

PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION

Part Number: [0783201001](#)
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, 14 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) 14
Circuits (maximum) 14
Circuits Detail Without optional manufacturing pins (S1 to S7 and P1 to P7); Void pins P8 and 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

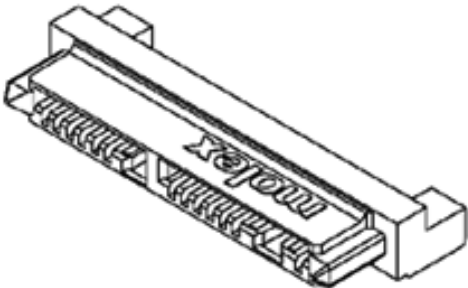


image - Reference only

Series

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

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

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

PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION

F

E

D

C

B

A

F

E

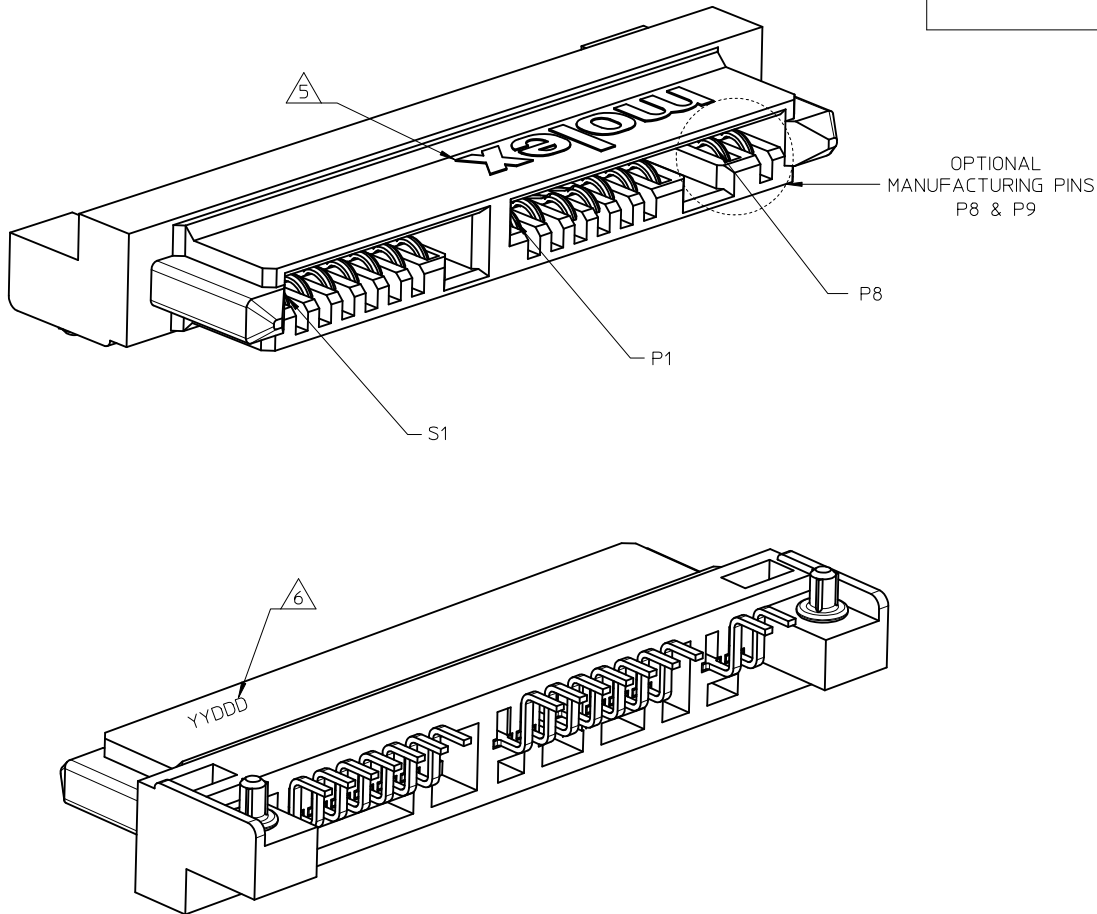
D

C

B

A

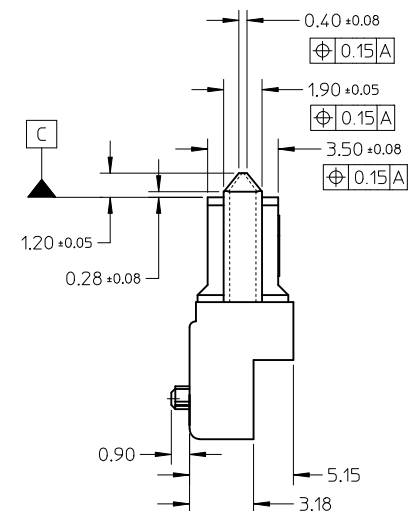
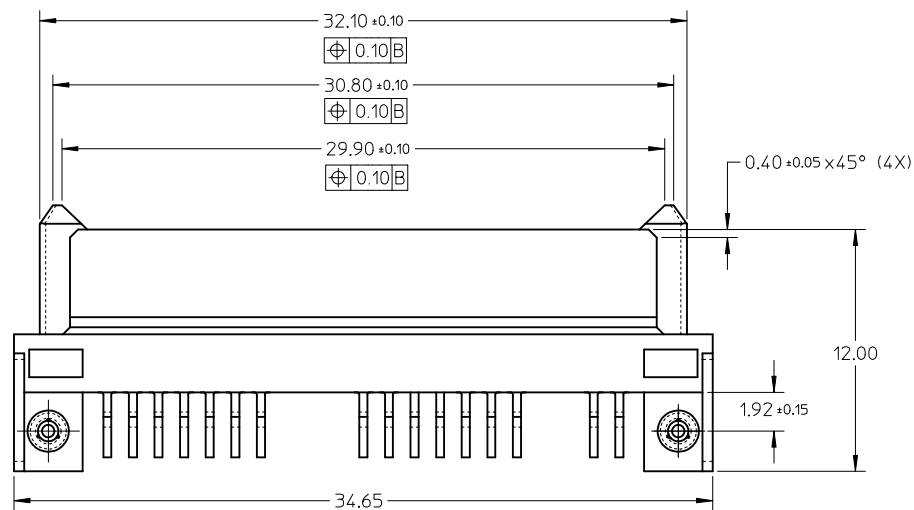
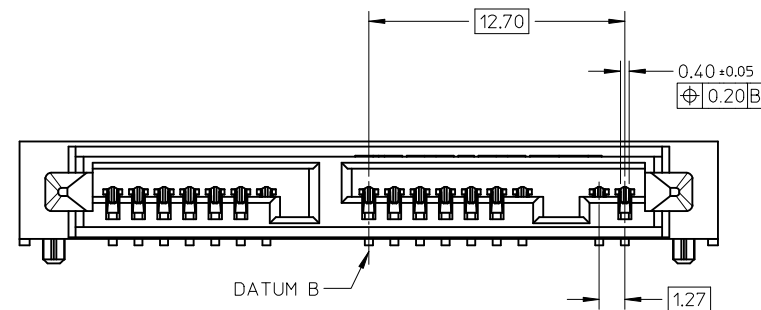
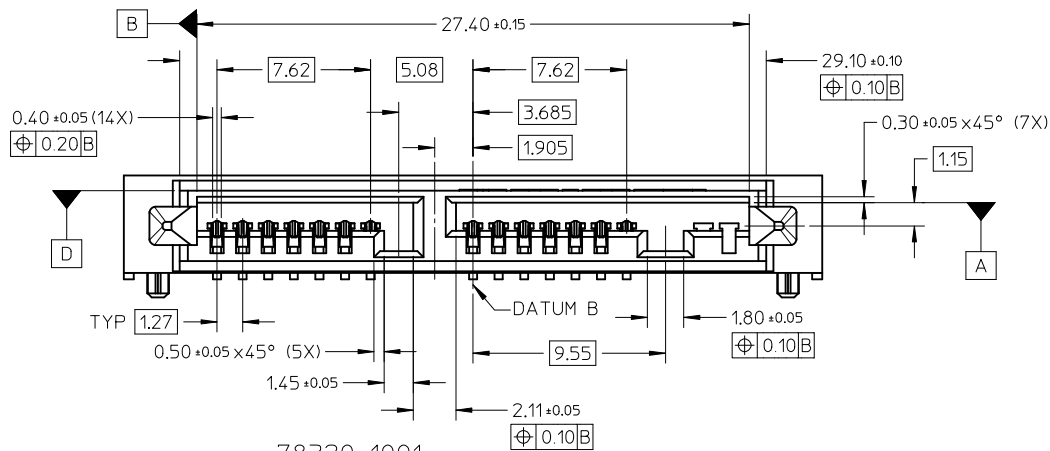
10	9	8	7	6	5	4	3	2	1
					PART NUMBER	TOTAL PINS	DESCRIPTION		
					78320-0001	16	WITH OPTIONAL MANUFACTURING PINS (S1 TO S7 & P1 TO P9)		
					78320-1001	14	WITHOUT OPTIONAL MANUFACTURING PINS (S1 TO S7 & P1 TO P7)		



