



To: All Molex Sales and Marketing
From: Richard Bahou, Global Product Manager
Re: I-Trac Vertical Receptacle Product Improvements

Date: March 5, 2012

Series: 78227, 78232, 78237

I-TRAC Power Modules			
Description	Product Series		
Row Size	7	11	15
Vertical Receptacle	78227	78232	78237

What's changing?

Improved vertical receptacle power module changes include side ribs and new top rib design.

Product Overview

The I-Trac product line consists of several power module variations, used with the 7, 11, and 15 row I-Trac signal modules.

Product Improvement

Aligned with company continuous improvement policy, Molex enhanced connector product design improves quality and molding manufacturing process.

1. The new enhanced power module connector will add a 3rd side rib.
2. The new top rib design will change.
3. Combined, the new side rib and top rib shape design changes will improve molding manufacturing process.
4. Product design changes will not affect Printed Circuit Board (PCB) layout design.
5. Product performance and specification will remain unchanged.

PN and Product Series

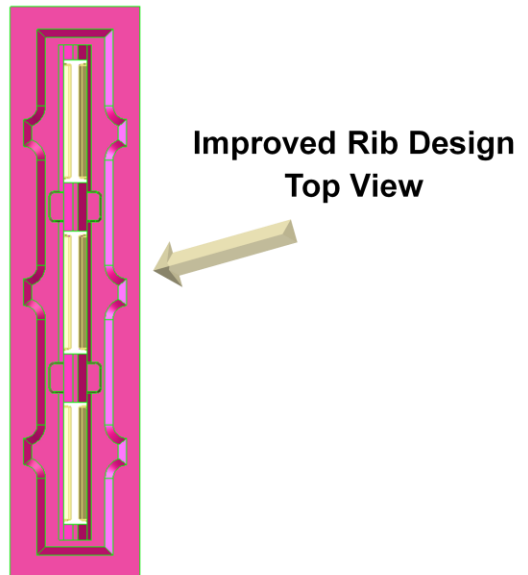
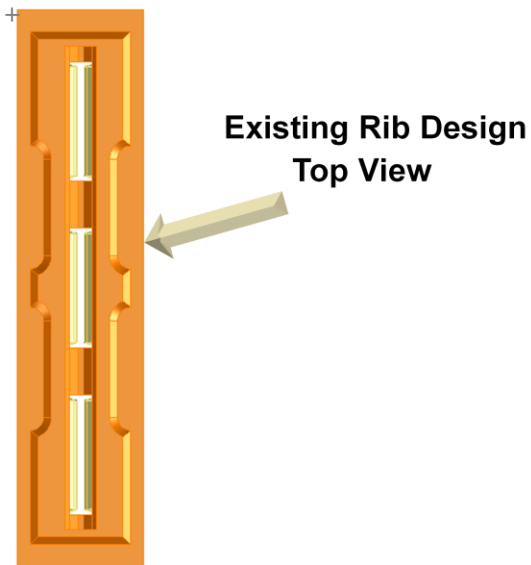
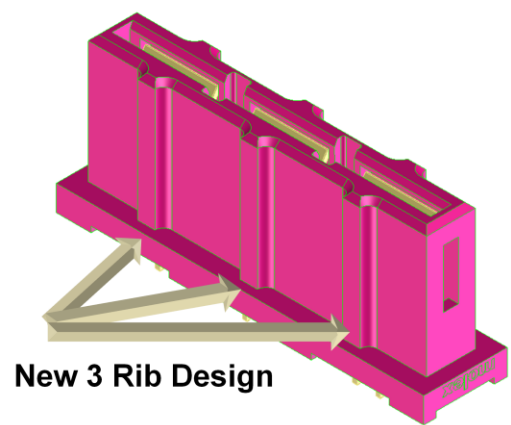
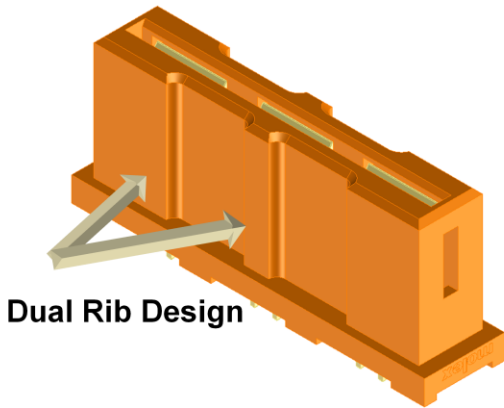
Molex will maintain same PNs and product series for 7, 11, and 15 row power connector system.

The product changes will be a running change for customer shipments commencing May 2012.

Figure 1 summarizes product design changes

Figure 1
Vertical Power Module Receptacle Design Improvements

Current	New
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For questions regarding the above, contact:

Richard Bahou
Global Product Manager – Backplane Group
Molex – Lisle, IL.
630-527-4517
richard.bahou@molex.com

F

F

E

E

D

D

C

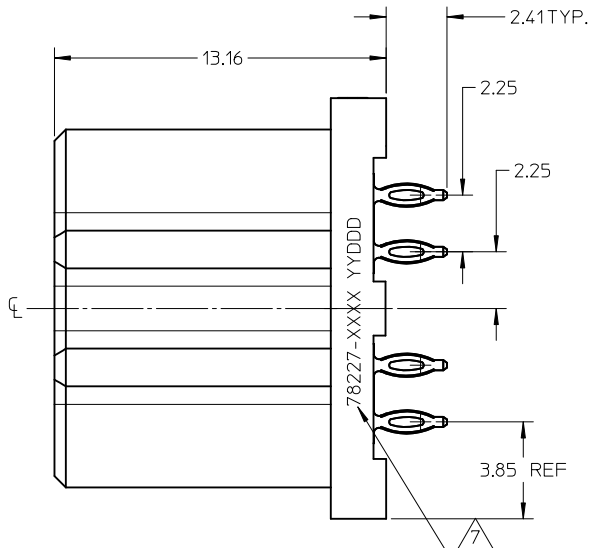
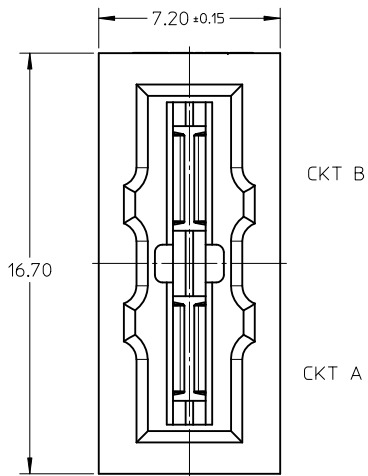
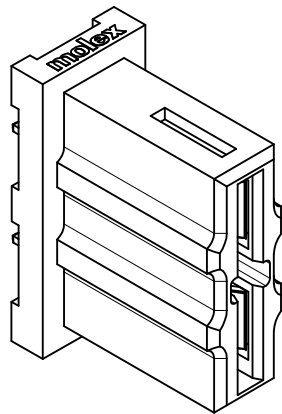
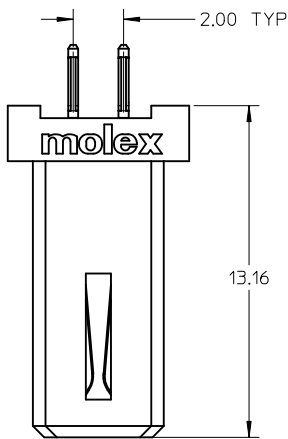
C

