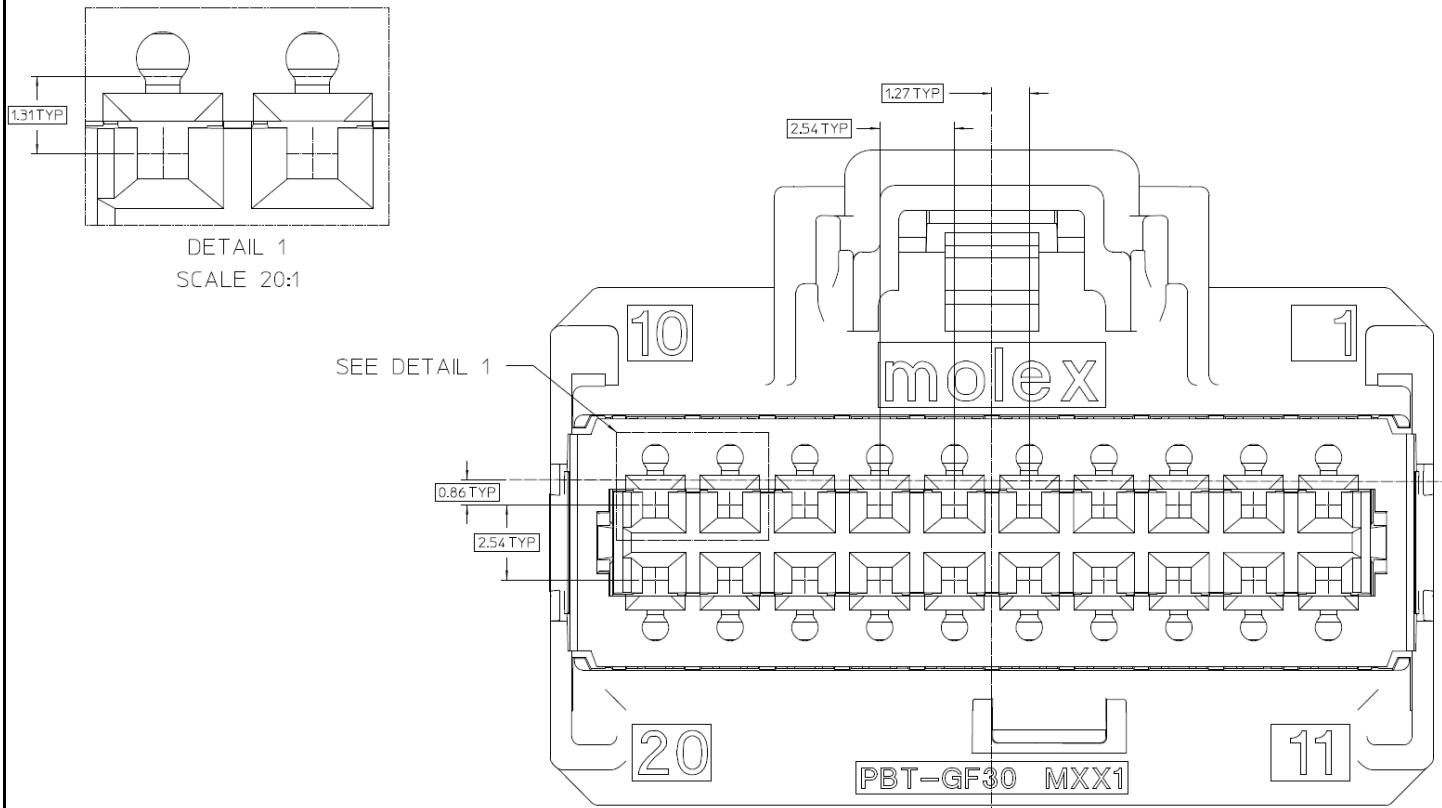


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# APPLICATION SPECIFICATION

## PREFERRED METHOD OF PROBING 34729 RECEPTACLE



### Probe Pin Details

Probe Pin Diameter: 0.020 in. / 0.50 mm

Probe Tip Shape: Spherical

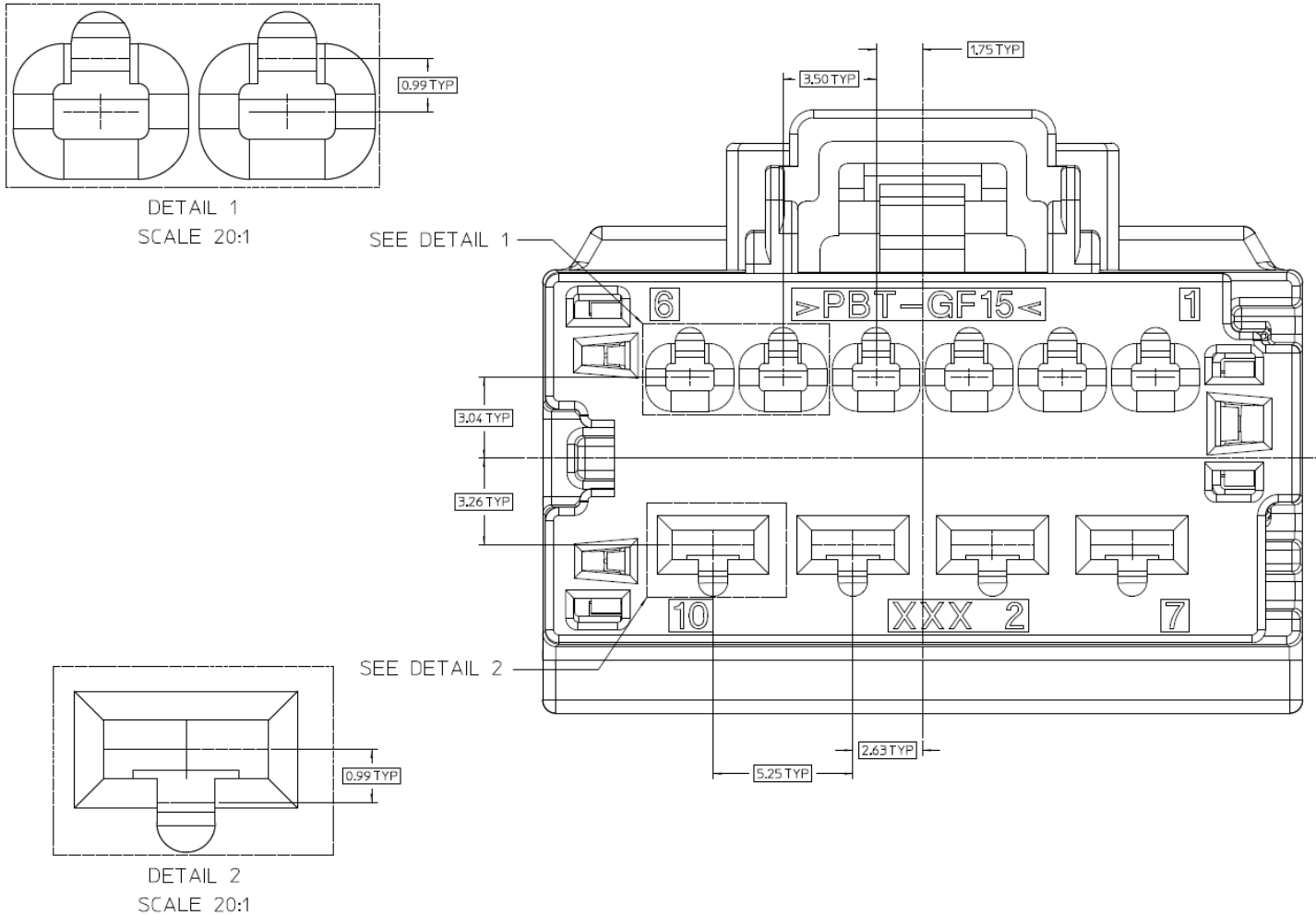
Spring Force: 4.7 oz. / 133 grams

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# APPLICATION SPECIFICATION

