

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

**Part Number:** **0783200001**  
**Status:** **Active**  
**Overview:** micro\_sata  
**Description:** 1.27mm (.050") Pitch High Speed Micro Serial ATA Device Receptacle for 1.8" HDD/SSD, SMT, Right Angle, Top Mount, 16 Circuits, Tray, Lead free

**Documents:**

[3D Model](#) [Product Specification PS-78320-002 \(PDF\)](#)  
[Drawing \(PDF\)](#) [RoHS Certificate of Compliance \(PDF\)](#)

**Agency Certification**

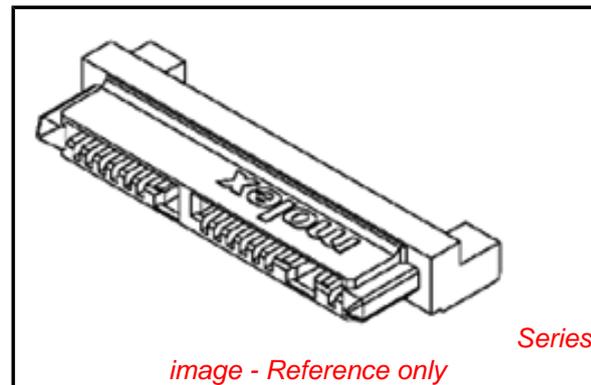
CSA LR19980  
 UL E29179

**General**

Product Family PCB Receptacles  
 Series 78320  
 Application Board-to-Board  
 Overview micro\_sata  
 Product Name Micro Serial ATA, Serial ATA

**Physical**

Circuits (Loaded) 16  
 Circuits (maximum) 16  
 Circuits Detail With optional manufacturing pins (S1 to S7 and P1 to P9)  
 Color - Resin Black  
 Durability (mating cycles max) 500  
 Flammability 94V-0  
 Glow-Wire Compliant No  
 Guide to Mating Part Yes  
 Keying to Mating Part Yes  
 Lock to Mating Part Yes  
 Material - Metal Copper Alloy  
 Material - Plating Mating Gold  
 Material - Plating Termination Tin  
 Material - Resin Nylon  
 Number of Rows 1  
 Orientation Right Angle  
 PCB Locator Yes  
 PCB Retention Yes  
 Packaging Type Tray  
 Pitch - Mating Interface (in) 0.050 In, 0.200 In  
 Pitch - Mating Interface (mm) 1.27 mm, 5.08 mm  
 Pitch - Term. Interface (in) 0.050 In, 0.200 In  
 Pitch - Term. Interface (mm) 1.27 mm, 5.08 mm  
 Plating min: Mating (µin) 30  
 Plating min: Mating (µm) 0.76  
 Plating min: Termination (µin) 100  
 Plating min: Termination (µm) 2.54  
 Polarized to Mating Part Yes  
 Polarized to PCB Yes  
 Stackable No  
 Temperature Range - Operating -40°C to +105°C  
 Termination Interface: Style Surface Mount



*image - Reference only*

**EU RoHS**

**ELV and RoHS Compliant**  
**REACH SVHC Contains SVHC: No**  
**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**

[78320Series](#)

**Mates With**

[78103](#) , [78283](#) and [78285](#) Micro SATA Device Plugs

**Electrical**

Current - Maximum per Contact	1.5A
Grounding to PCB	Yes
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