B

B

A

A



NOTES:

1. MATERIALS :
 HOUSING - LCP, GLASS FILLED, UL94-V0, COLOR: BLACK.
 POWER PIN - COPPER ALLOY
2. FINISHES :
 0.76 MICROMETER MINIMUM GOLD AT CONTACT AREA AND
 2.54 MICROMETER MINIMUM TIN AT SOLDER TAIL AREA
 OVER 1.27um MINIMUM NICKEL UNDERPLATE.
3. PRODUCT SPECIFICATION: PS-78231-006.



COMPONENT STAY AWAY ZONE FROM CONNECTOR.
 PCB NOTE FOR PLATED HOLE.

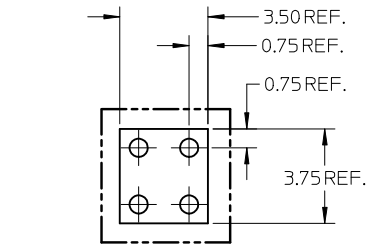
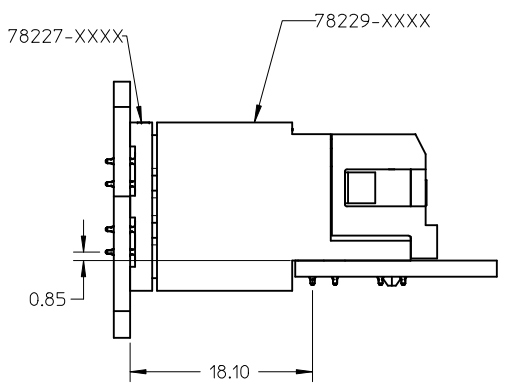
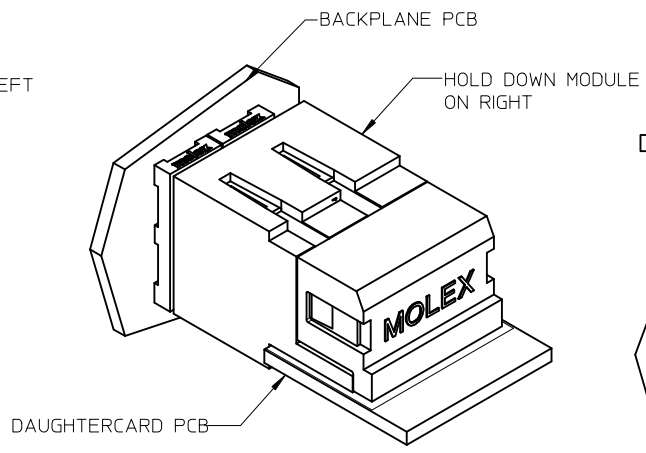
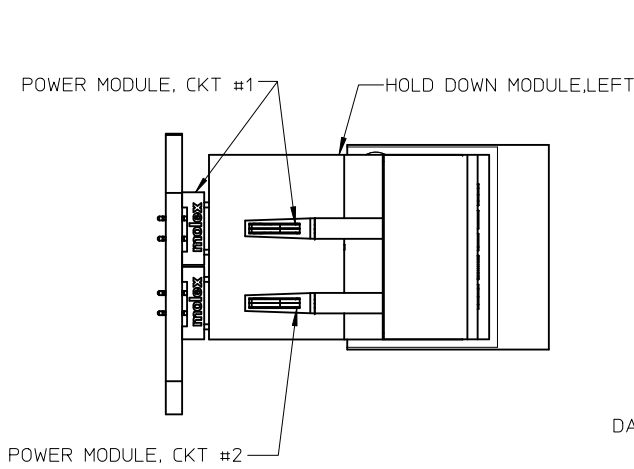
TYPE OF PLATED HOLE	DRILLED HOLE SIZE	PLATING THICKNESS	PLATED HOLE SIZE "ØDIM H"
TIN	0.838	0.007 MIN TIN/SILVER	0.725±0.075
SILVER	0.863	OVER 0.03 TO 0.08 COPPER PLATING	0.750±0.050

SEE SHEET 2 OR SHEET 3 FOR RECOMMENDED PCB LAYOUT.

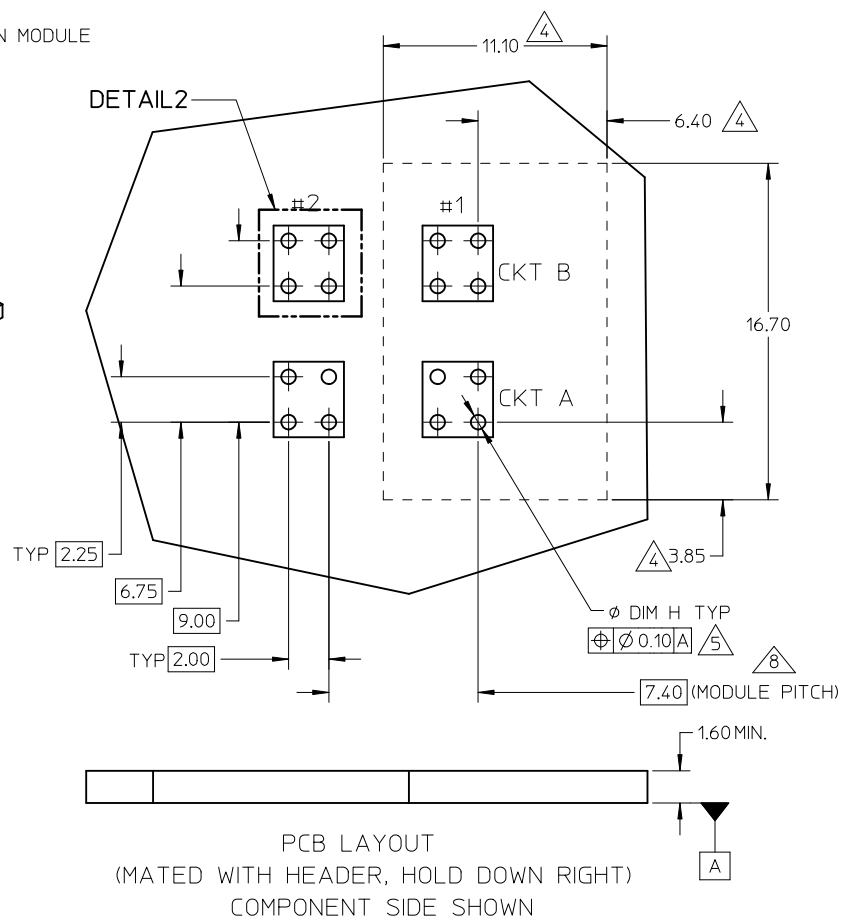
6. MATES WITH 78229-****.
7. PART NUMBER AND YY-DDD CODE.
8. ADD 7.4MM FOR EACH ADDITIONAL POWER MODULE.
9. PACKAGING PROCEDURE AS PER PK-78227-001.

