

**PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION**

**Part Number:** [0877801001](#)  
**Status:** **Active**  
**Description:** 1.27mm (.050") Pitch Serial ATA Host Receptacle, Press-fit, Vertical, Extended Height, 0.76µm (30µ") Gold (Au) Selective, 22 Circuits, Leadfree

**Documents:**

[3D Model](#) [Product Specification PS-87780-024 \(PDF\)](#)  
[Drawing \(PDF\)](#) [RoHS Certificate of Compliance \(PDF\)](#)

**General**

Product Family	PCB Receptacles
Series	<a href="#">87780</a>
Application	Board-to-Board
Product Literature Order No	SNG-029
Product Name	Serial ATA

**Physical**

Circuits (Loaded)	22
Circuits Detail	Power 15 pins Signal 7 pins
Durability (mating cycles max)	500
Glow-Wire Compliant	No
Guide to Mating Part	Yes
Lock to Mating Part	Yes
Material - Metal	Copper
Material - Plating Mating	Gold
Material - Plating Termination	Tin
Number of Rows	2
Orientation	Vertical
PC Tail Length (in)	0.136 In
PC Tail Length (mm)	3.45 mm
PCB Locator	Yes
PCB Retention	Yes
PCB Thickness Recommended (in)	0.060 In, 0.062 In, 0.070 In, 0.075 In, 0.080 In
PCB Thickness Recommended (mm)	1.50 mm, 1.60 mm, 1.80 mm, 1.90 mm, 2.00 mm
Packaging Type	Tray
Pitch - Mating Interface (in)	0.050 In
Pitch - Mating Interface (mm)	1.27 mm
Plating min: Mating (µin)	30
Plating min: Mating (µm)	0.76
Plating min: Termination (µin)	101.6
Plating min: Termination (µm)	2.54
Polarized to Mating Part	Yes
Polarized to PCB	Yes
Surface Mount Compatible (SMC)	Yes
Temperature Range - Operating	-40°C to +105°C
Termination Interface: Style	Through Hole

**Electrical**

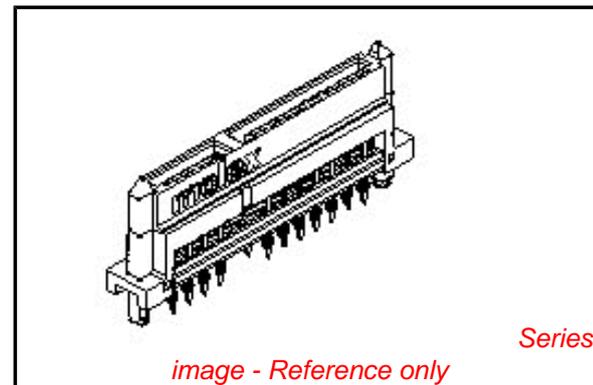
Current - Maximum per Contact	1.5A
Voltage - Maximum	30V

**Solder Process Data**

Duration at Max. Process Temperature (seconds)	10
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**Material Info**

**Reference - Drawing Numbers**



**EU RoHS**

**ELV and RoHS Compliant**  
**REACH SVHC**  
 Not Reviewed  
**Halogen-Free Status**

**China RoHS**



**Need more information on product environmental compliance?**

Email [productcompliance@molex.com](mailto:productcompliance@molex.com)  
 For a multiple part number RoHS Certificate of Compliance, [click here](#)

Please visit the [Contact Us](#) section for any non-product compliance questions.