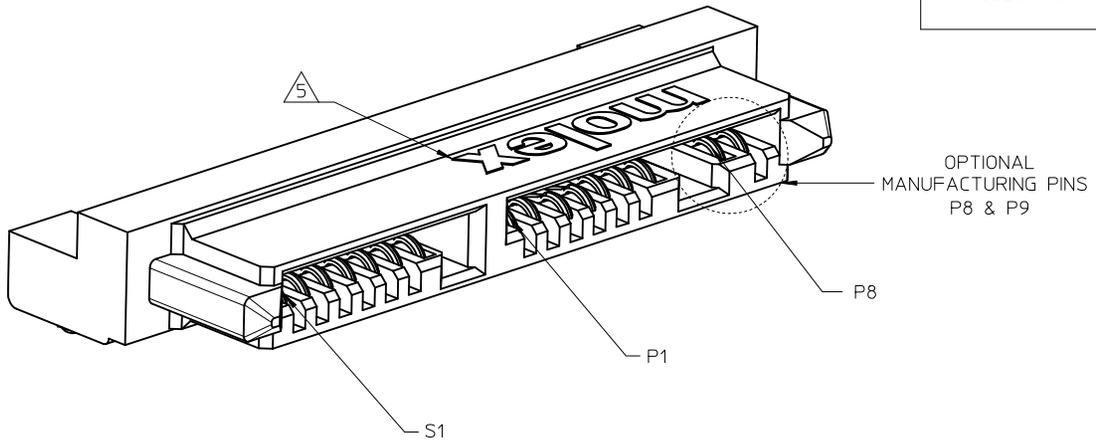
**Material Info****Reference - Drawing Numbers**

Packaging Specification	PK-78320-001
Product Specification	PS-78320-002
Sales Drawing	SD-78320-001

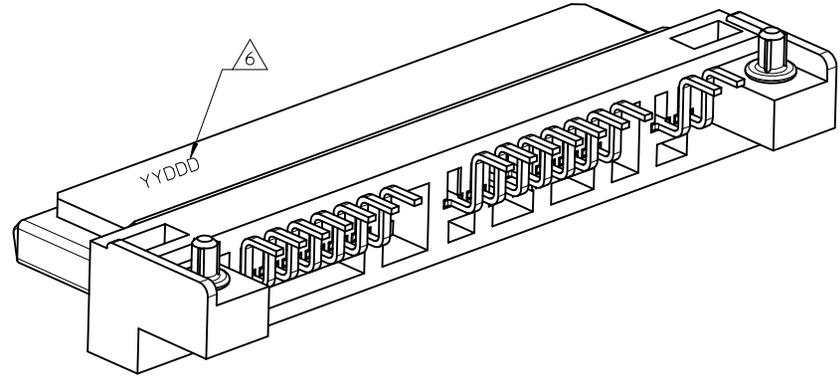
This document was generated on 05/21/2010

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5	4	3	2	1
PART NUMBER	TOTAL PINS	DESCRIPTION		
78320-0001	16	WITH OPTIONAL MANUFACTURING PINS (S1 TO S7 & P1 TO P9)		
78320-1001	14	WITHOUT OPTIONAL MANUFACTURING PINS (S1 TO S7 & P1 TO P7)		