REMOVE PB/SN EC NO: S2012-0580 DRWN: SHONG CHKD: LNG APPR: NAGESHKIN 2012/01/31 2012/02/13 2012/02/13	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)	DIMENSION STYLE	SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION
	▼ = 0 ◻ = 0	mm INCH 4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.25 ± --- 1 PLACE ± --- ± --- ANGULAR ± 3 °	MM ONLY	NTS	METRIC	
	DESCRIPTION	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	DRAWN BY	DATE	TITLE	
	REV		NG	2006/08/28	I-TRAC POWER, 7 ROW VERTICAL RECEPTACLE PRESS-FIT	
			CHECKED BY	DATE	MOLEX INCORPORATED	
			NRVITTAPELLI	2007/01/24	DOCUMENT NO.	
			APPROVED BY	DATE	SHEET NO.	
			NAGESHKIN	2012/01/06	1 OF 3	
			MATERIAL NO.		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION	
			782271001		SD-78227-011	

MATED DIMENSIONS AND PCB LAYOUT WITH HEADER HOLD DOWN LEFT

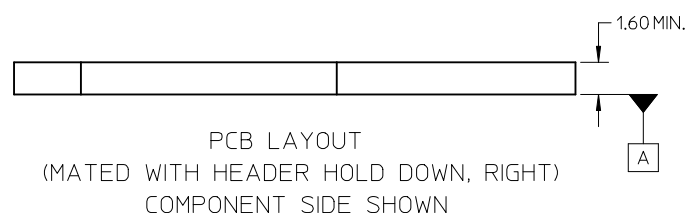
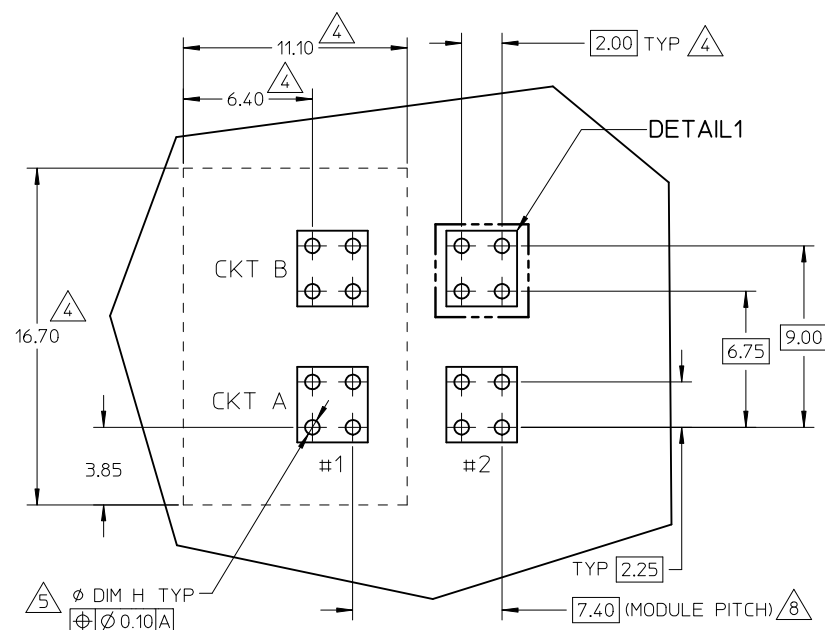
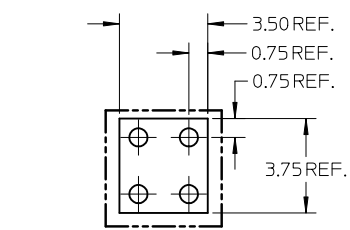
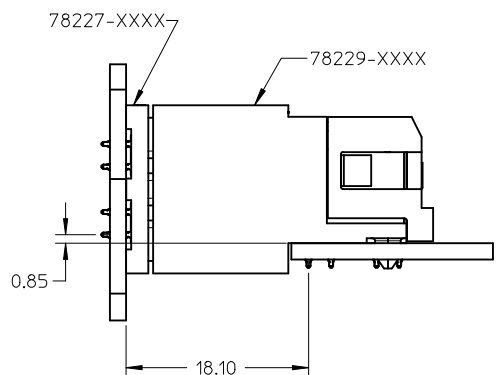
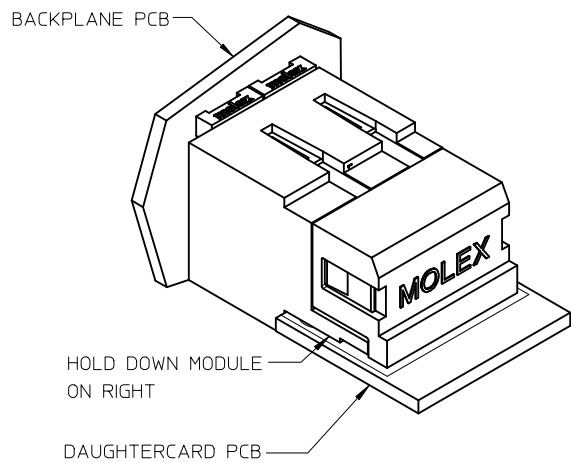
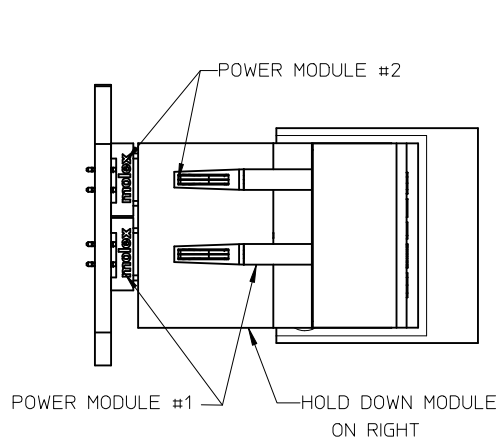