**Search Parts in this Series**

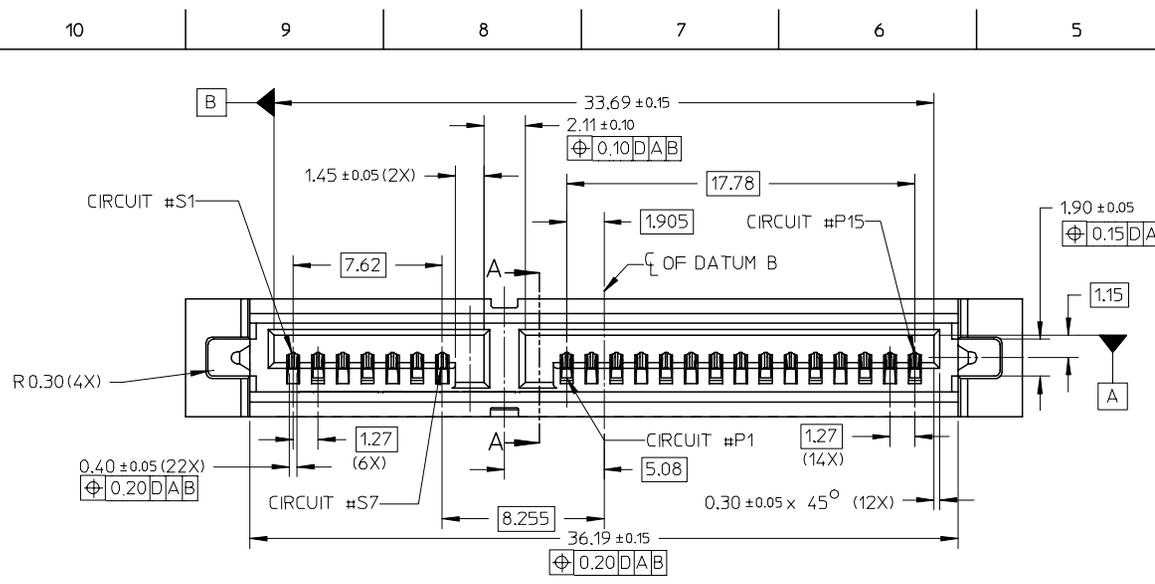
[87780Series](#)

**Mates With**

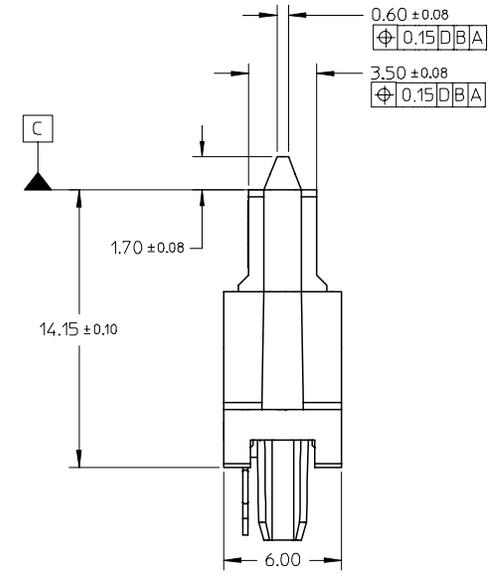
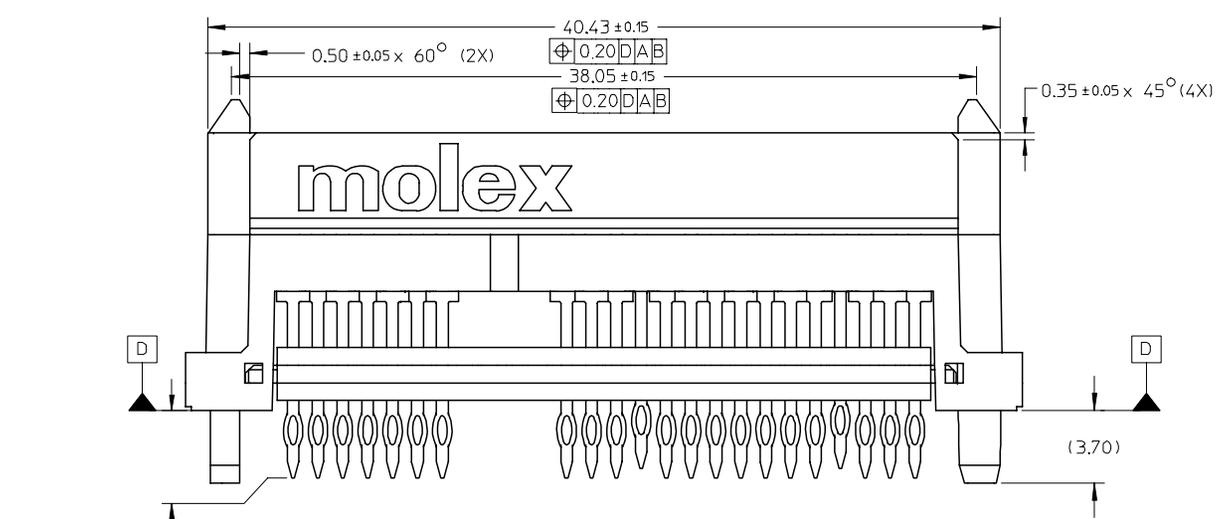
[87679](#) , [87799](#) , [87703](#)