## PREFERRED METHOD OF PROBING 31372 RECEPTACLE



### Probe Pin Details

Probe Pin Diameter: 0.020 in. / 0.50 mm

Probe Tip Shape: Spherical

Spring Force: 4.7 oz. / 133 grams

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# APPLICATION SPECIFICATION

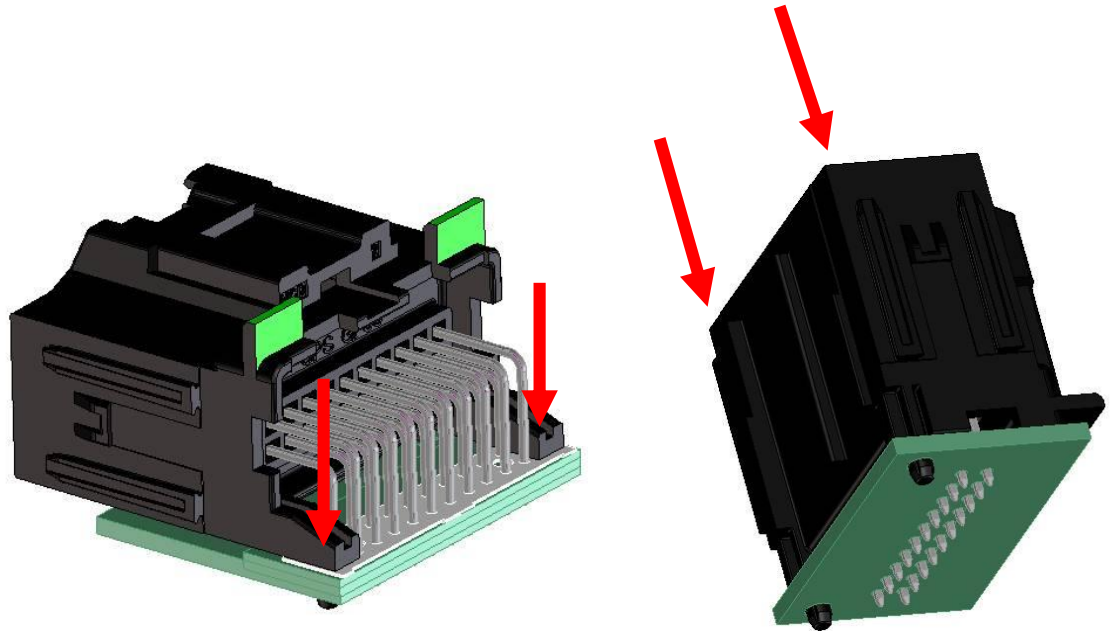
## 4.0 PROCEDURE

4.1 GENERAL REQUIREMENTS: PLEASE SEE PK-31300-892, FOR PRODUCT SPECIFICATIONS.