DETAIL2
COPPER PAD REFERENCE

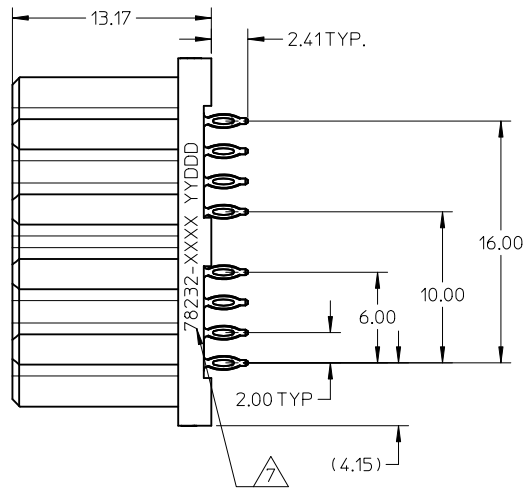
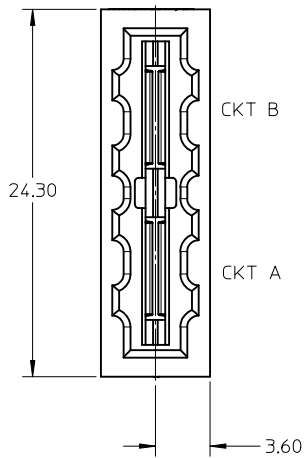
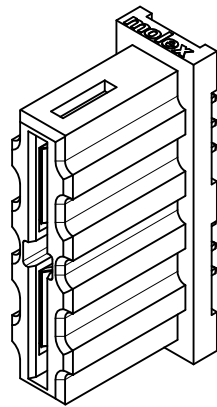
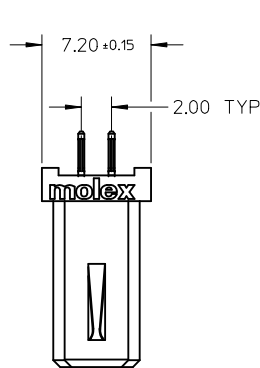


REMOVE PB/SN EC NO: S2012-0580 DRWN: SHONG CHKD: LNG APPR: NAGESHK N 2012/01/31 2012/02/13 2012/02/13	DESCRIPTION DESCRIPTION	QUALITY SYMBOLS ▽=0 ◻=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION		
			4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.25 ± --- 1 PLACE ± --- ± ---	mm INCH ± --- ± --- ± 0.25 ± --- ± --- ± ---	DRAWN BY LNG	DATE 2006/08/28	TITLE I-TRAC POWER, 7 ROW VERTICAL RECEPTACLE PRESS-FIT				
			ANGULAR ± 3 °	CHECKED BY NRVITTAPALLI	DATE 2007/01/24	MOLEX INCORPORATED					
			DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	APPROVED BY NAGESHK N	DATE 2012/01/06	MATERIAL NO. 782271001	DOCUMENT NO. SD-78227-011	SHEET NO. 2 OF 3			

MATED DIMENSIONS AND PCB LAYOUT WITH HEADER HOLD DOWN RIGHT



REMOVE PB/SN EC NO: S2012-0580 DRWN: SHONG CHKD: LNG APPR: NAGESHKN 2012/01/31 2012/02/13 2012/02/13	DESCRIPTION QUALITY SYMBOLS ▽=0 ◻=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE	SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION		
				MM ONLY	NTS	METRIC			
				mm	INCH	TITLE			
				4 PLACES ± --- ± ---	3 PLACES ± --- ± ---	I-TRAC POWER, 7 ROW VERTICAL RECEPTACLE PRESS-FIT			
		2 PLACES ± 0.25 ± ---	1 PLACE ± --- ± ---	MOLEX INCORPORATED					
		ANGULAR ± 3 °		DRAWN BY: LNG		DATE: 2006/08/28			
		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		CHECKED BY: NRVITTAPALLI		DATE: 2007/01/24			
				APPROVED BY: NAGESHKN		DATE: 2012/01/06			
				MATERIAL NO. 782271001		DOCUMENT NO. SD-78227-011			
				SIZE A3		SHEET NO. 3 OF 3			
		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION							



NOTES

1. MATERIALS :
 - HOUSING - LCP, GLASS FILLED, UL94-V0, COLOR: BLACK.
 - POWER PIN - COPPER ALLOY
2. FINISHES :
 - 0.76 MICROMETER MINIMUM GOLD AT CONTACT AREA AND 2.54 MICROMETER MINIMUM TIN AT SOLDER TAIL AREA OVER 1.27um MINIMUM NICKEL UNDERPLATE.
3. PRODUCT SPECIFICATION: PS-78231-006.
4. COMPONENT STAY AWAY ZONE FROM CONNECTOR.
5. PCB NOTE FOR PLATED HOLE.

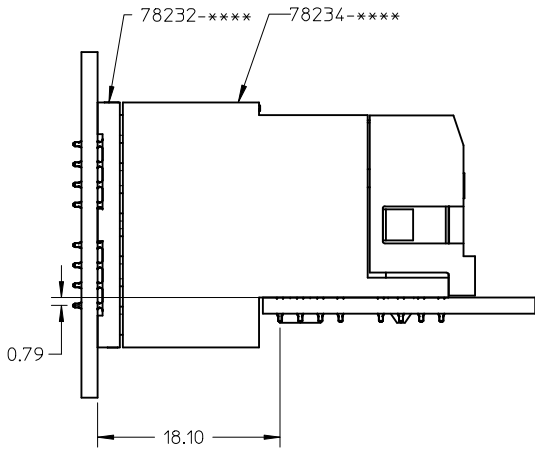
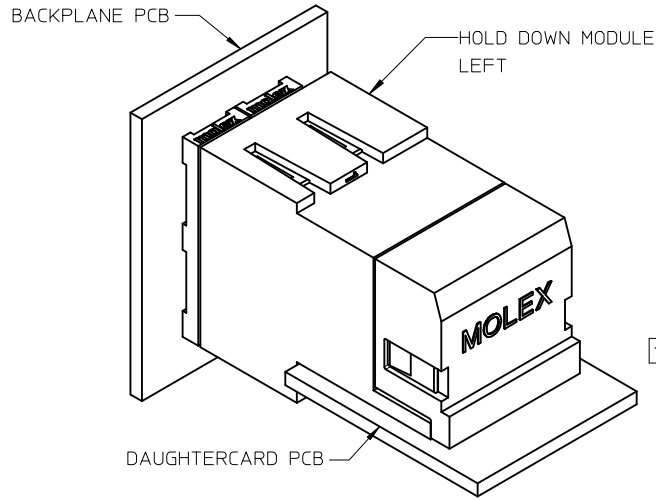
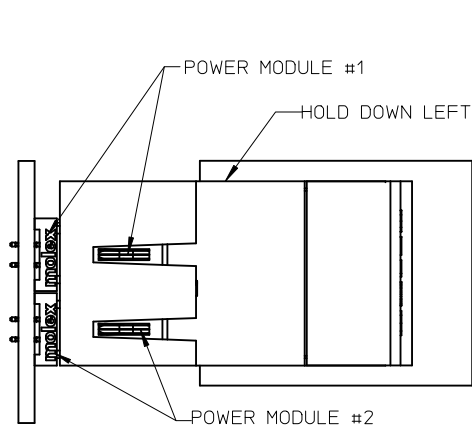
TYPE OF PLATED HOLE	DRILLED HOLE SIZE	PLATING THICKNESS	PLATED HOLE SIZE ØDIM H*
TIN	0.838	0.007 MIN TIN/SILVER OVER 0.03 TO 0.08 COPPER PLATING	0.725±0.075
SILVER	0.863		0.750±0.050

SEE SHEET 2 AND 3 FOR RECOMMENDED PCB LAYOUT.