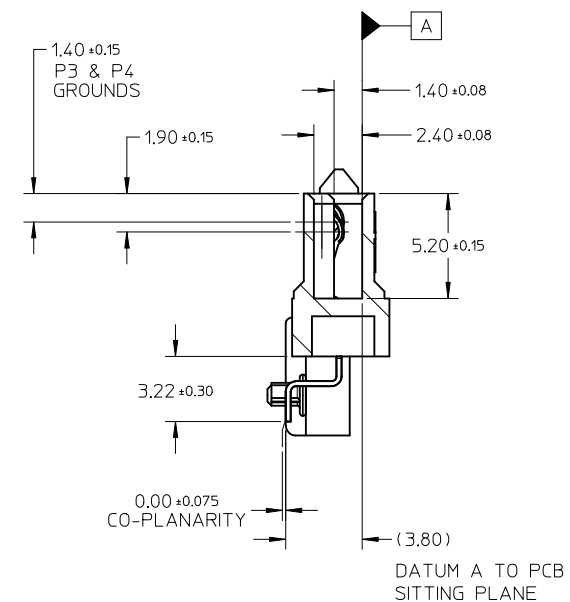
- NOTES:
1. MATERIAL : NYLON (PA), GLASS FILLED, UL 94V-0, BLACK
TERMINAL/LOCATING PIN : COPPER ALLOY
 2. FINISHES :
TERMINAL : 0.76µm MIN. SELECTIVE GOLD OVER
1.27µm MIN. NICKEL UNDERPLATE
: 2.54µm MIN. TIN OVER
1.27µm MIN. NICKEL UNDERPLATE
LOCATING PIN : 3.81µm MIN. TIN OVER
2.00µm MIN. NICKEL UNDERPLATE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

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

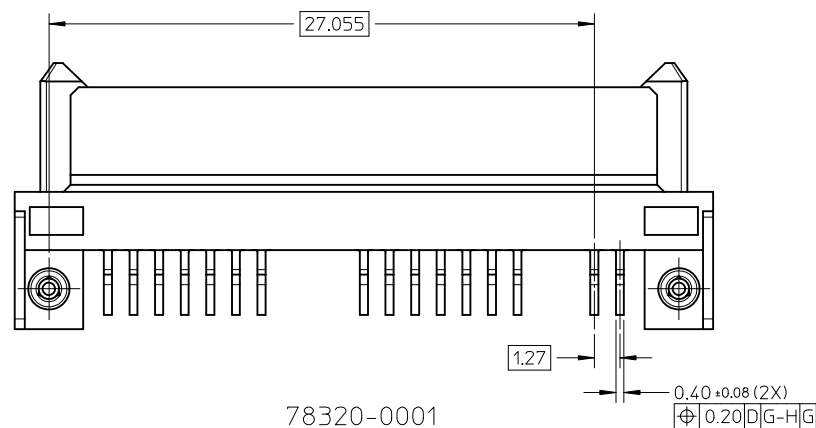
10 9 8 7 6 5 4 3 2 1



UPDATE VIEWS		QUALITY SYMBOLS		GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE		SCALE		DESIGN UNITS		THIRD ANGLE PROJECTION	
EC NO:	DATE	DRWNG:	DATE	CHKD:	DATE	MM ONLY	DATE	NTS	METRIC				
S2010-0590	2010/01/13	GMENARLY	2010/01/25	CHYD:CGOH	2010/01/28	mm	INCH						
						4 PLACES	± ---	± ---					
						3 PLACES	± ---	± ---					
						2 PLACES	± 0.20	± ---					
						1 PLACE	± ---	± ---					
						ANGULAR ± 3 °							
						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							



SECTION Z-Z



UPDATE VIEWS EC NO: SZ010-0590 DRAWN:GMEARLY CHKD:GGH APPR:BOKOK 2010/01/13 2010/01/25 2010/01/28	DESCRIPTION	QUALITY SYMBOLS F_A=0 F_C=0 F_P=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION			
			mm	INCH	DRAWN BY GMEARLY	DATE 2007/08/23	TITLE SERIAL ATA RECEPTACLE 1.8 INCH HDD/SSD R/A, SMT, 3.80MM HEIGHT MOLEX INCORPORATED					
			4 PLACES	±---	±---	CHECKED BY YKOH						DATE 2007/10/04
			3 PLACES	±---	±---	APPROVED BY BOKOK						DATE 2010/01/26
			2 PLACES	±0.20	±---	MATERIAL NO.		DOCUMENT NO.		SHEET NO.		
			1 PLACE	±---	±---	SEE TABLE		SD-78320-001		3 OF 5		
			ANGULAR ± 3 °			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		

10 9 8 7 6 5 4 3 2 1

F

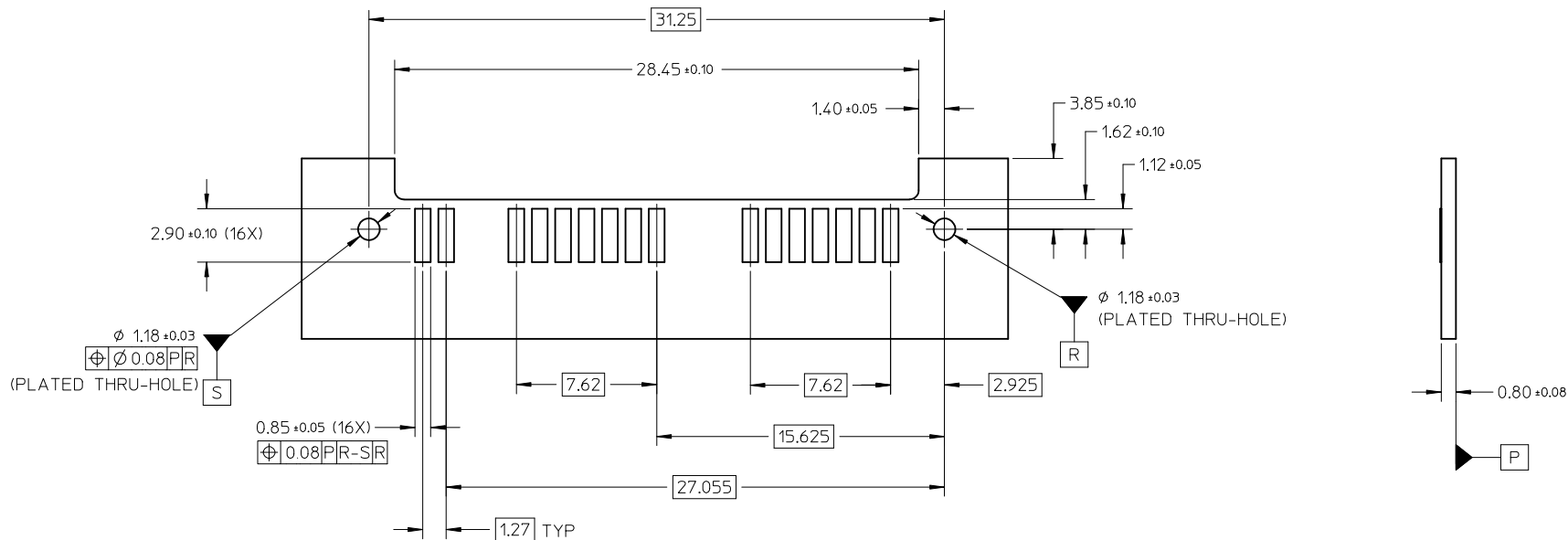
E

D

C

B

A



RECOMMENDED PCB LAYOUT

UPDATE VIEWS EC NO: S2010-0590 DRWN:GMENARLY CHKD:CGOH APPR:BOKOK A3	DESCRIPTION REV	QUALITY SYMBOLS F _A =0 F _C =0 F _P =0	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	± ---	± ---	CHECKED BY YKOH	DATE 2007/10/04					
			3 PLACES	± ---	± ---	APPROVED BY BOKOK	DATE 2010/01/26	MOLEX INCORPORATED				
			2 PLACES	± 0.20	± ---	MATERIAL NO. SEE TABLE						
			1 PLACE	± ---	± ---	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION						
			ANGULAR ± 3 °									
			DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS									

9 8 7 6 5 4 3 2 1

10 9 8 7 6 5 4 3 2 1

F

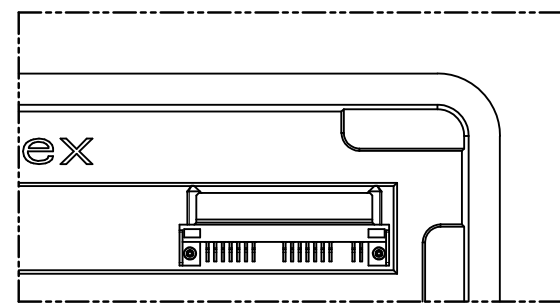
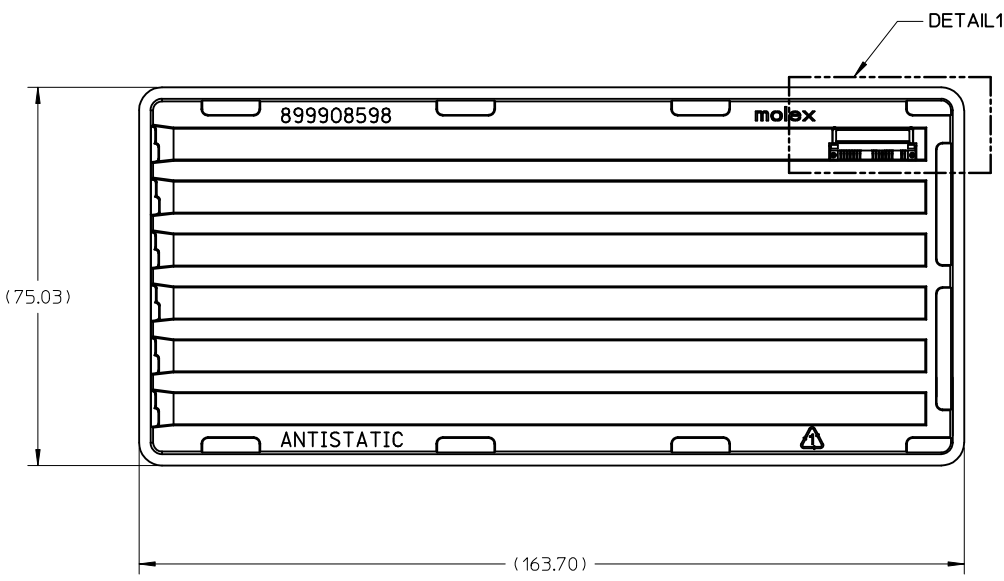
E

D

C

B

A



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	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)			DIMENSION STYLE		SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION			
								MM ONLY		NTS	METRIC				
					F_A =0		mm	INCH	DRAWN BY	DATE	TITLE	SERIAL ATA RECEPTACLE 1.8 INCH HDD/SSD R/A, SMT, 3.80MM HEIGHT			
						4 PLACES	± ---	± ---	GMENARLY	2007/08/23					
3 PLACES	± ---	± ---	CHECKED BY	DATE											
A3	REV	DESCRIPTION	QUALITY SYMBOLS	F_G =0	2 PLACES	± 0.20	± ---	YKOH	2007/10/04	MOLEX INCORPORATED					
				F_P =0	1 PLACE	± ---	± ---	APPROVED BY	DATE						
				ANGULAR ± 3 °			BOKOK		2010/01/26	molex					
				DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS			MATERIAL NO.		DOCUMENT NO.				SHEET NO.		
			SEE TABLE		SD-78320-001				5 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