

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, 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

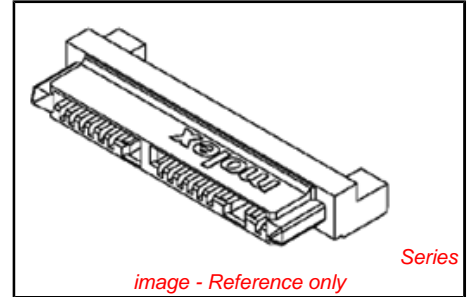


image - Reference only

<p>EU RoHS ELV and RoHS Compliant REACH SVHC Contains SVHC: No Halogen-Free Status Not Halogen-Free</p>	<p>China RoHS</p>
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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
[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

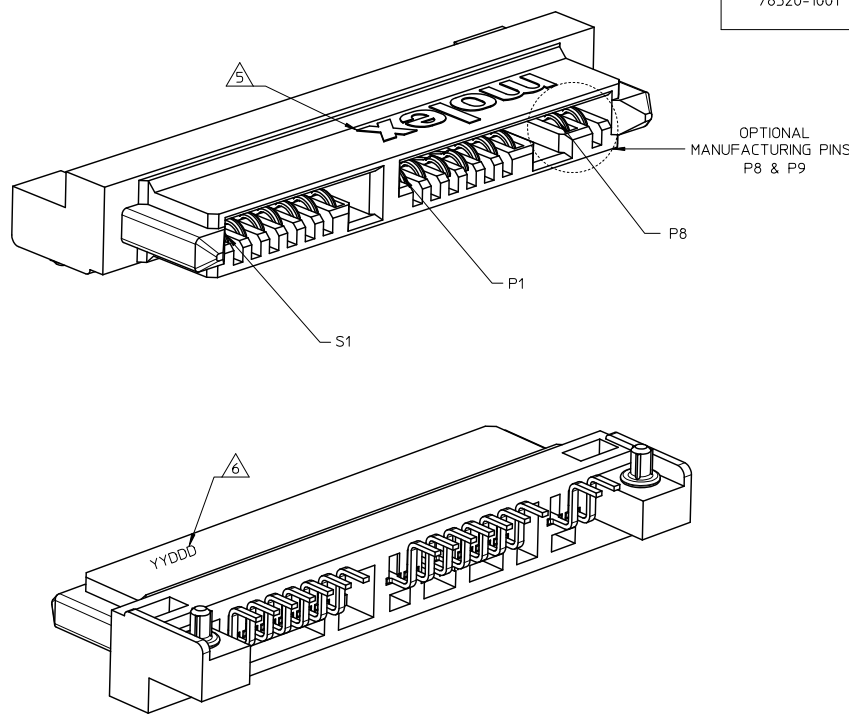
Material Info**Reference - Drawing Numbers**

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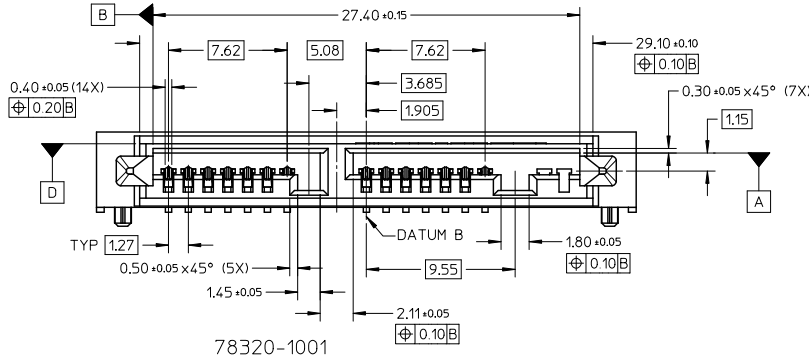
PART NUMBER	TOTAL PINS	DESCRIPTION
78320-0001	16	WITH OPTIONAL MANUFACTURING PINS (S1 TO S7 & P1 TO P9)
78320-1001	14	WITHOUT OPTIONAL MANUFACTURING PINS (S1 TO S7 & P1 TO P7)



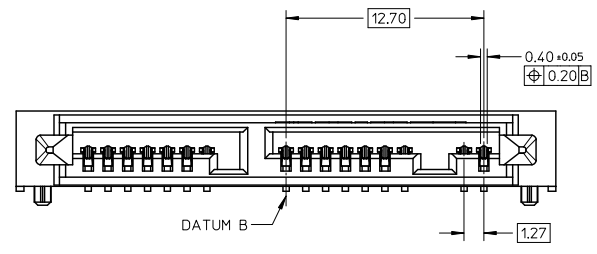
- NOTES:
- MATERIAL : NYLON (PA), GLASS FILLED, UL 94V-0, BLACK
TERMINAL/LOCATING PIN : COPPER ALLOY
 - FINISHES :
TERMINAL : 0.764m MIN. SELECTIVE GOLD OVER
1.274m MIN. NICKEL UNDERPLATE
2.544m MIN. TIN OVER
1.274m MIN. NICKEL UNDERPLATE
LOCATING PIN : 3.814m MIN. TIN OVER
2.004m MIN. NICKEL UNDERPLATE
 - 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 EIC NO: S2010-0590 DRAWN: GMENARLY 2010/01/13 CHECKED: CHYK:CGH 2010/01/25 APPR: BOKOK 2010/01/28 A3	QUALITY SYMBOLS 	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION		
			mm	INCH	DRAWN BY GMENARLY	DATE 2007/08/23	TITLE SERIAL ATA RECEPTACLE 1.8 INCH HDD/SSD R/A, SMT, 3.80MM HEIGHT			
		4 PLACES ± --- ± ---	3 PLACES ± --- ± ---	2 PLACES ± 0.20 ± --- ± ---	1 PLACE ± --- ± ---	CHECKED BY YKOH	DATE 2007/10/04	MOLEX INCORPORATED		
		ANGULAR ± 3°		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		APPROVED BY BOKOK	DATE 2010/01/28	MATERIAL NO. SEE TABLE	DOCUMENT NO. SD-78320-001	SHEET NO. 1 OF 5

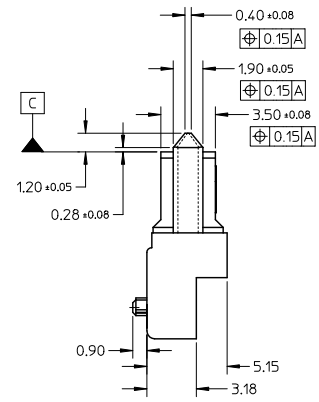
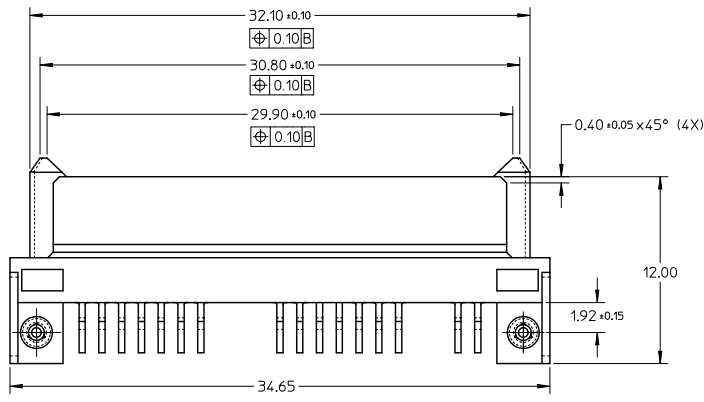
10 9 8 7 6 5 4 3 2 1



78320-1001



78320-0001



UPDATE VIEWS EEC NO: S2010-0590 DRAWN: GMENARLY 2010/01/13 CHECKED: CHYKICGOH 2010/01/25 APPR: BOKKOK 2010/01/26	QUALITY SYMBOLS □=0 □=0 □=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION	
		4 PLACES ± --- ± ---	mm INCH	DRAWN BY GMENARLY	DATE 2007/08/23	TITLE SERIAL ATA RECEPTACLE 1.8 INCH HDD/SSD R/A, SMT, 3.80MM HEIGHT			
		3 PLACES ± --- ± ---		CHECKED BY YKOH	DATE 2007/10/04	MOLEX INCORPORATED			
		2 PLACES ± 0.20 ± ---		APPROVED BY BOKKOK	DATE 2010/01/26	MATERIAL NO. SEE TABLE DOCUMENT NO. SD-78320-001 SHEET NO. 2 OF 5			
		ANGULAR ± 3°		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			