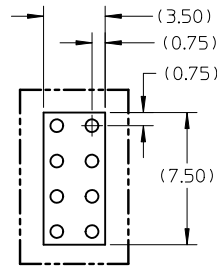
6. MATES WITH 78234-****.
7. PART NUMBER AND YEAR-WK CODE.
8. ADJACENT POWER MODULE PITCH.
9. PACKAGING PROCEDURE AS PER PK-78232-001.

REMOVE PB/SN EC NO: S2012-0580 DRWN: SHONG CHKD: LNG APPR: NAGESHKIN	2012/01/31 2012/02/13 2012/02/13	DESCRIPTION A1	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)	DIMENSION STYLE	SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION		
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			∇=0	4 PLACES ± --- ± ---	DRAWN BY DATE	TITLE	I-TRAC POWER, 11 ROW VERTICAL RECEPTACLE PRESS-FIT MOLEX INCORPORATED			
				3 PLACES ± --- ± ---	CHECKED BY DATE					
	2 PLACES ± 0.25 ± ---	APPROVED BY DATE		MATERIAL NO. 78232-1001 DOCUMENT NO. SD-78232-011 SHEET NO. 1 OF 3						
	1 PLACE ± --- ± ---			DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS						
	ANGULAR ± 3 °			THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION						

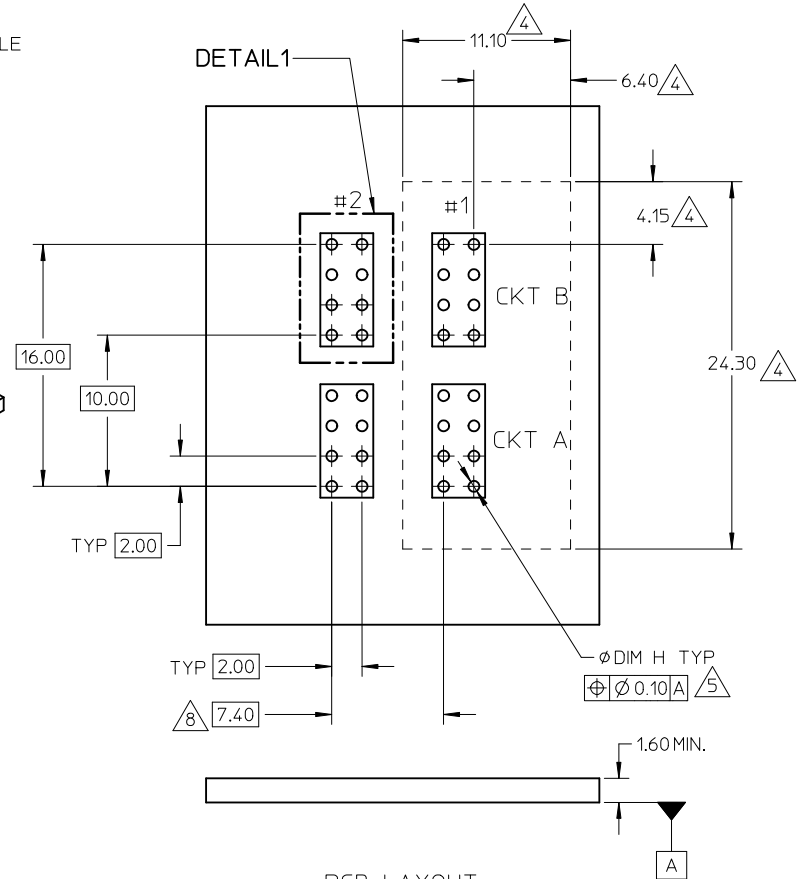
MATED DIMENSIONS AND PCB LAYOUT WITH HEADER HOLD DOWN LEFT



MATED SYSTEM FOR 78232 & 78234



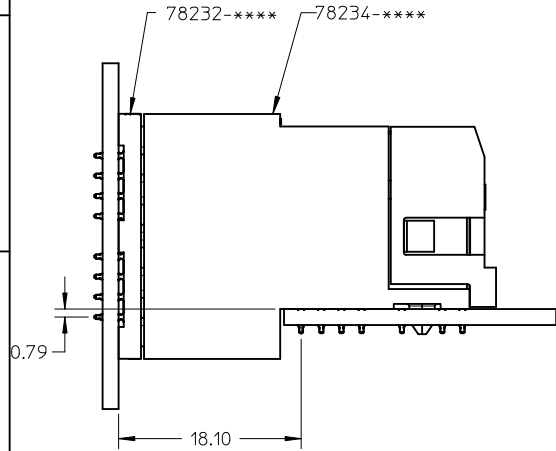
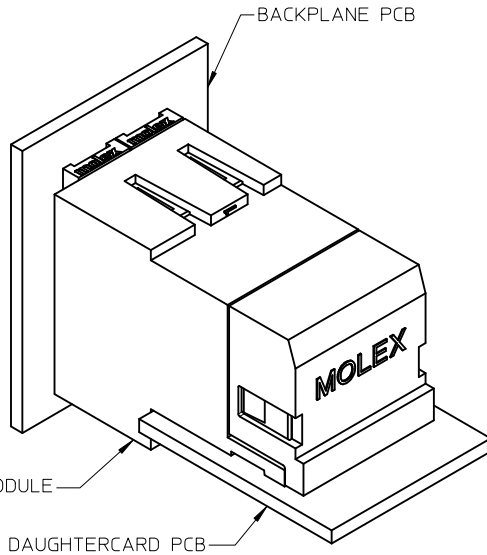
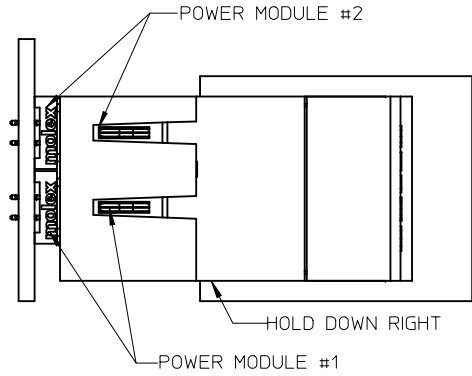
DETAIL1
COPPER PAD REFERENCE