This document was generated on 04/09/2010

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- NOTES:
- MATERIAL: LIQUID CRYSTALLINE POLYMER (LCP), GLASS FILLED, UL 94V-0. COLOR: BLACK  
TERMINAL: COPPER ALLOY
  - PLATING  
CONTACT: 0.76µm MIN. SELECTIVE GOLD OVER 1.27µm MIN. NICKEL UNDERPLATE  
SOLDERTAIL: 2.54µm MIN. TIN OVER 1.27µm MIN. NICKEL UNDERPLATE
  - MOLEX LOGO LOCATED APPROXIMATELY AS SHOWN
  - MAXIMUM WARPAGE OF 0.13 mm OVER THE LENGTH OF THE CONNECTOR IN ANY DIRECTION BEFORE AND AFTER EXPOSURE TO MOLEX'S REFLOW PROFILE.
  - PCB THICKNESS RANGE FROM 1.50 mm TO 2.00 mm
  - KEEP OUT ZONE ON BOTH SIDE OF PCB FOR CONNECTOR INSERTION AND EXTRACTION TOOL
  - PRODUCT SPECIFICATION: PS-87780-024 APPLIES
  - PACKAGING  
30 CONNECTORS PER TRAY
  - MATES WITH SATA PLUG SERIES: 87679, 87703, 87799.



THE DESIGN IS BASED ON DESIGN OBJECTIVES AND IS STRICTLY TENTATIVE. IT MAY CHANGE BASED ON RESULTS OF ADDITIONAL DESIGN REVIEWS & VERIFICATIONS

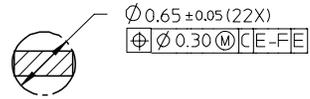
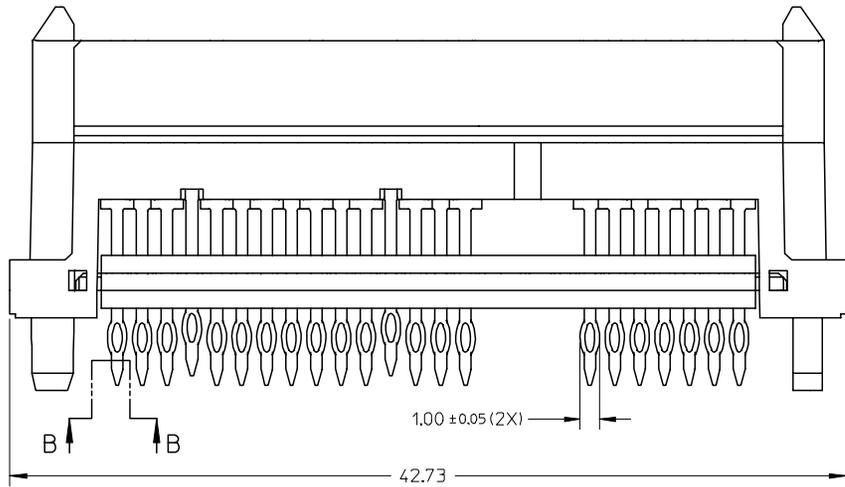
EC NO: S2006-0465	2005/11/09	DRWN:KHLIM	2005/11/09	CHKD:SHONG	2005/11/10	APPR:KCLING	2005/11/10
A1	REV	DESCRIPTION					