9 8 7 6 5 4 3 2 1

10 9 8 7 6 5 4 3 2 1

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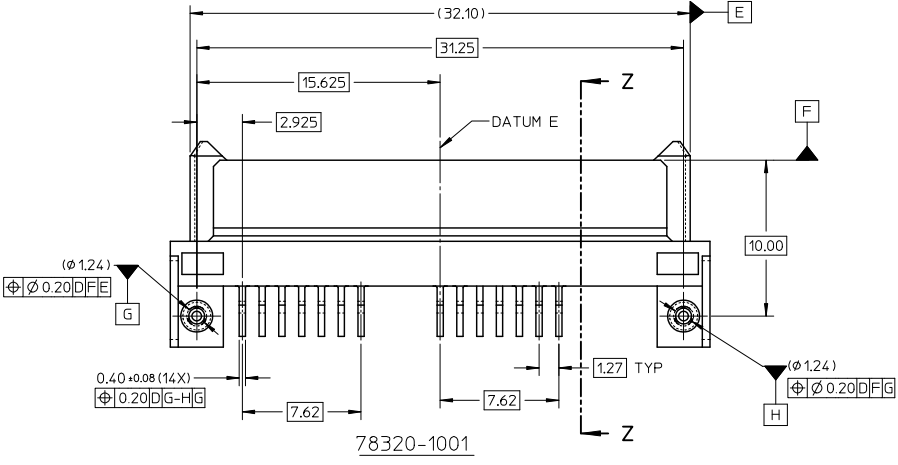
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D

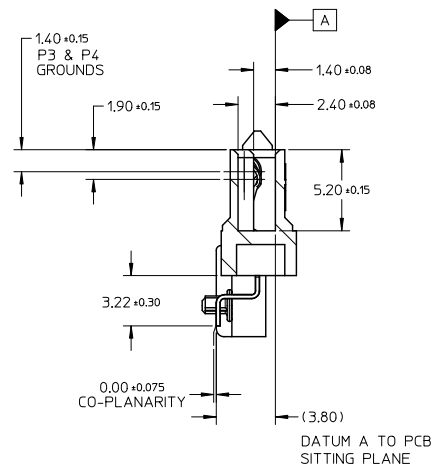
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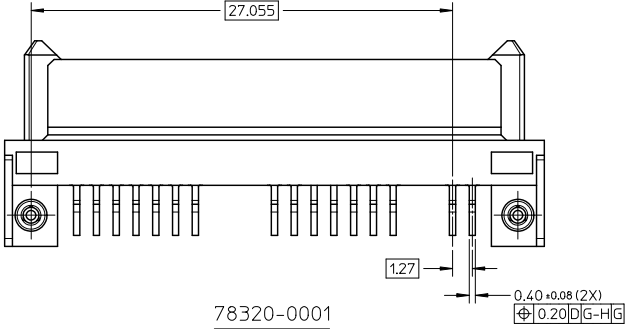
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78320-1001