## 4.2 ASSEMBLY INSTRUCTIONS:

WHERE FORCE NEEDS TO BE APPLIED TO SEAT HEADER TO PCB (PRESS FIT, OUTER POSTS)

**NOTE: ANY PRESSURE PLACED ON THE HEADER PINS MAY DAMAGE THE ASSEMBLY**



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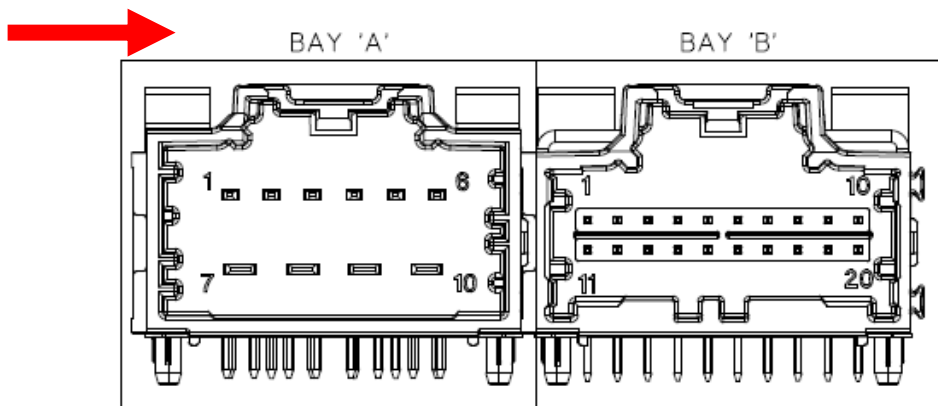
# APPLICATION SPECIFICATION

## 4.3 DRAWING DETAIL:

BELOW ARE VIEWS FROM THE 2 BAY STAC'D HEADER DRAWING. ALL 2 BAY HEADERS WILL BE COVERED BY THIS SINGLE DRAWING.