QUALITY SYMBOLS	▽=0
	△=0

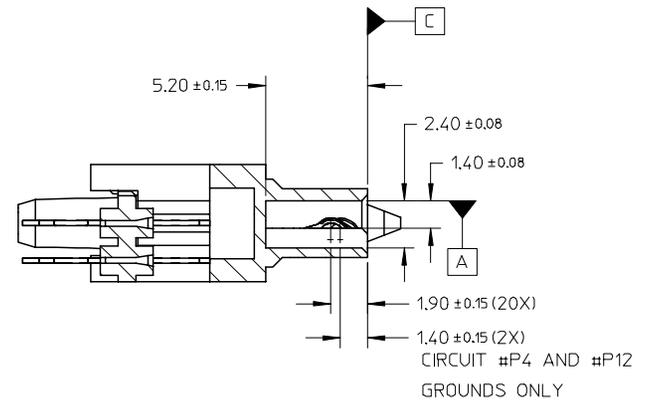
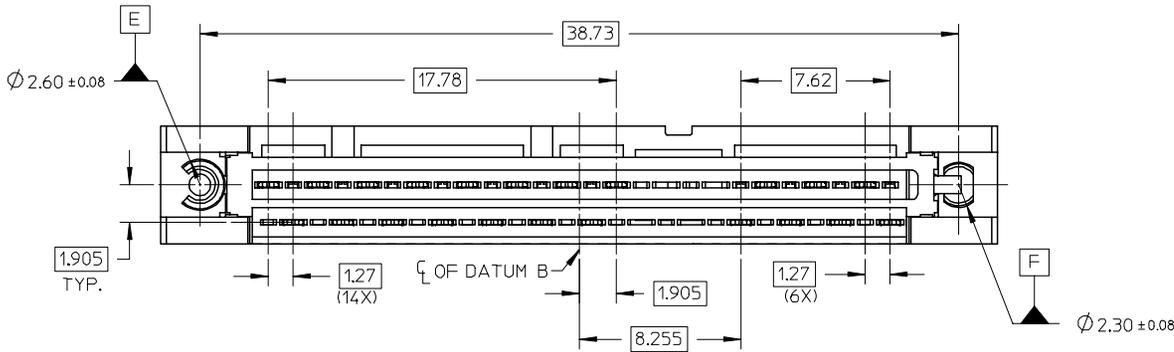
GENERAL TOLERANCES (UNLESS SPECIFIED)	
	mm
	INCH
4 PLACES	± ---
3 PLACES	± ---
2 PLACES	± 0.20
1 PLACE	± ---
ANGULAR ± 3°	
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	

DIMENSION STYLE		SCALE		DESIGN UNITS		THIRD ANGLE PROJECTION	
MM ONLY		NTS		METRIC			
DRAWN BY	DATE	TITLE					
KHLIM	2005/01/23	SERIAL ATA BACKPLANE EXTENDED HEIGHT PRESS FIT RECEPTACLE					
CHECKED BY	DATE						
KCLING	2005/02/03	MOLEX INCORPORATED					
APPROVED BY	DATE						
SKTOH	2005/02/04	MATERIAL NO.		DOCUMENT NO.		SHEET NO.	
		87780-1001		SD-87780-031		1 OF 4	
SIZE	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION						
A3							