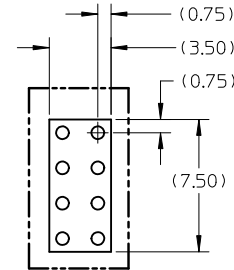
PCB LAYOUT
(MATED WITH HEADER HOLD DOWN MODULE LEFT)
COMPONENT SIDE SHOWN

REMOVE PB/SN EC NO: S2012-0580 DRWN: SHONG CHKD: LNG APPR: NAGESHKN	2012/01/31 2012/02/13 2012/02/13	DESCRIPTION A1	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)	DIMENSION STYLE	SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION	
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			∇=0	4 PLACES ± --- ± ---	DRAWN BY DATE	TITLE	I-TRAC POWER, 11 ROW VERTICAL RECEPTACLE PRESS-FIT MOLEX INCORPORATED		
				3 PLACES ± --- ± ---	CHECKED BY DATE				
	2 PLACES ± 0.25 ± ---	APPROVED BY DATE	MATERIAL NO. 78232-1001 DOCUMENT NO. SD-78232-011			SHEET NO. 2 OF 3			
	1 PLACE ± --- ± ---	MATERIAL NO.							
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS				THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION					

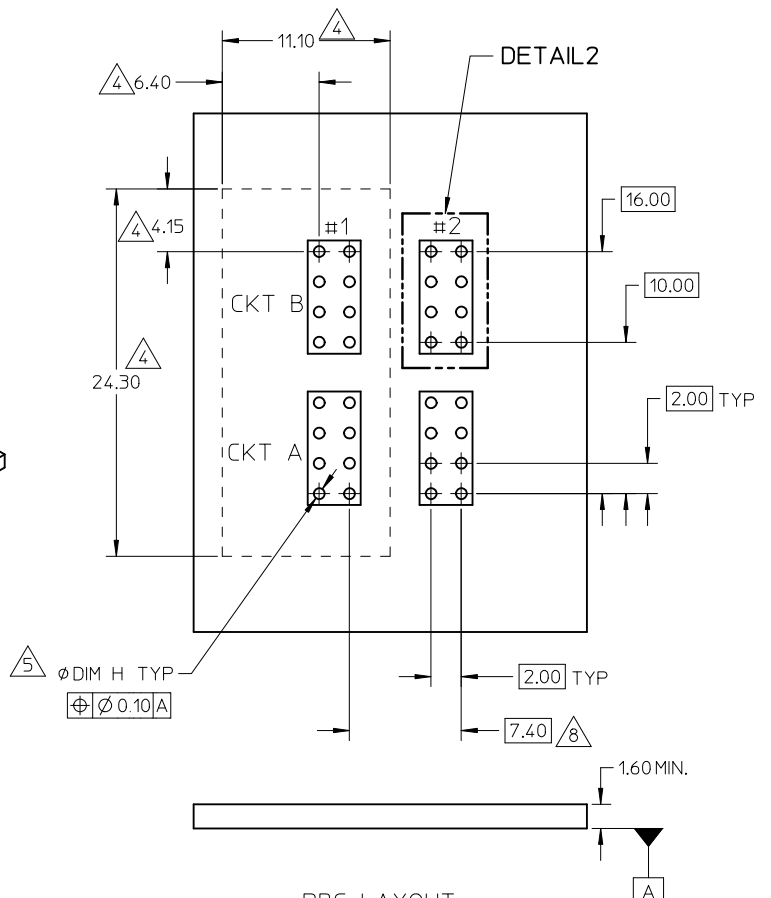
MATED DIMENSIONS AND PCB LAYOUT WITH HEADER HOLD DOWN RIGHT



MATED SYSTEM FOR 78232 & 78234

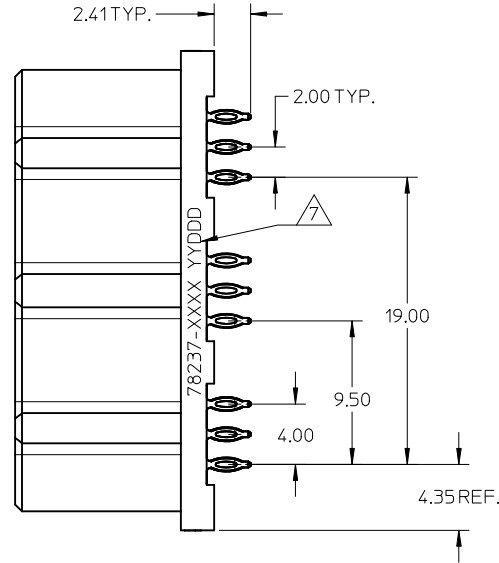
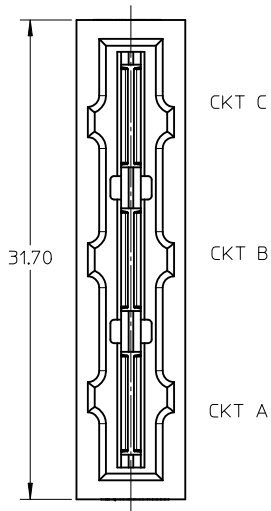
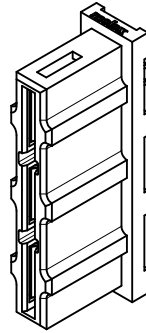
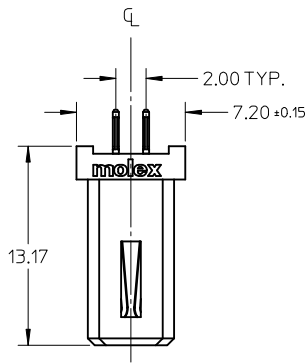


DETAIL2
COPPER PAD REFERENCE



PBC LAYOUT
(MATED WITH HEADER HOLD DOWN RIGHT)
COMPONENT SIDE SHOWN

REMOVE PB/SN EC NO: S2012-0580 DRWN: SHONG CHKD: LNG APPR: NAGESHKN 2012/01/31 2012/02/13 2012/02/13	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)	DIMENSION STYLE	SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION	
	▼ = 0 ◻ = 0	mm INCH 4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.25 ± --- 1 PLACE ± --- ± --- ANGULAR ± 3 °	MM ONLY	NTS	METRIC		
	DESCRIPTION	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	DRAWN BY: SHONG CHECKED BY: LNG APPROVED BY: NAGESHKN MATERIAL NO: 78232-1001	DATE: 2006/08/15 DATE: 2006/08/25 DATE: 2012/01/06	TITLE	I-TRAC POWER, 11 ROW VERTICAL RECEPTACLE PRESS-FIT MOLEX INCORPORATED	SHEET NO: 3 OF 3
	REV: A1			SIZE: A3	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		



NOTES

- MATERIALS :
HOUSING - LCP, GLASS FILLED, UL94-V0, COLOR: BLACK.
POWER PIN - COPPER ALLOY
- FINISHES:
TIN: 0.76 MICROMETER MINIMUM GOLD AT CONTACT AREA AND
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1.27µm MINIMUM NICKEL UNDERPLATE.
- PRODUCT SPECIFICATION: PS-78231-006.
- COMPONENT STAY AWAY ZONE FROM CONNECTOR.
- PCB NOTE FOR PLATED HOLE.