WHEN LOOKING AT THE FRONT (MATE) SIDE OF THE HEADER IT CAN BE DETERMINED WHAT HEADER BAY'S ARE IN WHAT LOCATIONS. THE BAY LETTER REFERENCES (BAY 'A', BAY 'B', ECT.) ARE LOCATIONS ONLY AND DO NOT REPRESENT ANY PARTICULAR CIRCUIT SIZE OR KEY OPTION.

2 BAY STAC64 RIGHT ANGLE HEADER ASSEMBLY  
(P/N: 34708-2012 SHOWN)



DIMENSIONAL CHART FOR MULTIBAY CONFIGURATION:

2 BAY PART NUMBER	BAY A			BAY B			DIM 'A'	DIM 'B'	DIM 'C'	DIM 'D'
	CKT	TYPE	POL	CKT	TYPE	POL				
34708-2000	20	0.64mm	A	20	0.64mm	B	66.94	64.47	27.94	27.94
34708-2012	10	HYBRID	A	20	0.64mm	C	66.94	64.47	27.94	27.94
34708-2022	20	0.64mm	C	10	HYBRID	A	66.94	64.47	27.94	27.94

THE HEADER 'BAY ID' SECTION ON THE CHART CORRESPONDS WITH THE LOCATION ON THE FRONT VIEW OF THE HEADER.

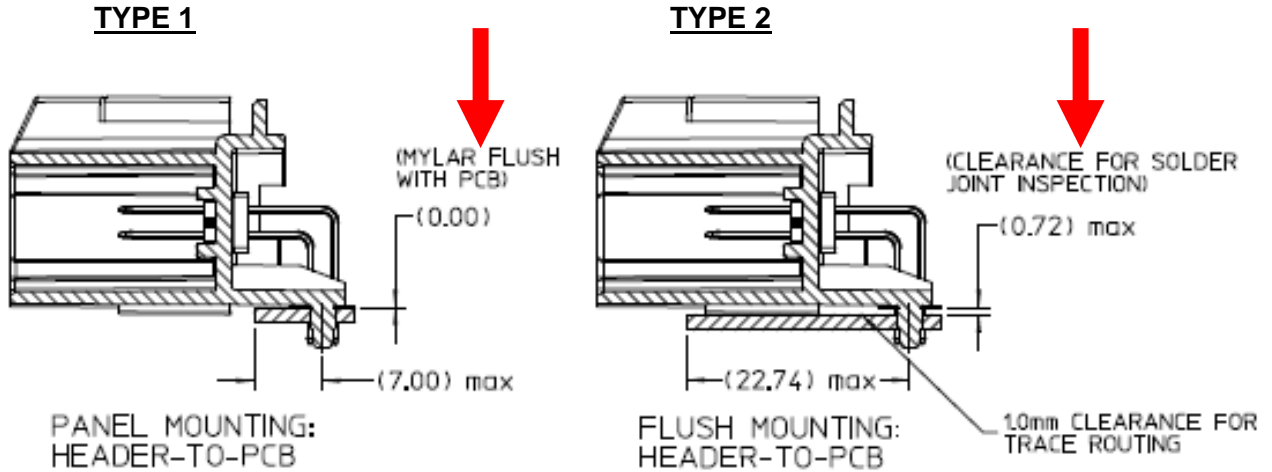
REVISION: <b>B3</b>	ECR/ECN INFORMATION: EC No: 115620 DATE: 2017 / 04 / 11	TITLE: <b>STAC64 SYSTEM APPLICATION GUIDE</b>	SHEET No. <b>15 of 17</b>
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# APPLICATION SPECIFICATION

## RECOMMENDED HEADER MOUNTING STRATEGIES (RIGHT ANGLE HEADER ONLY):



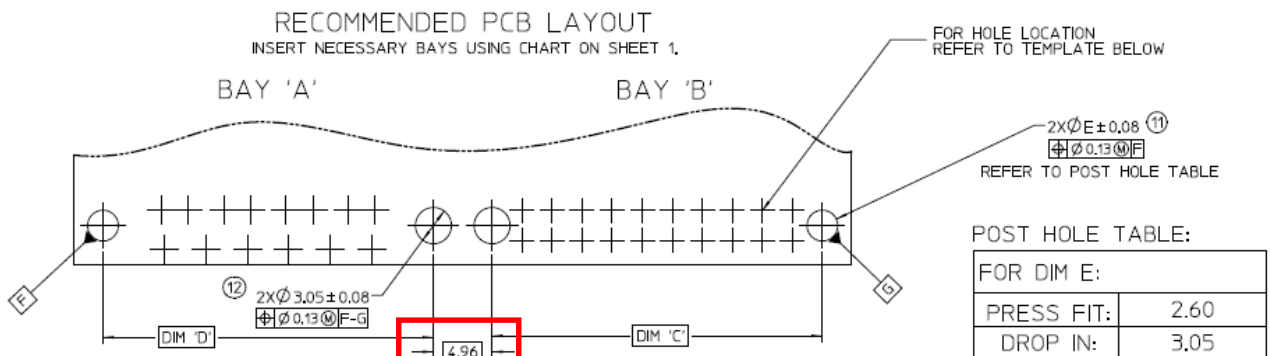
**TYPE 1:** THE BOTTOM STANDOFF RIBS ARE NOT USED. THE HEADER(S) RESTS FLAT ON THE PCB.

**TYPE 2:** THE RIBS ON THE BOTTOM OF THE PART(S) REST ON THE PCB ALLOWING FOR SOLDER JOINT INSPECTION AFTER SOLDERING.

### BUILDING OF A PRINTED CIRCUIT BOARD LAYOUT:

**NOTE:** THE SAME BAY ID MUST BE USED FROM THE CHART ON PAGE 1.

**1. REFERENCE CHART ON PAGE 1 FOR WHAT CIRCUIT SIZE AND TYPE OF HEADER GO IN EACH 'BAY' LOCATION.**



**2. DETERMINE IF HEADER MUST BE DROP IN CAPABLE OR IF PRESS FIT IS ACCEPTABLE. PRESS FIT IS RECOMMENDED AND WILL RETAIN HEADER DURING PROCESSING.**

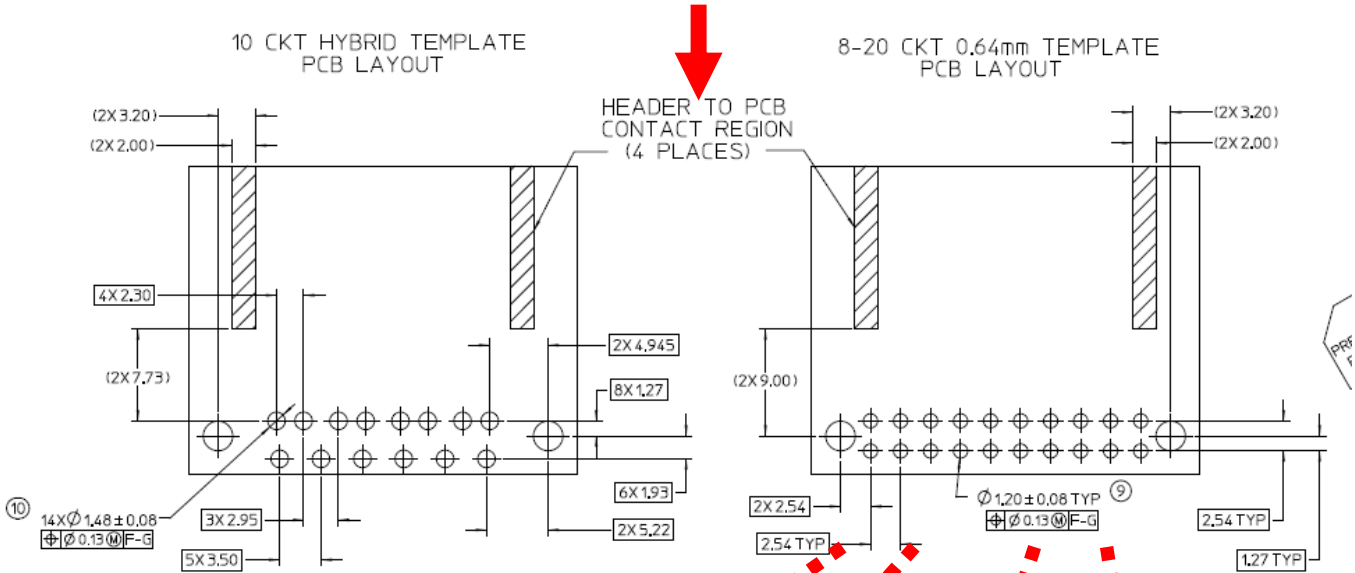
REVISION: <b>B3</b>	ECR/ECN INFORMATION: EC No: 115620 DATE: 2017 / 04 / 11	TITLE: <b>STAC64 SYSTEM APPLICATION GUIDE</b>	SHEET No. <b>16 of 17</b>
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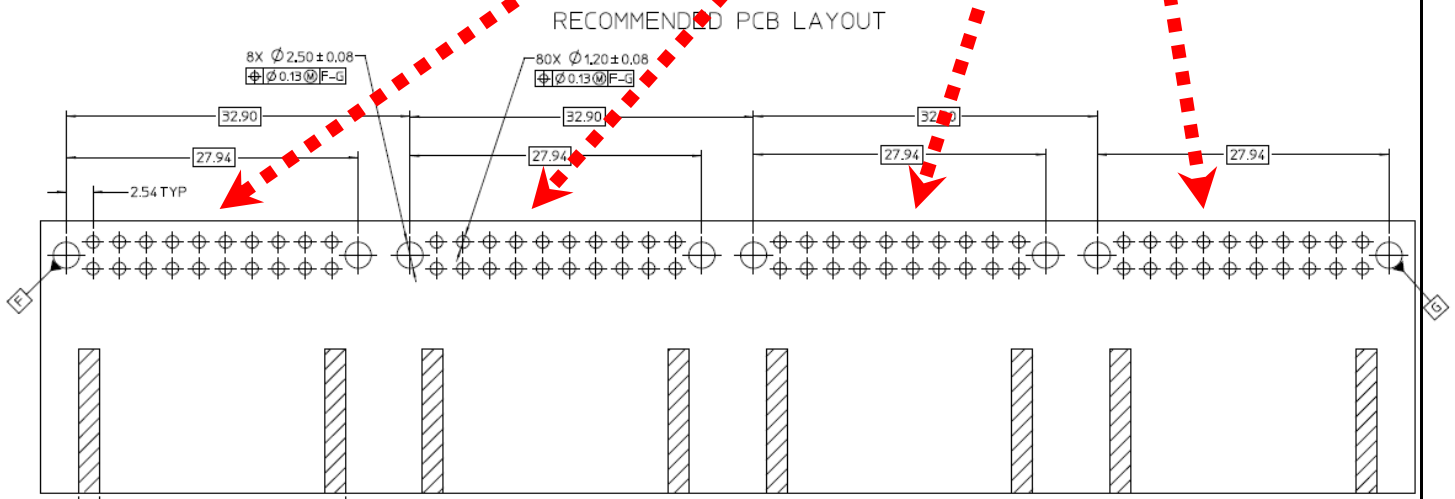
# APPLICATION SPECIFICATION

**3. USING THE SINGLE HEADER LAYOUTS BELOW BUILD THE PCB LAYOUT OF THE MULTI-BAY HEADER BY SPACING ADJACENT POST HOLES AT 4.96mm.**

**KEEP OUT AREAS (RIGHT ANGLE HEADERS)**



**4. PLACE NECESSARY PCB LAYOUT IN EACH 'BAY' LOCATION AT 4.96mm SPACING.**



**80CKT – 4 BAY HEADER FOOT PRINT – 20X20X20X20**

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