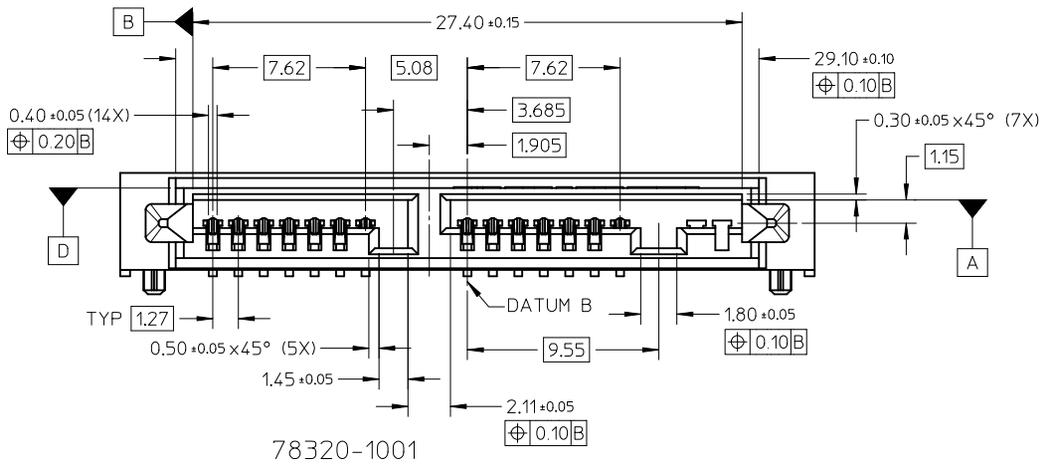


- NOTES:
- MATERIAL : NYLON (PA), GLASS FILLED, UL 94V-0, BLACK  
TERMINAL/LOCATING PIN : COPPER ALLOY
  - FINISHES :  
 TERMINAL : 0.76 $\mu$ m MIN. SELECTIVE GOLD OVER  
 1.27 $\mu$ m MIN. NICKEL UNDERPLATE  
 : 2.54 $\mu$ m MIN. TIN OVER  
 1.27 $\mu$ m MIN. NICKEL UNDERPLATE  
 LOCATING PIN : 3.81 $\mu$ m MIN. TIN OVER  
 2.00 $\mu$ m MIN. NICKEL UNDERPLATE
  - PRODUCT SPECIFICATION: PS-78320-002
  - PACKAGING : TRAY
  - MOLEX LOGO LOCATED APPROXIMATELY AS SHOWN
  - DATE CODE LOCATED APPROXIMATELY AS SHOWN
  - THIS PRODUCT IS COMPLIANT TO RoHS DIRECTIVE WITH THE FOLLOWING BANNED SUBSTANCES - LEAD, MERCURY, CADMIUM, HEXAVALENT CHROMIUM, POLYBROMINATED BIPHENYLS AND POLYBROMINATED DIPHENYLS ETHERS.
  - NON FUNCTIONAL CORING MAY VARY.

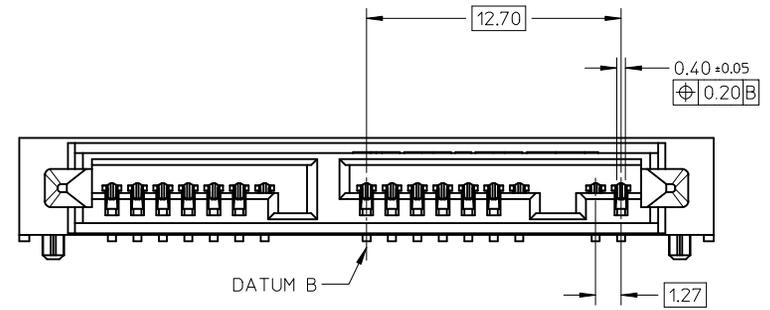


UPDATE VIEWS EC NO: S2010-0590 DRWN:GMENARLY 2010/01/13 CHKD:CGOH 2010/01/25 APPR:BOKOK 2010/01/28	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE		SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION	
	$\nabla_A=0$	mm INCH		MM ONLY		NTS	METRIC		
	$\nabla_C=0$	4 PLACES	$\pm$ ---	$\pm$ ---	DRAWN BY	DATE	TITLE		
	$\nabla_P=0$	3 PLACES	$\pm$ ---	$\pm$ ---	GMENARLY	2007/08/23	SERIAL ATA RECEPTACLE		
	2 PLACES	$\pm$ 0.20	$\pm$ ---	CHECKED BY	DATE	1.8 INCH HDD/SSD			
	1 PLACE	$\pm$ ---	$\pm$ ---	YKOH	2007/10/04	R/A, SMT, 3.80MM HEIGHT			
		ANGULAR $\pm$ 3 °		APPROVED BY	DATE	MOLEX INCORPORATED			
		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		BOKOK	2010/01/26	MOLEX INCORPORATED			
				MATERIAL NO.		DOCUMENT NO.		SHEET NO.	
				SEE TABLE		SD-78320-001		1 OF 5	
				SIZE	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION				
				A3					