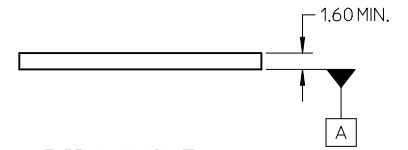
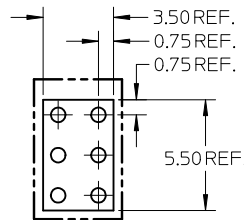
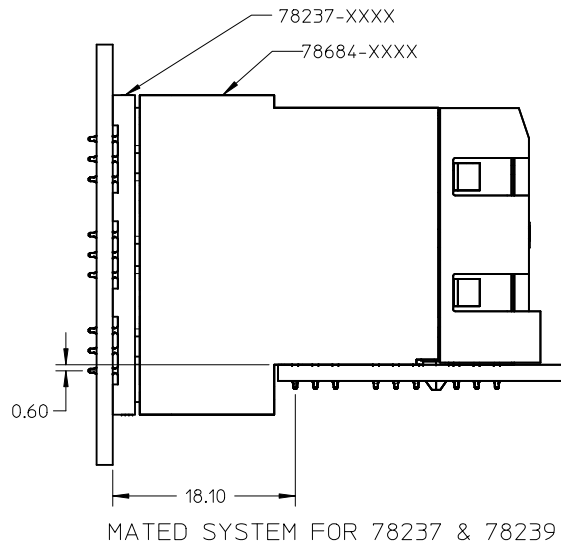
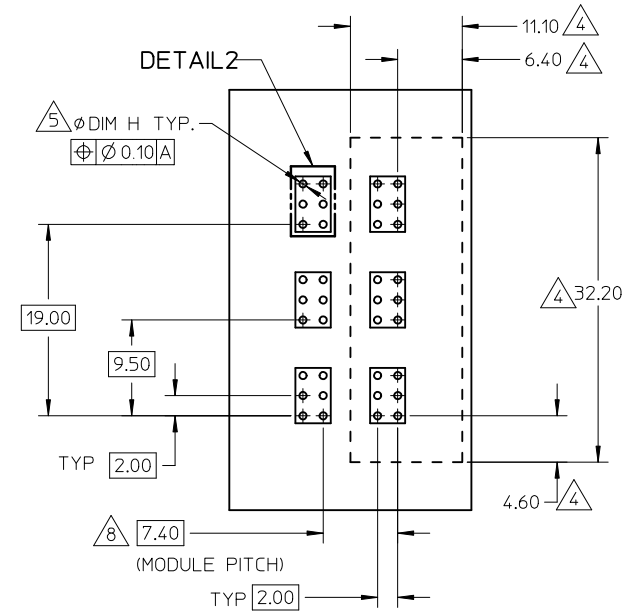
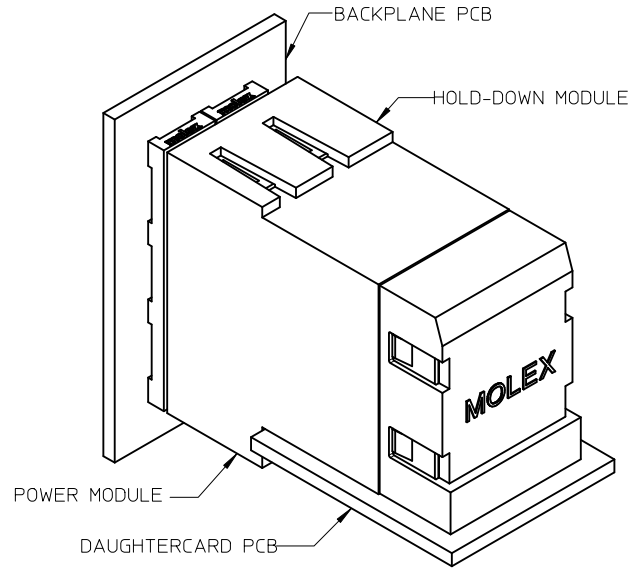
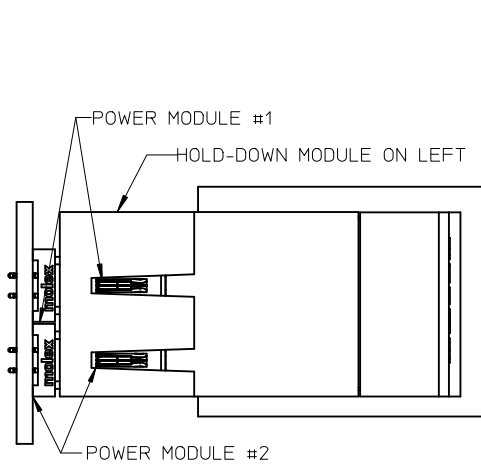
TYPE OF PLATED HOLE	DRILLED HOLE SIZE	PLATING THICKNESS	PLATED HOLE SIZE "ØDIM H"
TIN	0.838	0.007 MIN TIN/SILVER	0.725±0.075
SILVER	0.863	OVER 0.03 TO 0.08 COPPER PLATING	0.750±0.050

SEE SHEET 2 AND 3 FOR RECOMMENDED PCB LAYOUT.

- MATES WITH 78684-****.
- PART NUMBER AND YY-DDD DATE CODE.
- ADD 7.40mm FOR EACH ADDITIONAL POWER MODULE.
- PACKAGING PROCEDURE AS PER PK-78237-001.

REMOVE PB/SN EC NO: S2012-0580 DRWN: SHONG CHKD: LNG APPR: NAGESHK N 2012/01/31 2012/02/13 2012/02/13	DESCRIPTION REV A1	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)	DIMENSION STYLE	SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION
		▽=0 Ⓢ=0	mm INCH 4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.25 ± --- 1 PLACE ± --- ± --- ANGULAR ± 3 °	MM ONLY	NTS	METRIC	☉ □ PROJECTION
		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	DRAWN BY DATE LNG 2006/10/05 CHECKED BY DATE NRVITTPALLI 2006/10/27 APPROVED BY DATE NAGESHK N 2012/01/06	TITLE	I-TRAC POWER, 15 ROW VERTICAL RECEPTACLE PRESS-FIT		
		MATERIAL NO. 78237-1001	DOCUMENT NO. SD-78237-011	MOLEX INCORPORATED		SHEET NO. 1 OF 3	