SECTION Z-Z

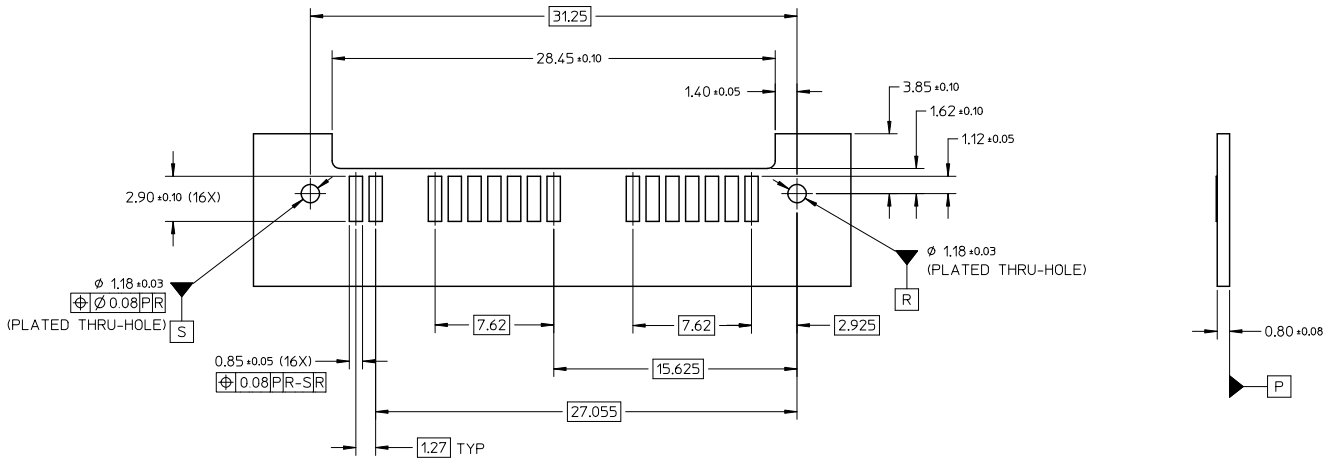


78320-0001

UPDATE VIEWS EEC NO: S2010-0590 DRAWN: GMENARLY 2010/01/13 CHECKED: CGOH 2010/01/25 APPR: BOKKOK 2010/01/26	QUALITY SYMBOLS □=0 □=0 □=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			
2 PLACES ± 0.20	± ---	CHECKED BY	DATE	1.8 INCH HDD/SSD					
1 PLACE ± ---	± ---	YKOH	2007/10/04	R/A, SMT, 3.80MM HEIGHT					
ANGULAR ± 3°		APPROVED BY	DATE	MOLEX INCORPORATED					
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		BOKKOK	2010/01/26	MATERIAL NO.		DOCUMENT NO.	SHEET NO.		
		SEE TABLE				SD-78320-001		3 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

10 9 8 7 6 5 4 3 2 1

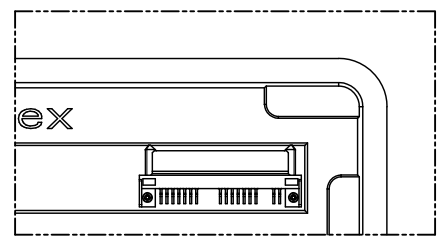
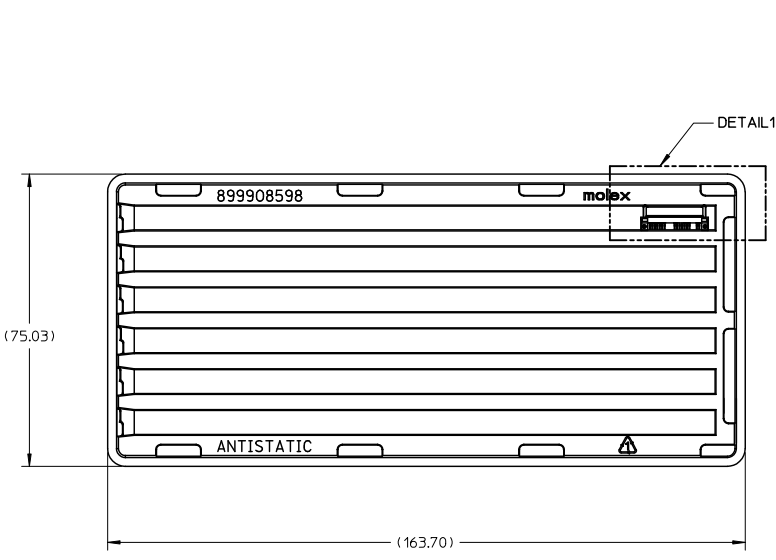


RECOMMENDED PCB LAYOUT

UPDATE VIEWS EEC NO: S2010-0590 DRAWN: GMENARLY 2010/01/13 CHECKED: CHYKJCGOH 2010/01/25 APPR: BOKKOK 2010/01/26	QUALITY SYMBOLS □=0 □=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°	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	DRAWN BY GMENARLY	DATE 2007/08/23	CHECKED BY YKOH	DATE 2007/10/04	APPROVED BY BOKKOK	DATE 2010/01/26	MATERIAL NO. SEE TABLE	DOCUMENT NO. SD-78320-001	SHEET NO. 4 OF 5
		TITLE SERIAL ATA RECEPTACLE 1.8 INCH HDD/SSD R/A, SMT, 3.80MM HEIGHT							MOLEX INCORPORATED							
		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



DETAIL 1

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

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		4 PLACES ± --- ± ---	mm	INCH	DRAWN BY GMENARLY	DATE 2007/08/23	TITLE SERIAL ATA RECEPTACLE 1.8 INCH HDD/SSD R/A, SMT, 3.80MM HEIGHT		
		3 PLACES ± --- ± ---			CHECKED BY YKOH	DATE 2007/10/04	MOLEX INCORPORATED		
		2 PLACES ± 0.20 ± ---			APPROVED BY BOKOK	DATE 2010/01/26	MATERIAL NO. SEE TABLE	DOCUMENT NO. SD-78320-001	SHEET NO. 5 OF 5
		1 PLACE ± --- ± ---	ANGULAR ± 3 °		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS				

9 8 7 6 5 4 3 2 1