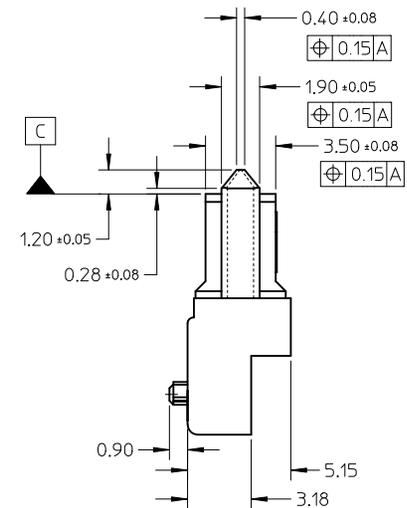
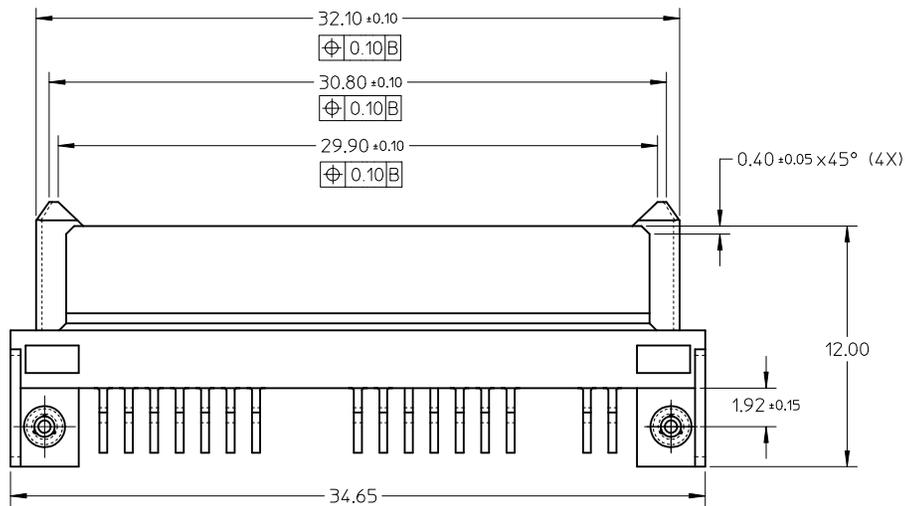
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78320-1001