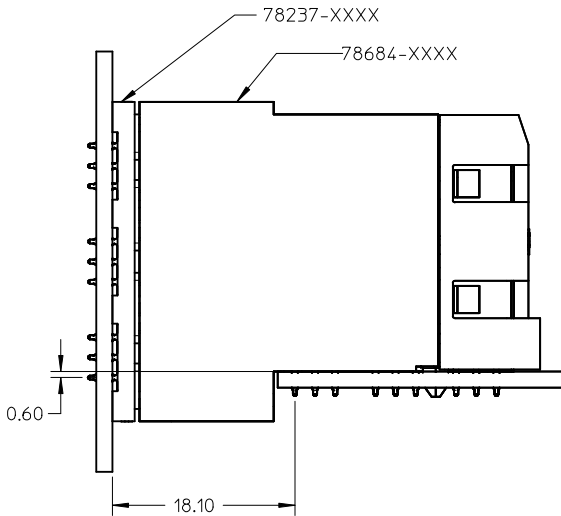
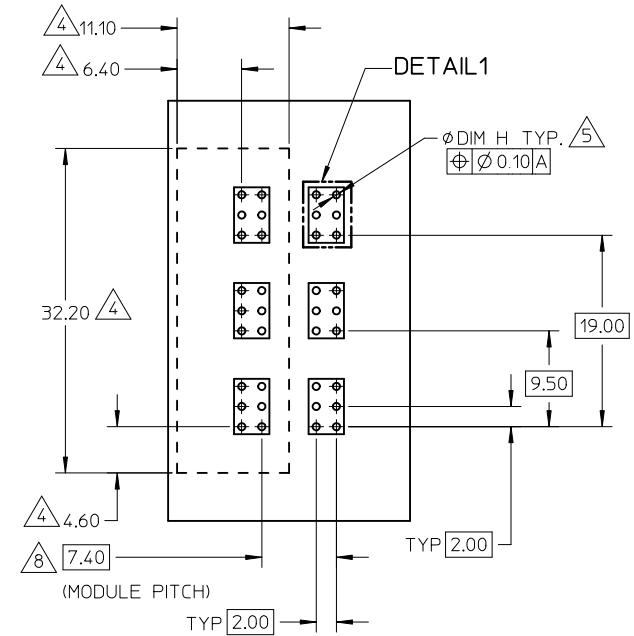
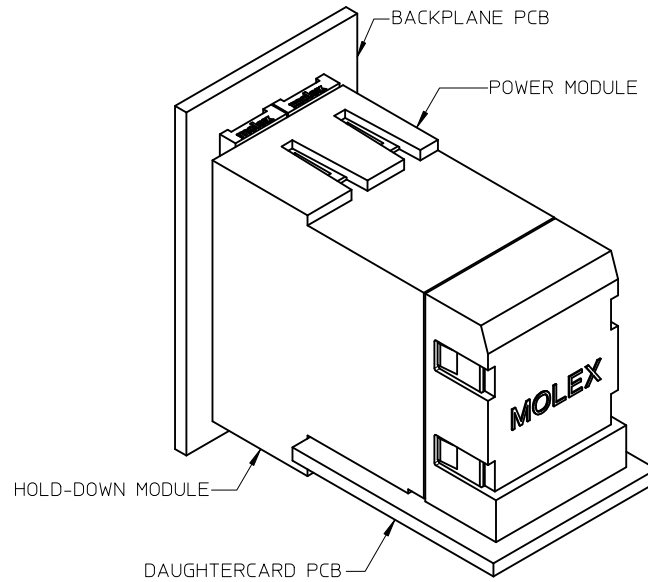
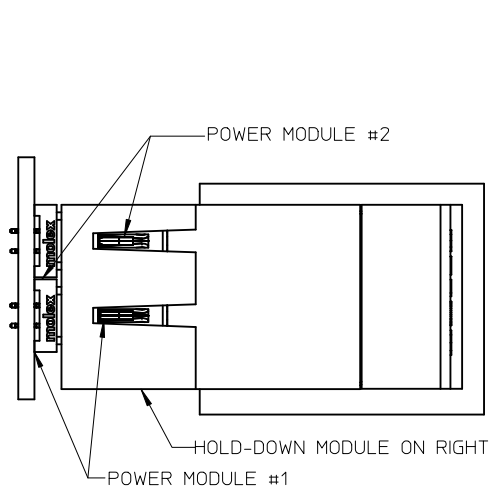
MATED DIMENSIONS AND PCB LAYOUT WITH HEADER HOLD DOWN LEFT



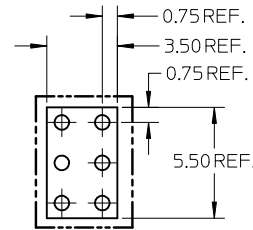
PCB LAYOUT
(MATED WITH HEADER HOLD DOWN MODULE LEFT)
COMPONENT SIDE SHOWN

REMOVE PB/SN EC NO: S2012-0580 DRWN: SHONG CHKD: LING APPR: NAGESHKN 2012/01/31 2012/02/13 2012/02/13	DESCRIPTION QUALITY SYMBOLS ▽=0 ◻=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY	SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION	
		4 PLACES ± --- ± ---	mm INCH	DRAWN BY LNG	DATE 2006/10/05	TITLE I-TRAC POWER, 15 ROW VERTICAL RECEPTACLE PRESS-FIT		
		3 PLACES ± --- ± ---		CHECKED BY NRVITTPALLI	DATE 2006/10/27	MOLEX INCORPORATED		
		2 PLACES ± 0.25 ± ---		APPROVED BY NAGESHKN	DATE 2012/01/06	MATERIAL NO. 78237-1001	DOCUMENT NO. SD-78237-011	SHEET NO. 2 OF 3
1 PLACE ± --- ± ---		ANGULAR ± 3 °		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION				
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS								

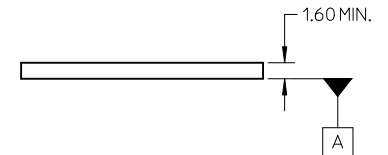
MATED DIMENSIONS AND PCB LAYOUT WITH HEADER HOLD DOWN RIGHT



MATED SYSTEM FOR 78237 & 78239



DETAIL1
COPPER PAD REFERENCE



PCB LAYOUT
(MATED WITH HEADER HOLD DOWN MODULE RIGHT)
COMPONENT SIDE SHOWN

REMOVE PB/SN EC NO: S2012-0580 DRWN: SHONG CHKD: LNG APPR: NAGESHKN	DESCRIPTION REV	QUALITY SYMBOLS ▽=0 ◻=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY	SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION		
			mm	INCH	DRAWN BY LNG	DATE 2006/10/05	TITLE I-TRAC POWER, 15 ROW VERTICAL RECEPTACLE PRESS-FIT			
			4 PLACES ± --- ± ---	3 PLACES ± --- ± ---	CHECKED BY NRVITTAPELLI	DATE 2006/10/27	MOLEX INCORPORATED			
			2 PLACES ± 0.25 ± ---	1 PLACE ± --- ± ---	APPROVED BY NAGESHKN	DATE 2012/01/06	DOCUMENT NO. SD-78237-011		SHEET NO. 3 OF 3	
A1			ANGULAR ± 3 °	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SIZE A3	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION			