

PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION

Part Number: [0877811001](#)
Status: **Active**
Description: 1.27mm (.050") Pitch Serial ATA Host Receptacle, Surface Mount, Vertical, Extended Height, 0.76µm (30µ") Gold (Au) Selective, 22 Circuits, Leadfree

Documents:

[3D Model](#) [Product Specification PS-87781-005 \(PDF\)](#)
[Drawing \(PDF\)](#) [RoHS Certificate of Compliance \(PDF\)](#)

General

Product Family	PCB Receptacles
Series	87781
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	None
Material - Plating Mating	Gold
Material - Plating Termination	Tin
Number of Rows	1
Orientation	Vertical
PCB Locator	Yes
PCB Retention	None
Packaging Type	Tray
Pitch - Mating Interface (in)	0.050 In
Pitch - Mating Interface (mm)	1.27 mm
Plating min: Mating (µin)	30.4
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)	N/A
Temperature Range - Operating	-40°C to +105°C
Termination Interface: Style	Through Hole and Surface Mount

Electrical

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

Solder Process Data

Duration at Max. Process Temperature (seconds)	10
Lead-free Process Capability	Reflow Capable (SMT only)
Max. Cycles at Max. Process Temperature	1
Process Temperature max. C	260

Material Info

Reference - Drawing Numbers

Product Specification	PS-87781-005
Sales Drawing	SD-87781-017

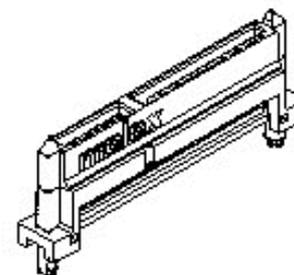


image - Reference only

Series

EU RoHS

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

China RoHS



Halogen-Free
Need more information on product environmental compliance?

Email 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

[87781Series](#)

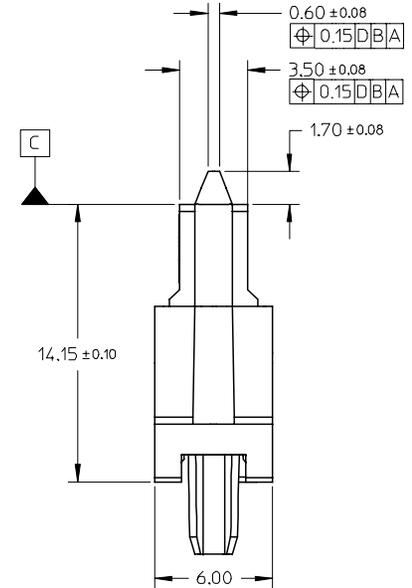
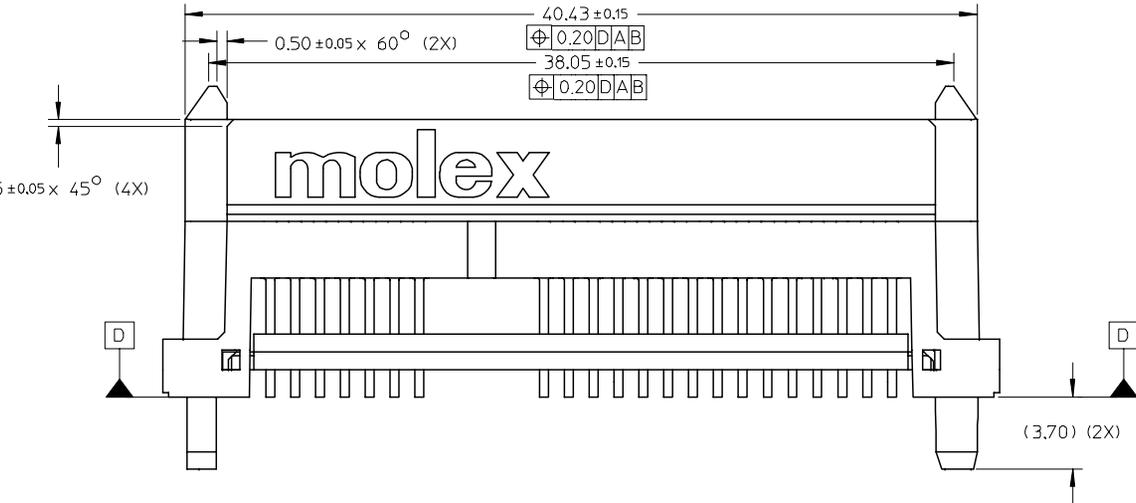
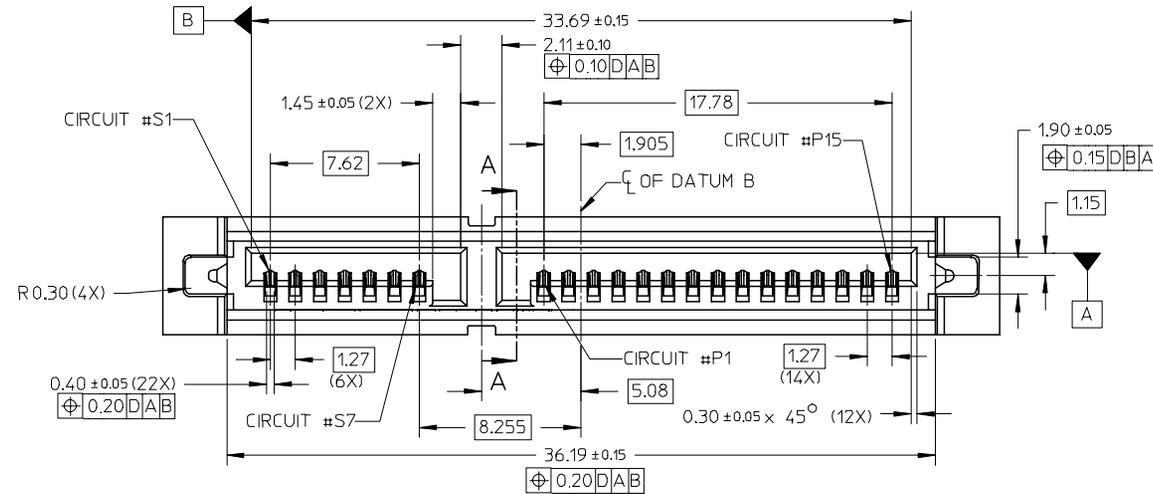
Mates With

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

This document was generated on 04/09/2010

PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION

10 9 8 7 6 5 4 3 2 1



NOTES:

- MATERIAL: HIGH TEMPERATURE THERMOPLASTIC, 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 MAX. 260°C FOR 10 SECONDS
- PRODUCT SPECIFICATION: PS-87781-005 APPLIES
- PACKAGING
30 CONNECTORS PER TRAY

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

EC NO: S2005-0571	2005/02/05	DRWN:KHLIM	2005/02/14	CHKD:KCLIM	2005/02/14	APPR:SKTOH	2005/02/16
A	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	MM ONLY
DRAWN BY	KHL IM
DATE	2004/01/12
CHECKED BY	KCL ING
DATE	2005/02/03
APPROVED BY	SKTOH
DATE	2005/02/04
MATERIAL NO.	87781-1001
SIZE	A3

SCALE	NTS	DESIGN UNITS	METRIC	THIRD ANGLE PROJECTION
TITLE		SERIAL ATA BACKPLANE EXTENDED HEIGHT SIL SMT RECEPTACLE		
MOLEX INCORPORATED		MOLEX INCORPORATED		
DOCUMENT NO.	SD-87781-017	SHEET NO.	1 OF 4	
THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION				

9 8 7 6 5 4 3 2 1

10 9 8 7 6 5 4 3 2 1

F

E

D

C

B

A

F

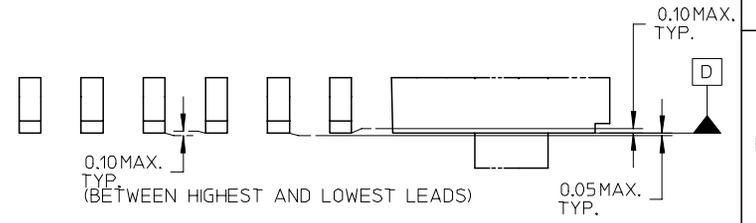
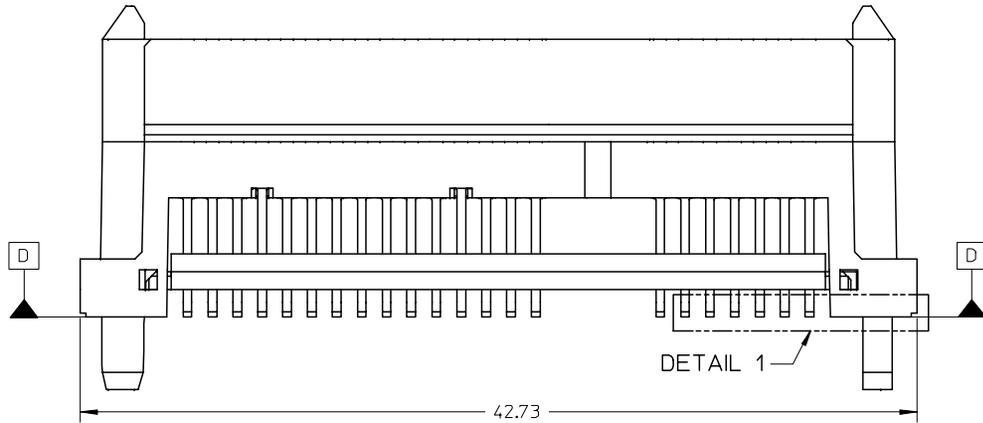
E

D

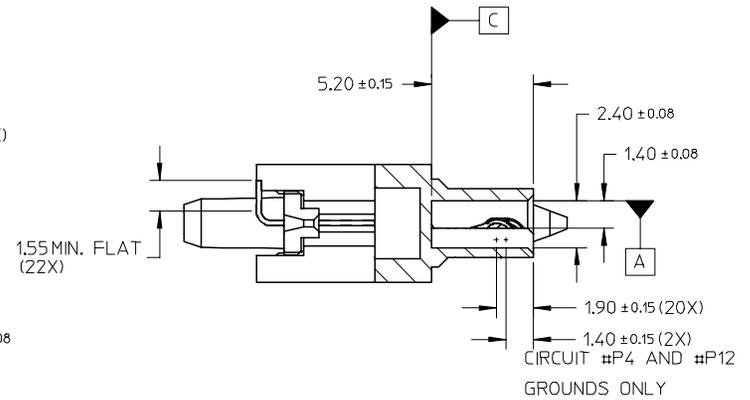
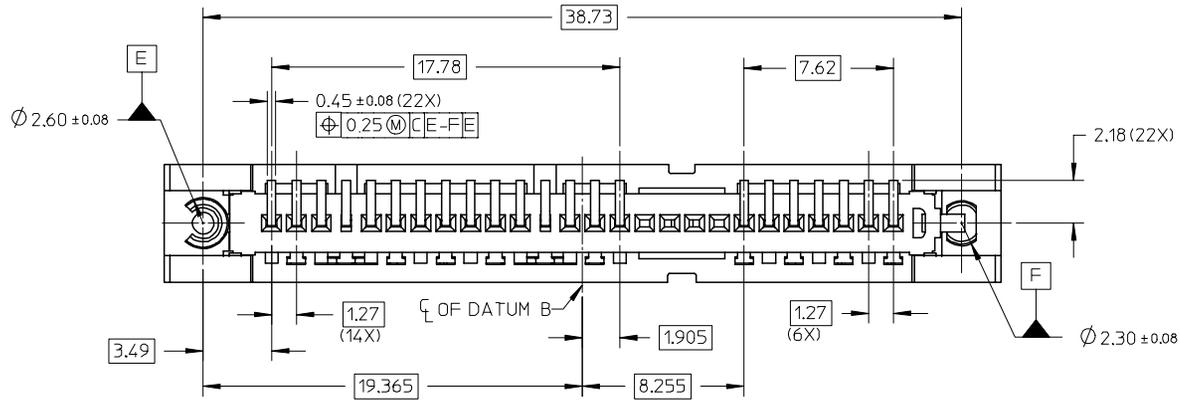
C

B

A



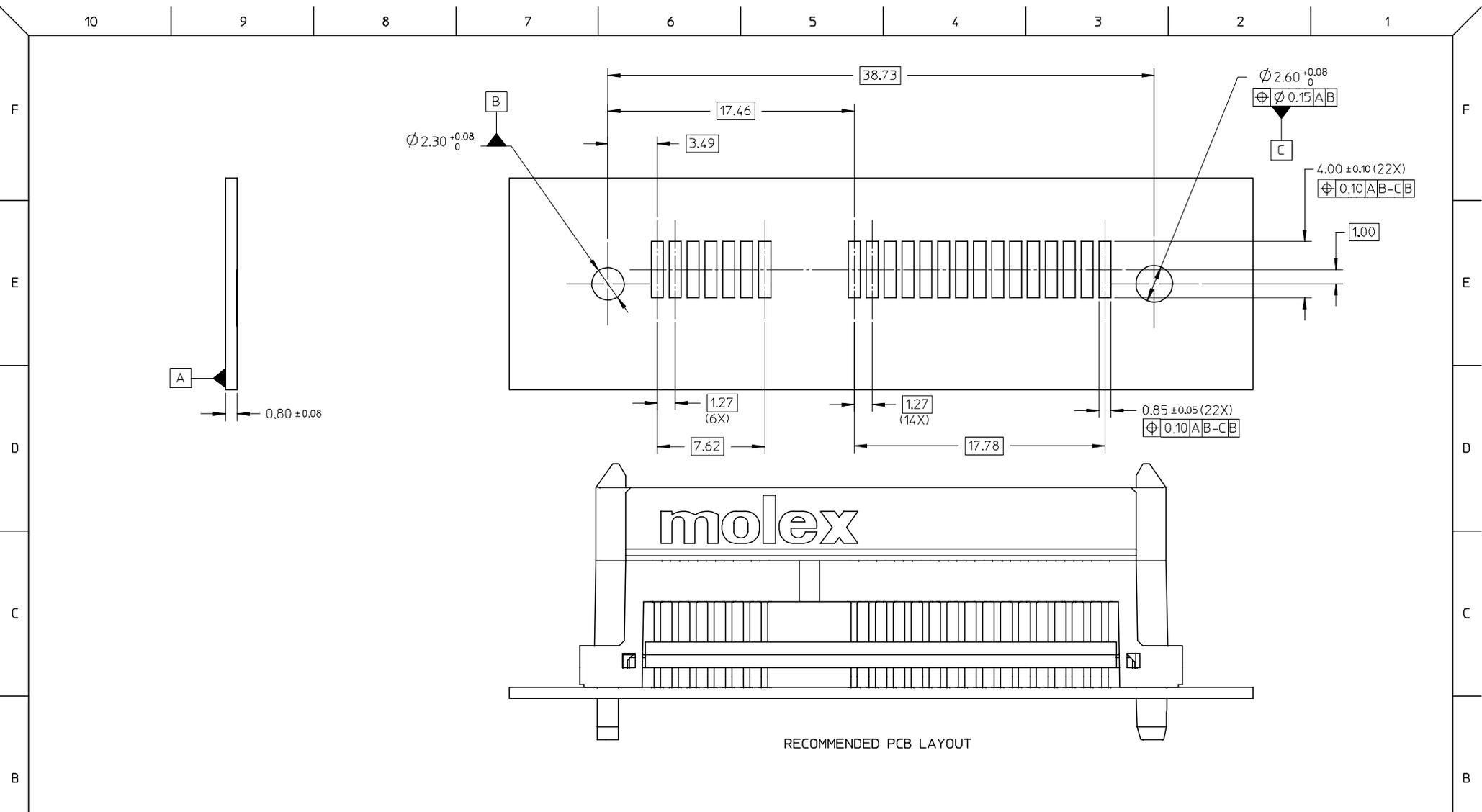
DETAIL 1



SECTION A-A

EC NO: S2005-0571 DRWN:KHLIM 2005/02/05 CHKD:KCLING 2005/02/14 APPR:SKTOH 2005/02/16	QUALITY SYMBOLS ▽=0 ◻=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION	
				DRAWN BY DATE KHLIM 2004/01/12		TITLE SERIAL ATA BACKPLANE EXTENDED HEIGHT SIL SMT RECEPTACLE			
				CHECKED BY DATE KCLING 2005/02/03		MOLEX INCORPORATED			
				APPROVED BY DATE SKTOH 2005/02/04		MATERIAL NO. 87781-1001		DOCUMENT NO. SD-87781-017	
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					

9 8 7 6 5 4 3 2 1



RECOMMENDED PCB LAYOUT

EC NO: S2005-0571 DRWN:KHLIM 2005/02/05 CHKD:KCLING 2005/02/14 APPR:SKTOH 2005/02/16	QUALITY SYMBOLS ▽=0 ▽C=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 2004/01/12	TITLE SERIAL ATA BACKPLANE EXTENDED HEIGHT SIL SMT RECEPTACLE		
							CHECKED BY KCLING	DATE 2005/02/03	MOLEX MOLEX INCORPORATED		
							APPROVED BY SKTOH	DATE 2005/02/04	DOCUMENT NO. SD-87781-017		
A	REV	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS			MATERIAL NO. 87781-1001	SIZE A3	SHEET NO. 3 OF 4		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		

10 9 8 7 6 5 4 3 2 1

F

F

E

E

D

D

C

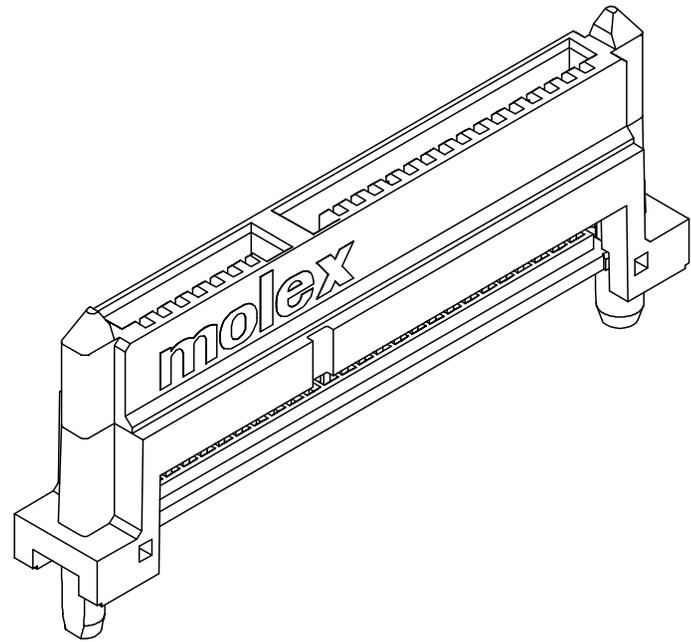
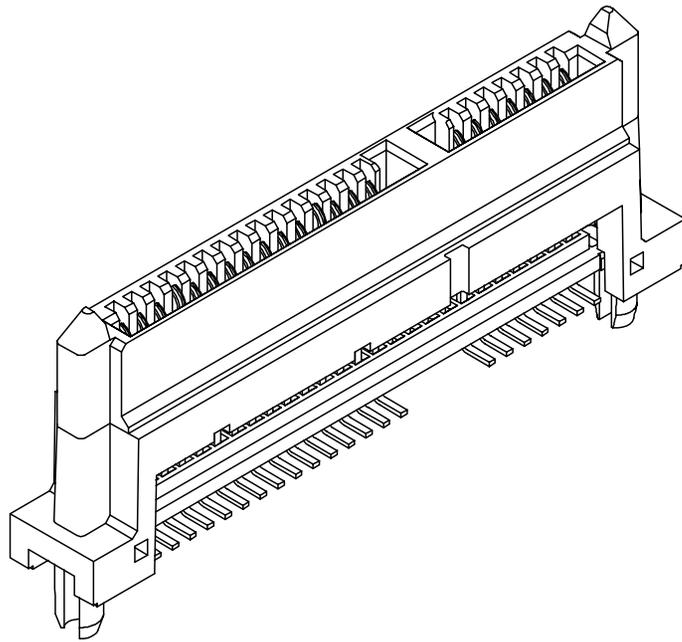
C

B

B

A

A



EC NO: S2005-0571 2005/02/05 DRWN:KHLIM 2005/02/14 CHKD:KCLING APPR:SKTOH 2005/02/16	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 2004/01/12	TITLE SERIAL ATA BACKPLANE EXTENDED HEIGHT SIL SMT RECEPTACLE				
			ANGULAR ± 3 °		CHECKED BY KCLING	DATE 2005/02/03	MOLEX INCORPORATED				
			DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		APPROVED BY SKTOH	DATE 2005/02/04	MATERIAL NO. 87781-1001	DOCUMENT NO. SD-87781-017	SHEET NO. 4 OF 4		

9 8 7 6 5 4 3 2 1