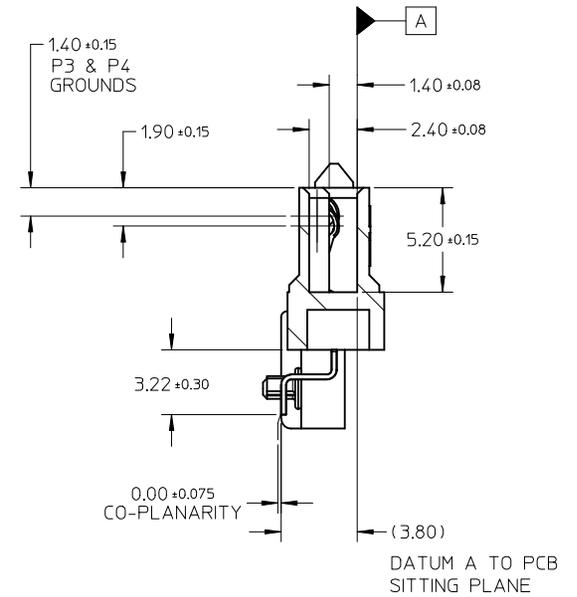
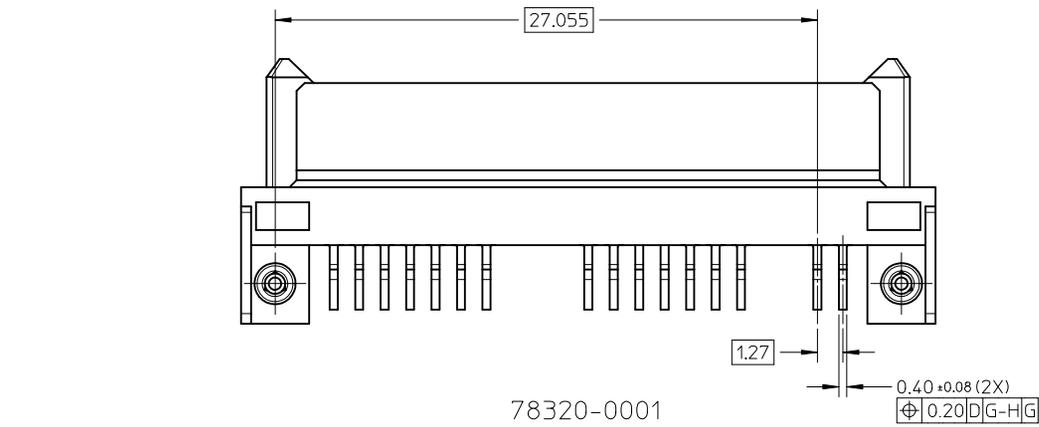
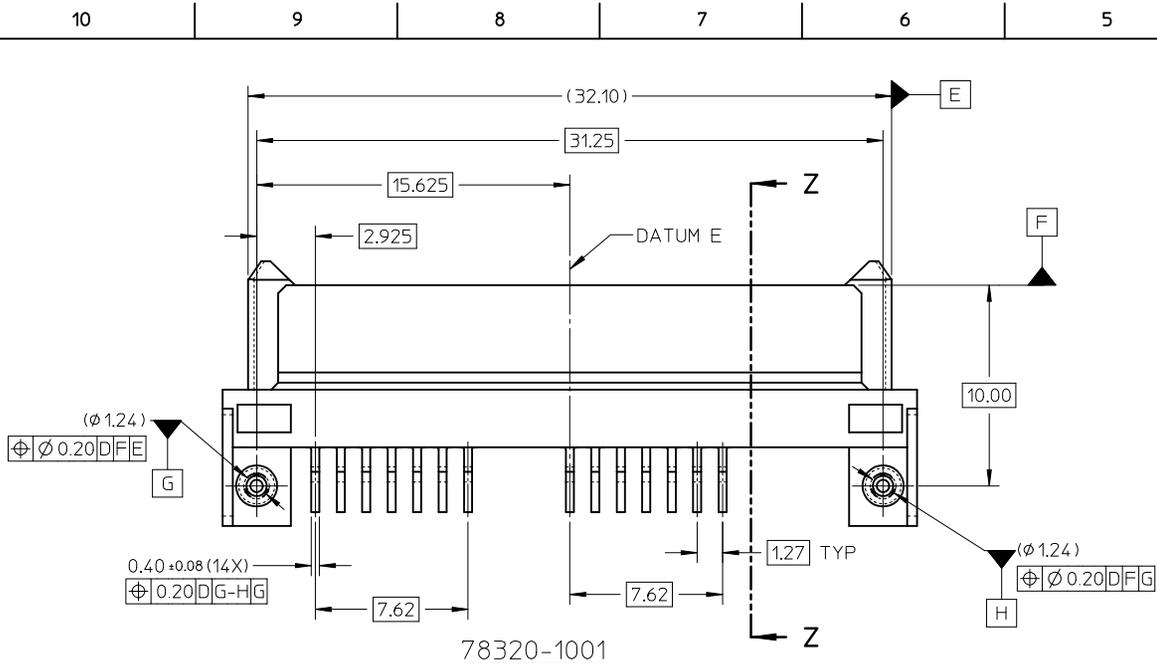


