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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

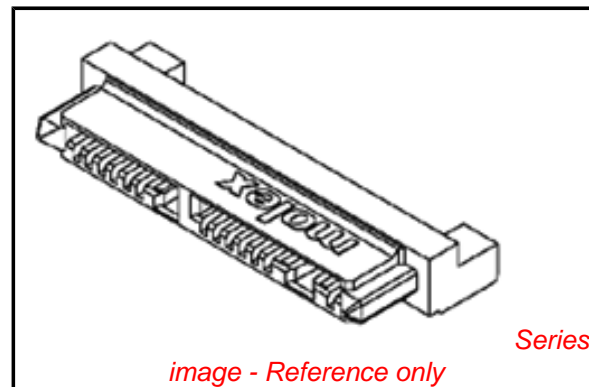
CSA LR19980
 UL E29179

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



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
 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

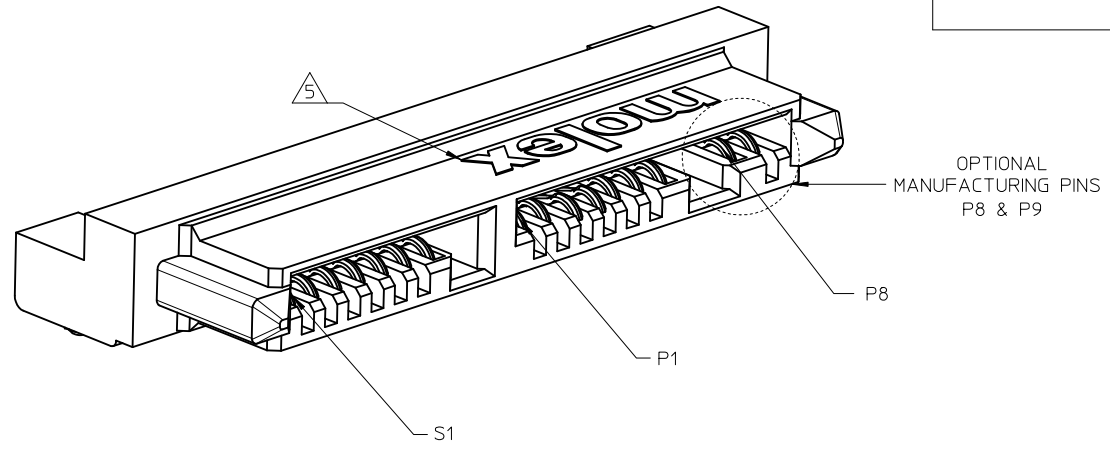
Material Info**Reference - Drawing Numbers**

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

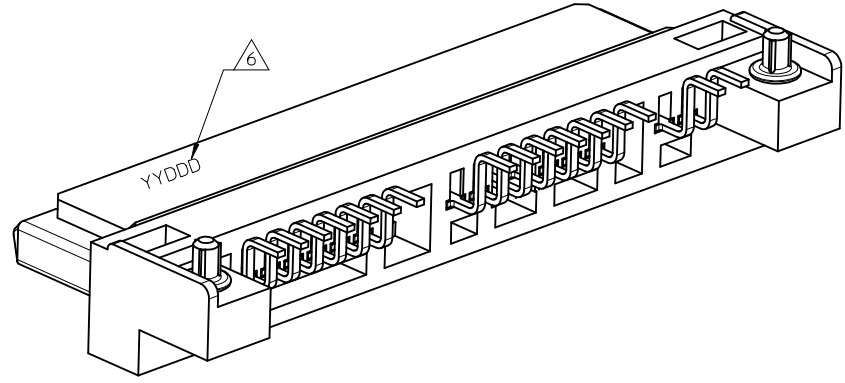
This document was generated on 05/21/2010

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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)		

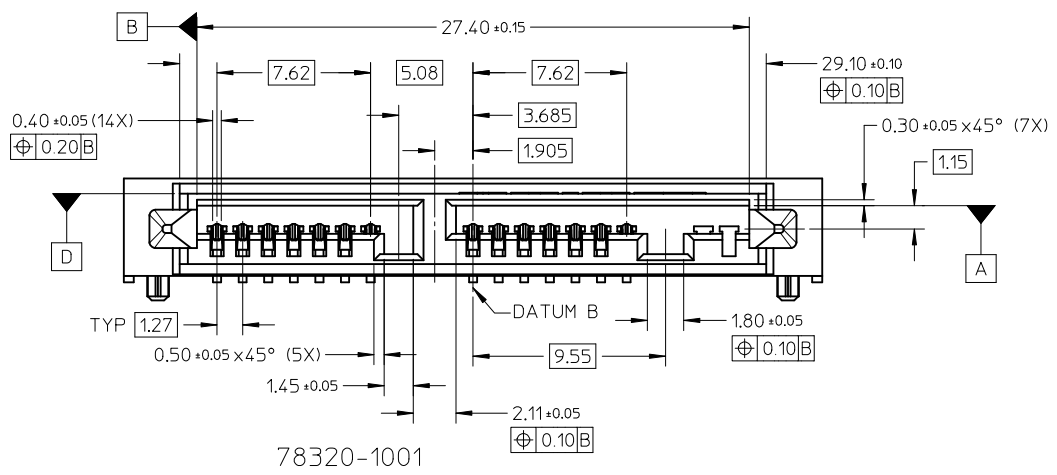


- NOTES:
- MATERIAL : NYLON (PA), GLASS FILLED, UL 94V-0, BLACK
TERMINAL/LOCATING PIN : COPPER ALLOY
 - FINISHES :
 TERMINAL : 0.76µm MIN. SELECTIVE GOLD OVER
 1.27µm MIN. NICKEL UNDERPLATE
 : 2.54µm MIN. TIN OVER
 1.27µm MIN. NICKEL UNDERPLATE
 LOCATING PIN : 3.81µm MIN. TIN OVER
 2.00µm MIN. NICKEL 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.

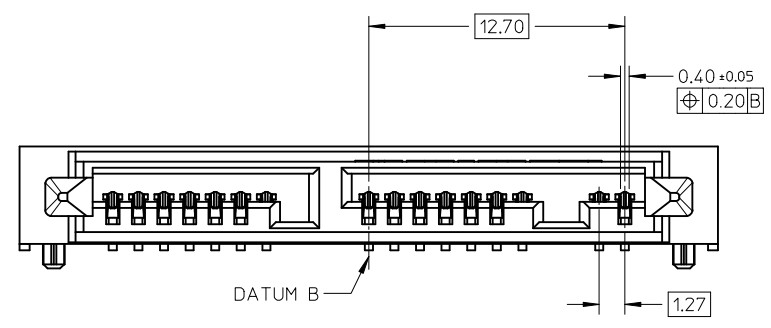


UPDATE VIEWS EC NO: S2010-0590 DRWN:GMENARLY 2010/01/13 CHKD:CGOH 2010/01/25 APPR:BOKOK 2010/01/28	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE		SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION	
	▽ _A =0	mm	INCH	MM ONLY		NTS	METRIC		
	▽ _B =0	4 PLACES ± ---	± ---	DRAWN BY	DATE	TITLE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

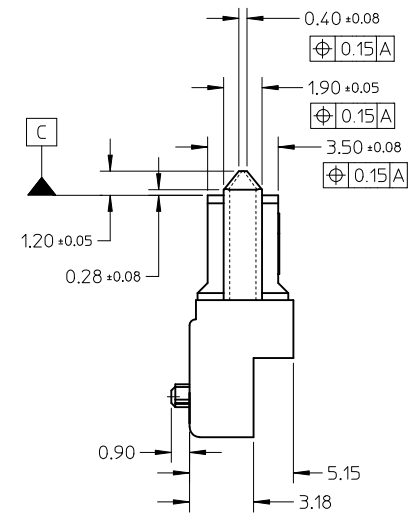
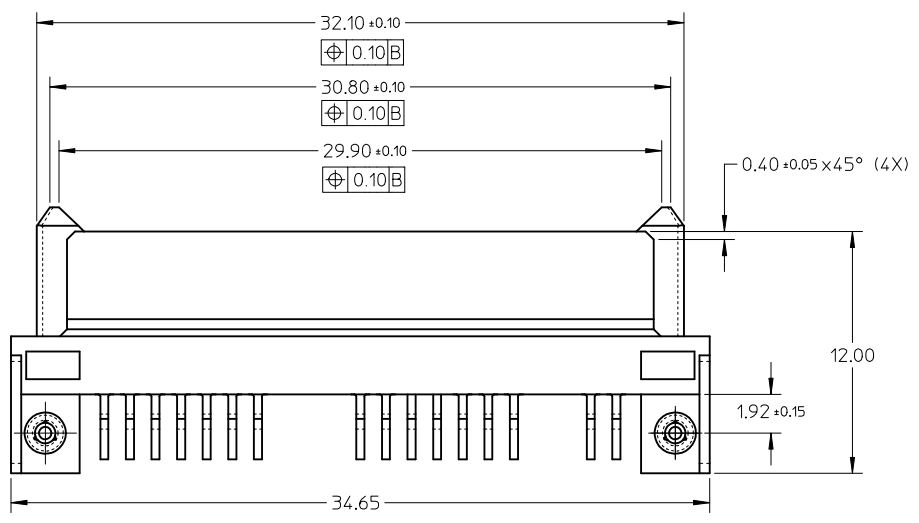
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78320-1001

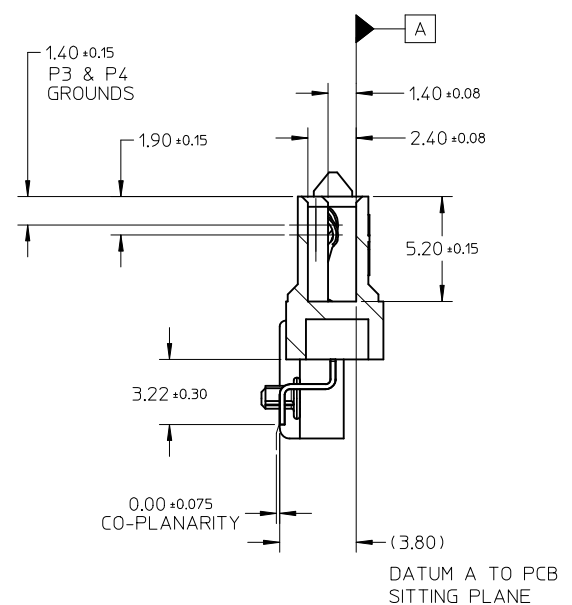
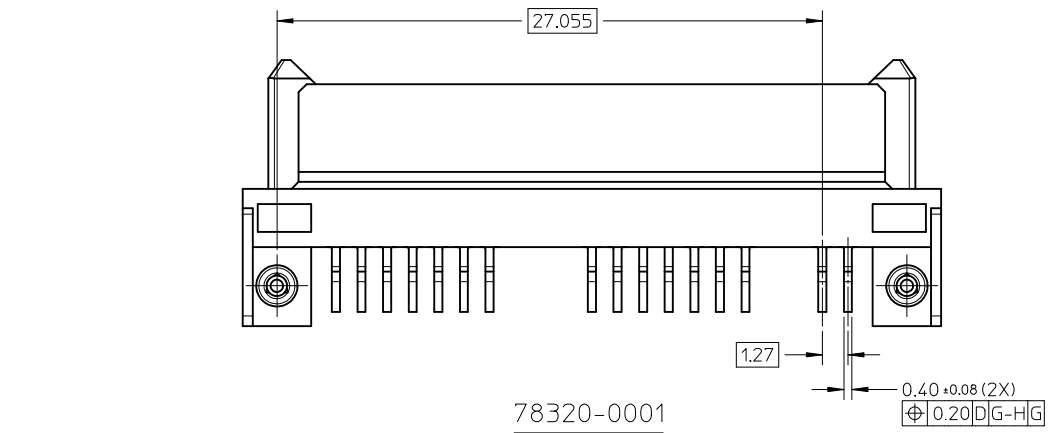
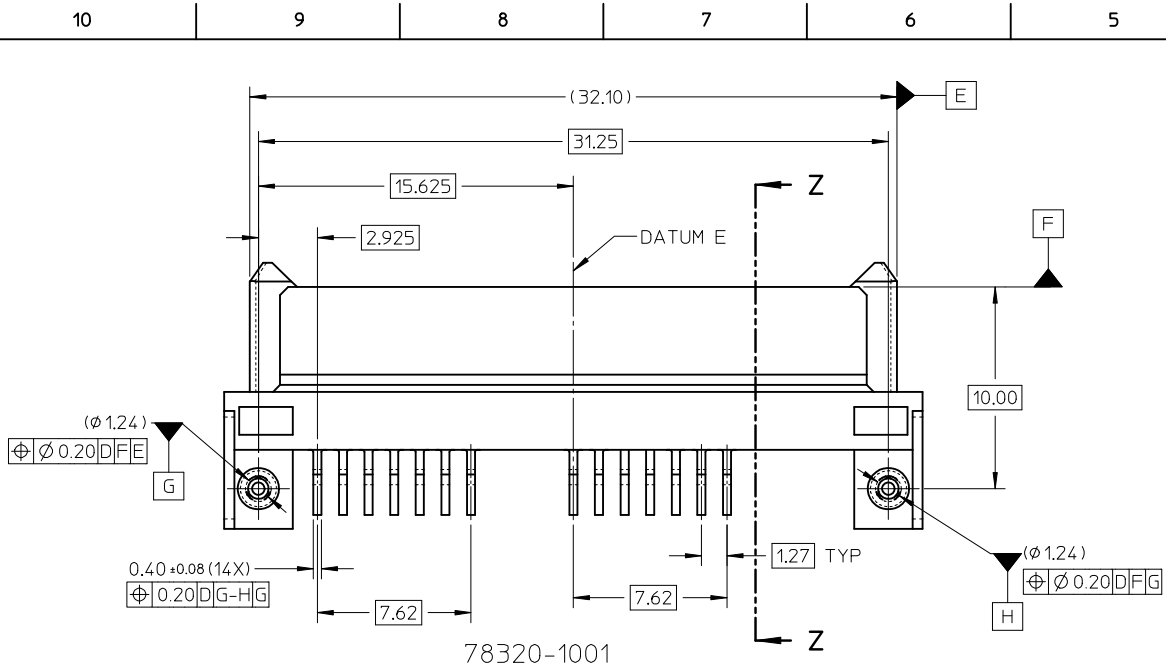


78320-0001



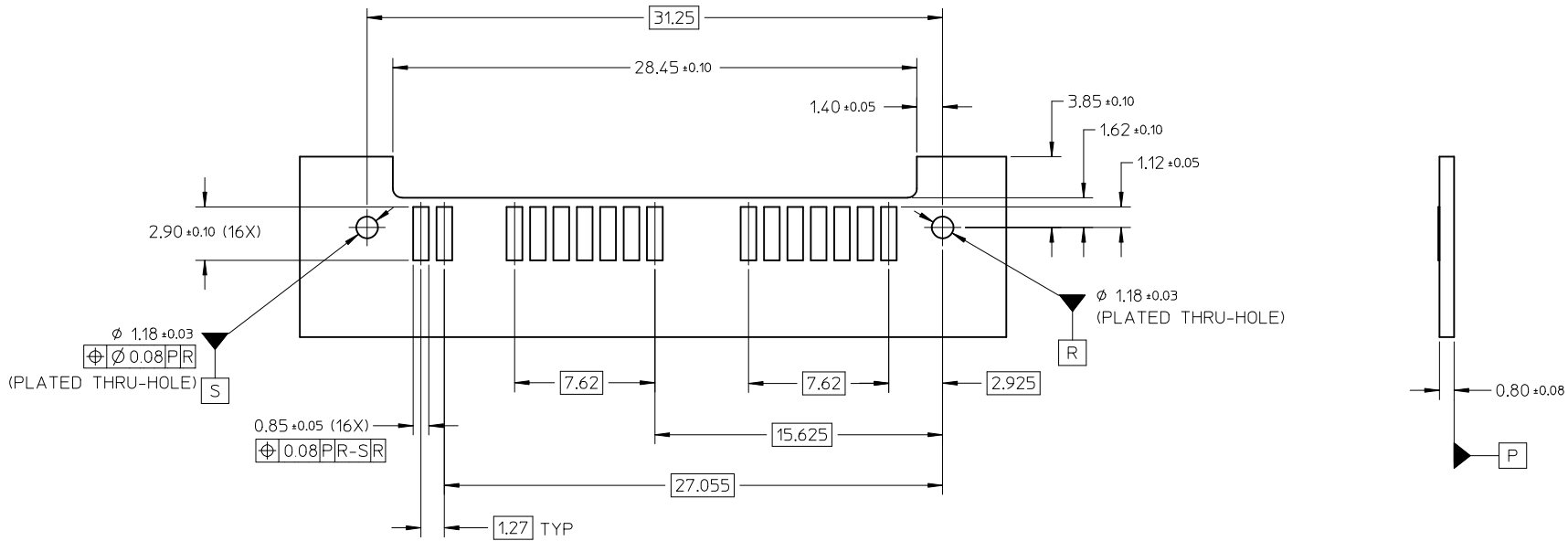
UPDATE VIEWS EC NO: S2010-0590 DRWNG:GMENARLY 2010/01/13 CHKD:CGOH 2010/01/25 APPR:BOKOK 2010/01/28	QUALITY SYMBOLS $F_A=0$ $F_C=0$ $F_P=0$	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE		SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION		
		mm	INCH	MM ONLY		NTS	METRIC			
		4 PLACES	± ---	± ---	DRAWN BY	DATE	TITLE			
		3 PLACES	± ---	± ---	GMEARLY	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					
				BOKOK	2010/01/26					
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS				MATERIAL NO.	DOCUMENT NO.	SHEET NO.				
				SEE TABLE	SD-78320-001	2 OF 5				
				SIZE	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION					
				A3						

9 8 7 6 5 4 3 2 1



SECTION Z-Z

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			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	± ---	± ---	CHECKED BY YKOH	DATE 2007/10/04	MOLEX INCORPORATED			
		3 PLACES	± ---	± ---	APPROVED BY BOKOK	DATE 2010/01/26	DOCUMENT NO. SD-78320-001		SHEET NO. 3 OF 5	
			ANGULAR ± 3 °		MATERIAL NO. SEE TABLE		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				SIZE A3						



RECOMMENDED PCB LAYOUT

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	$F_C=0$	4 PLACES ± ---	± ---	GMENARLY	2007/08/23	SERIAL ATA RECEPTACLE 1.8 INCH HDD/SSD R/A, SMT, 3.80MM HEIGHT		
	$F_P=0$	3 PLACES ± ---	± ---	CHECKED BY	DATE	MOLEX INCORPORATED		
	2 PLACES ± 0.20	± ---	YKOH	2007/10/04	APPROVED BY		DATE	
	1 PLACE ± ---	± ---	BOKOK	2010/01/26	MATERIAL NO.		DOCUMENT NO.	SHEET NO.
	ANGULAR ± 3 °		SEE TABLE		SD-78320-001		4 OF 5	
	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			

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F

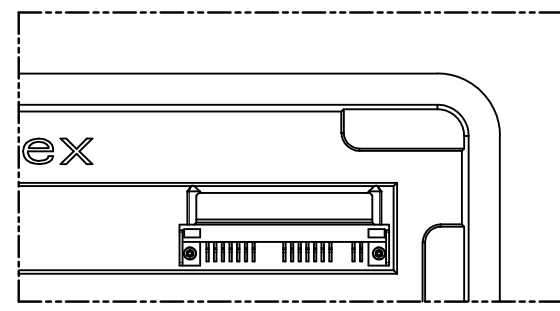
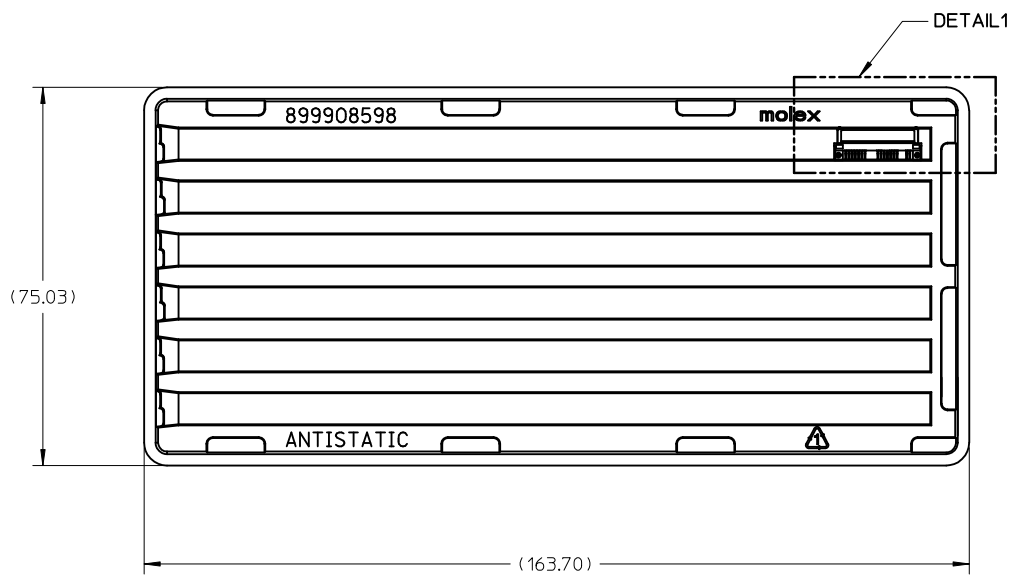
E

D

C

B

A



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

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	$F_A=0$	mm	INCH	DRAWN BY	DATE	TITLE		
	$F_C=0$	4 PLACES ± ---	± ---	GMENARLY	2007/08/23	SERIAL ATA RECEPTACLE 1.8 INCH HDD/SSD R/A, SMT, 3.80MM HEIGHT MOLEX INCORPORATED		
	$F_P=0$	3 PLACES ± ---	± ---	CHECKED BY	DATE			
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	1 PLACE ± ---	± ---	APPROVED BY	DATE	SHEET NO.			
		ANGULAR ± 3 °		BOKOK	2010/01/26	SD-78320-001		
		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		MATERIAL NO.		5 OF 5		
				SEE TABLE		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		
				SIZE	A3			

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