10 9 8 7 6 5 4 3 2 1



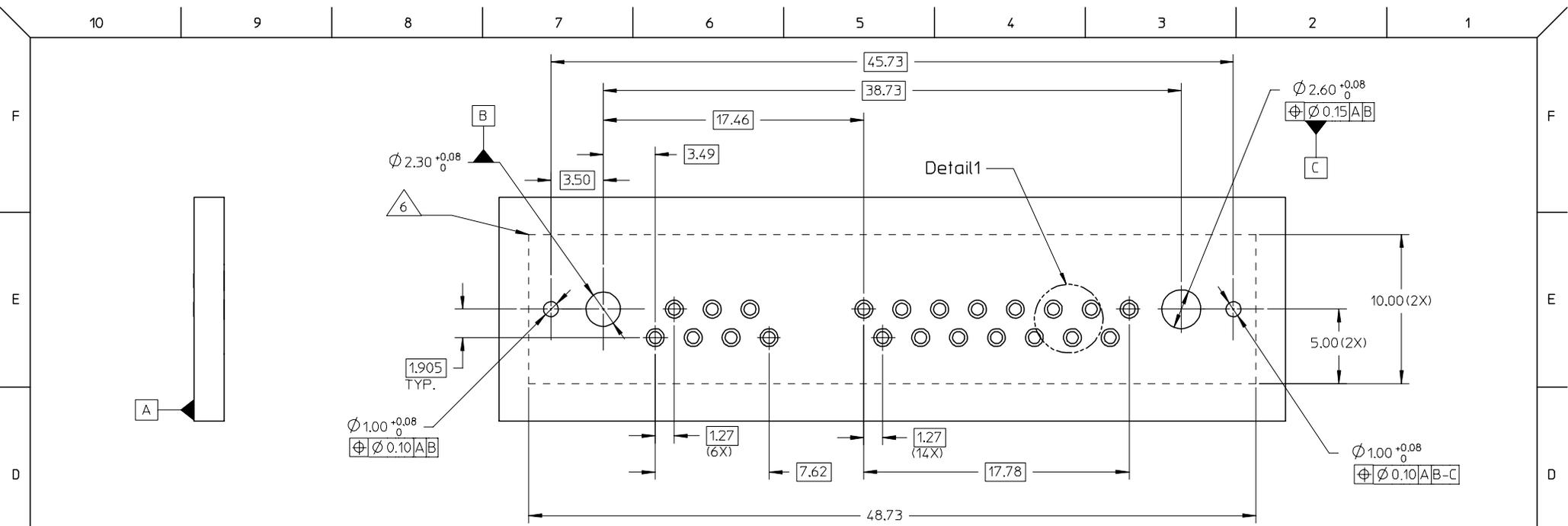
SECTION B-B



SECTION A-A

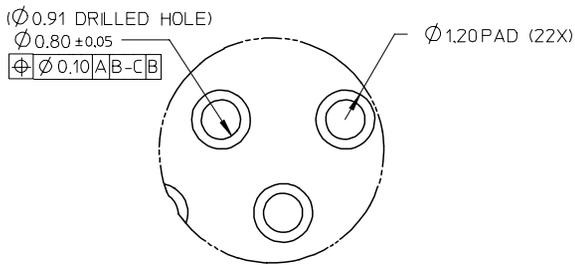
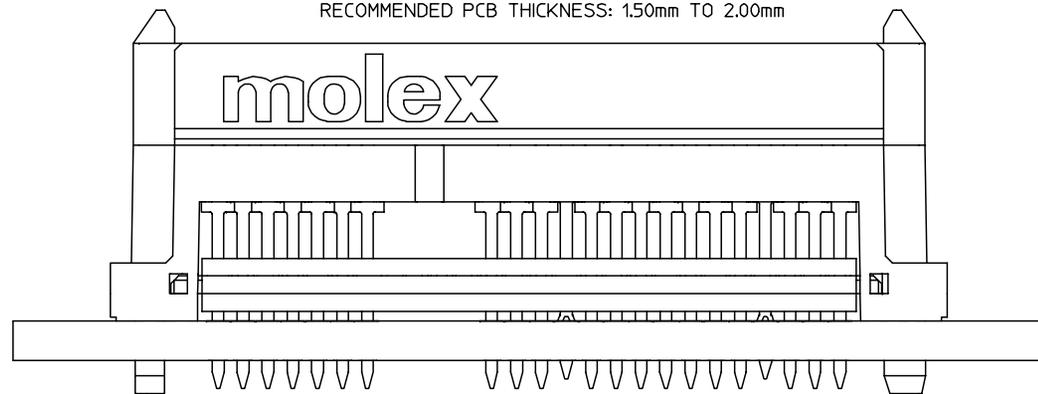
EC NO: S2006-0465 2005/11/09 DRWN:KHLIM 2005/11/09 CHKD:SHONG 2005/11/10 APPR:KCLING	QUALITY SYMBOLS ▽=0 ▽=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION			
		4 PLACES ± --- ± ---	3 PLACES ± --- ± ---	2 PLACES ± 0.20 ± ---	1 PLACE ± --- ± ---	ANGULAR ± 3 °	DRAWN BY KHLIM	DATE 2005/01/23	SERIAL ATA BACKPLANE EXTENDED HEIGHT PRESS FIT RECEPTACLE		
							CHECKED BY KCLING	DATE 2005/02/03			
							APPROVED BY SKTOH	DATE 2005/02/04	MOLEX INCORPORATED		
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		MATERIAL NO. 87780-1001		DOCUMENT NO. SD-87780-031		SHEET NO. 2 OF 4					

9 8 7 6 5 4 3 2 1



RECOMMENDED PCB LAYOUT

RECOMMENDED PCB THICKNESS: 1.50mm TO 2.00mm



Detail1

EC NO: S2006-0465 2005/11/09 DRWN:KHLIM 2005/11/09 CHKD:SHONG 2005/11/10 APPR:KCLING	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 ± 0.20 ± ---	1 PLACE ± --- ± ---	ANGULAR ± 3 °	DRAWN BY KHL IM	DATE 2005/01/23	TITLE SERIAL ATA BACKPLANE EXTENDED HEIGHT PRESS FIT RECEPTACLE		
							APPROVED BY SKTOH	DATE 2005/02/04	MOLEX INCORPORATED		
		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS					MATERIAL NO. 87780-1001	DOCUMENT NO. SD-87780-031	SHEET NO. 3 OF 4		

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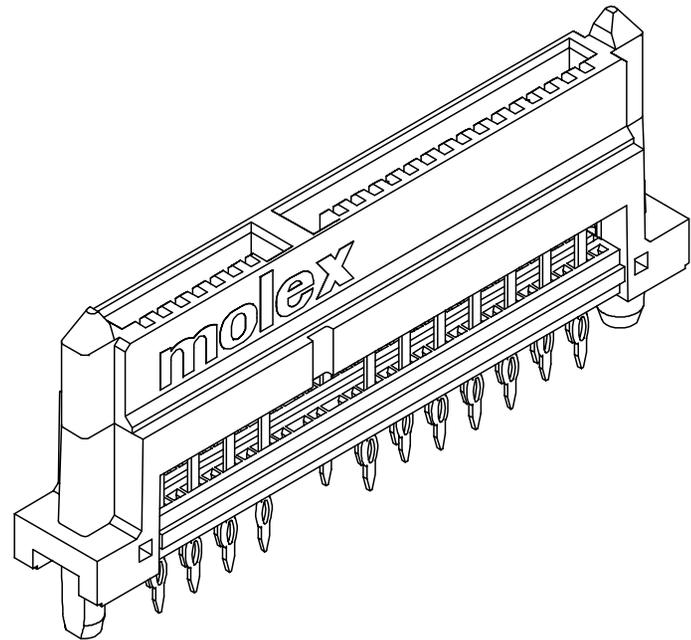
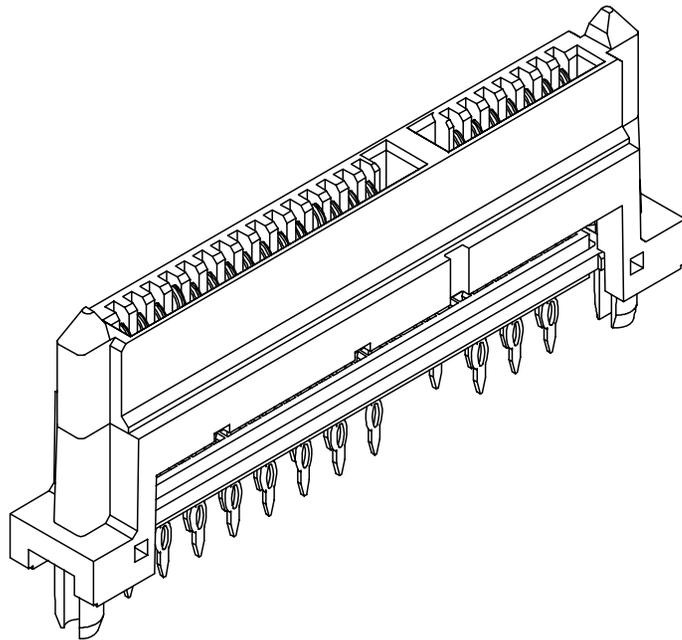
E

D

C

B

A



EC NO: S2006-0465 2005/11/09 DRWN:KHLIM 2005/11/09 CHKD:SHONG APPR:KCLING 2005/11/10	DESCRIPTION REV	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 ± 0.20 ± --- 1 PLACE ± --- ± ---	mm    INCH	DRAWN BY KHLIM	DATE 2005/01/23	TITLE SERIAL ATA BACKPLANE EXTENDED HEIGHT PRESS FIT RECEPTACLE				
			ANGULAR ± 3 °	CHECKED BY KCLING	DATE 2005/02/03						
		A1		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	APPROVED BY SKTOH	DATE 2005/02/04	MATERIAL NO. 87780-1001	DOCUMENT NO. SD-87780-031	MOLEX INCORPORATED		SHEET NO. 4 OF 4
			SIZE A3		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION						

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