78320-0001



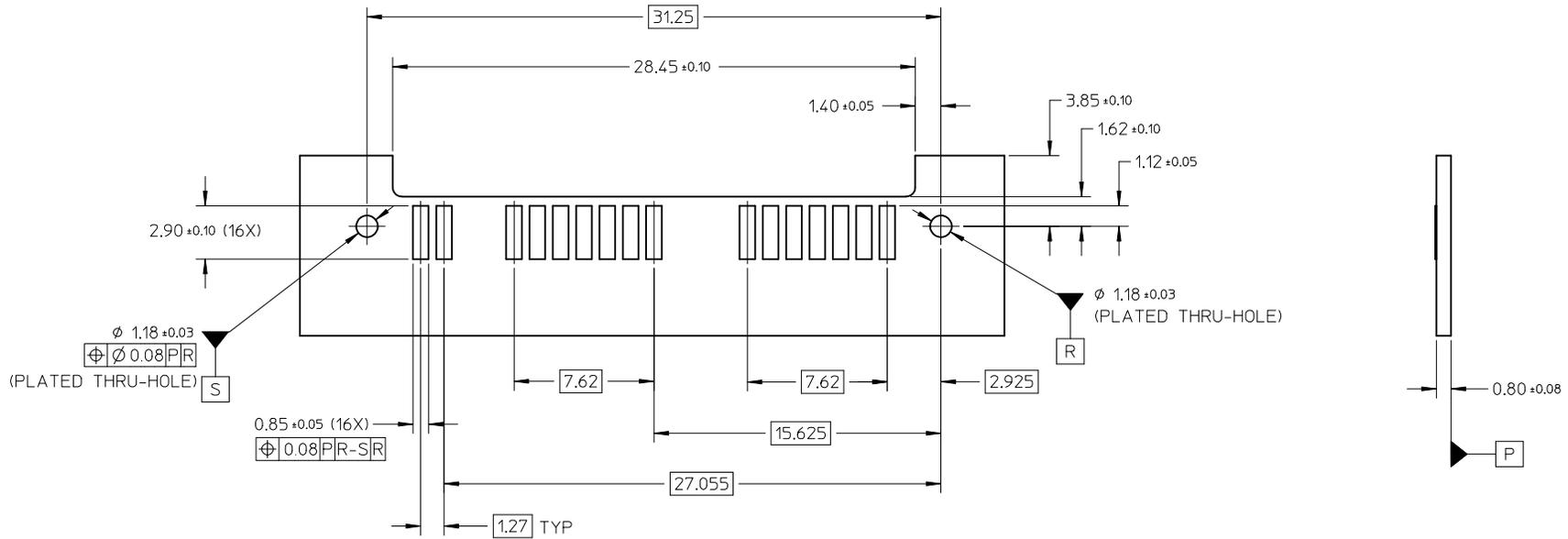
<b>UPDATE VIEWS</b> EC NO: S2010-0590 DRWNG:GMENARLY 2010/01/13 CHKD:CGOH 2010/01/25 APPR:BOKOK 2010/01/28	QUALITY SYMBOLS $F_A=0$ $F_C=0$ $F_P=0$	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE		SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION		
		mm	INCH	MM ONLY		NTS	METRIC			
		4 PLACES	± ---	± ---	DRAWN BY	DATE	TITLE			
		3 PLACES	± ---	± ---	GMENARLY	2007/08/23	SERIAL ATA RECEPTACLE 1.8 INCH HDD/SSD R/A, SMT, 3.80MM HEIGHT			
2 PLACES	± 0.20	± ---	CHECKED BY	DATE	MOLEX INCORPORATED 					
1 PLACE	± ---	± ---	YKOH	2007/10/04						
	ANGULAR ± 3 °		APPROVED BY	DATE	MATERIAL NO.		DOCUMENT NO.			
			BOKOK	2010/01/26	SEE TABLE		SD-78320-001		SHEET NO.	
	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SIZE		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION					
A3			A3							

9 8 7 6 5 4 3 2 1



SECTION Z-Z

<b>UPDATE VIEWS</b> EC NO: S2010-0590 DRWNG: GMENARLY 2010/01/13 CHKD: CGOH 2010/01/25 APPR: BOKOK 2010/01/26	QUALITY SYMBOLS $F_A=0$ $F_G=0$ $F_P=0$	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE <b>MM ONLY</b>		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION		
			mm	INCH	DRAWN BY	DATE	TITLE			
		4 PLACES	± ---	± ---	GMENARLY	2007/08/23	SERIAL ATA RECEPTACLE 1.8 INCH HDD/SSD R/A, SMT, 3.80MM HEIGHT MOLEX INCORPORATED			
		3 PLACES	± ---	± ---	CHECKED BY	DATE				
	ANGULAR ± 3 °		APPROVED BY	DATE	MATERIAL NO.	DOCUMENT NO.	SHEET NO.			
	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SEE TABLE	2010/01/26			SD-78320-001			
			SIZE	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION						
A3	REV			A3						3 OF 5



RECOMMENDED PCB LAYOUT

UPDATE VIEWS EC NO: S2010-0590 DRWNG: GMENARLY 2010/01/13 CHKD: CGOH 2010/01/25 APPR: BOKOK 2010/01/28	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE		SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION	
	$F_A=0$	mm	INCH	MM ONLY		NTS	METRIC		
	$F_C=0$	4 PLACES ± ---	± ---	DRAWN BY	DATE	TITLE			
	$F_P=0$	3 PLACES ± ---	± ---	GMENARLY	2007/08/23	SERIAL ATA RECEPTACLE 1.8 INCH HDD/SSD R/A, SMT, 3.80MM HEIGHT			
	2 PLACES ± 0.20	± ---	CHECKED BY	DATE	MOLEX INCORPORATED				
	1 PLACE ± ---	± ---	YKOH	2007/10/04	DOCUMENT NO.				
	ANGULAR ± 3 °		APPROVED BY	DATE	SD-78320-001				
	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		BOKOK	2010/01/26	SHEET NO.				
			MATERIAL NO.	SEE TABLE	4 OF 5				
			SIZE	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION					
A3	REV								

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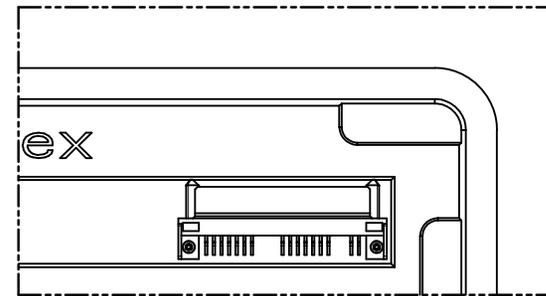
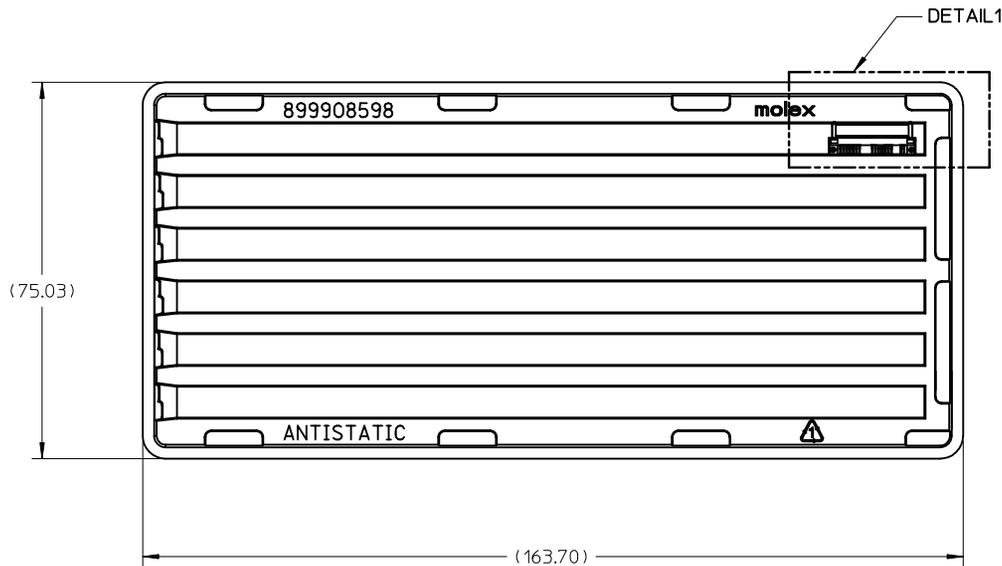
E

D

C

B

A



DETAIL 1

NOTES:

1. PACKAGING QTY: 54PCS/TRAY
2. MATERIAL: PVC-CLEAR, ANTISTATIC  
0.70MM THICK (PRE-FORMED)

UPDATE VIEWS EC NO: S2010-0590 DRWNG: GMENARLY 2010/01/13 CHKD: CGOH 2010/01/25 APPR: BOKOK 2010/01/28	DESCRIPTION REV	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)	DIMENSION STYLE	SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION		
		$F_A=0$ $F_C=0$ $F_P=0$	mm    INCH 4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.20 ± --- 1 PLACE ± --- ± --- ANGULAR ± 3 °	MM ONLY	NTS	METRIC	DRAWN BY: GMENARLY CHECKED BY: YKOH APPROVED BY: BOKOK MATERIAL NO.	DATE: 2007/08/23 DATE: 2007/10/04 DATE: 2010/01/26 DOCUMENT NO.	TITLE: SERIAL ATA RECEPTACLE 1.8 INCH HDD/SSD R/A, SMT, 3.80MM HEIGHT MOLEX INCORPORATED
		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	SEE TABLE	SD-78320-001	5 OF 5				
		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

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В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

### Офис по работе с юридическими лицами:

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