

PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION

Part Number: [0783200002](#)
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, with Support Rib, Tape on Reel, Lead free

Documents:

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

Agency Certification

CSA LR19980
UL E29179

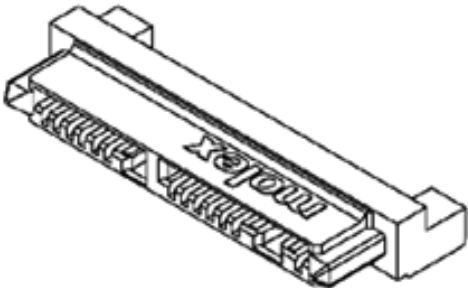
General

Product Family PCB Receptacles
Series [78320](#)
Application Board-to-Board
Comments With central support rib on underside of housing
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 Embossed Tape on Reel
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



Series

image - Reference only

EU RoHS

**ELV and RoHS
Compliant**

REACH SVHC

Not Reviewed

Halogen-Free

Status

Not 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.

China RoHS



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

Product Specification	PS-78320-002
Sales Drawing	SD-78320-002

This document was generated on 05/21/2010

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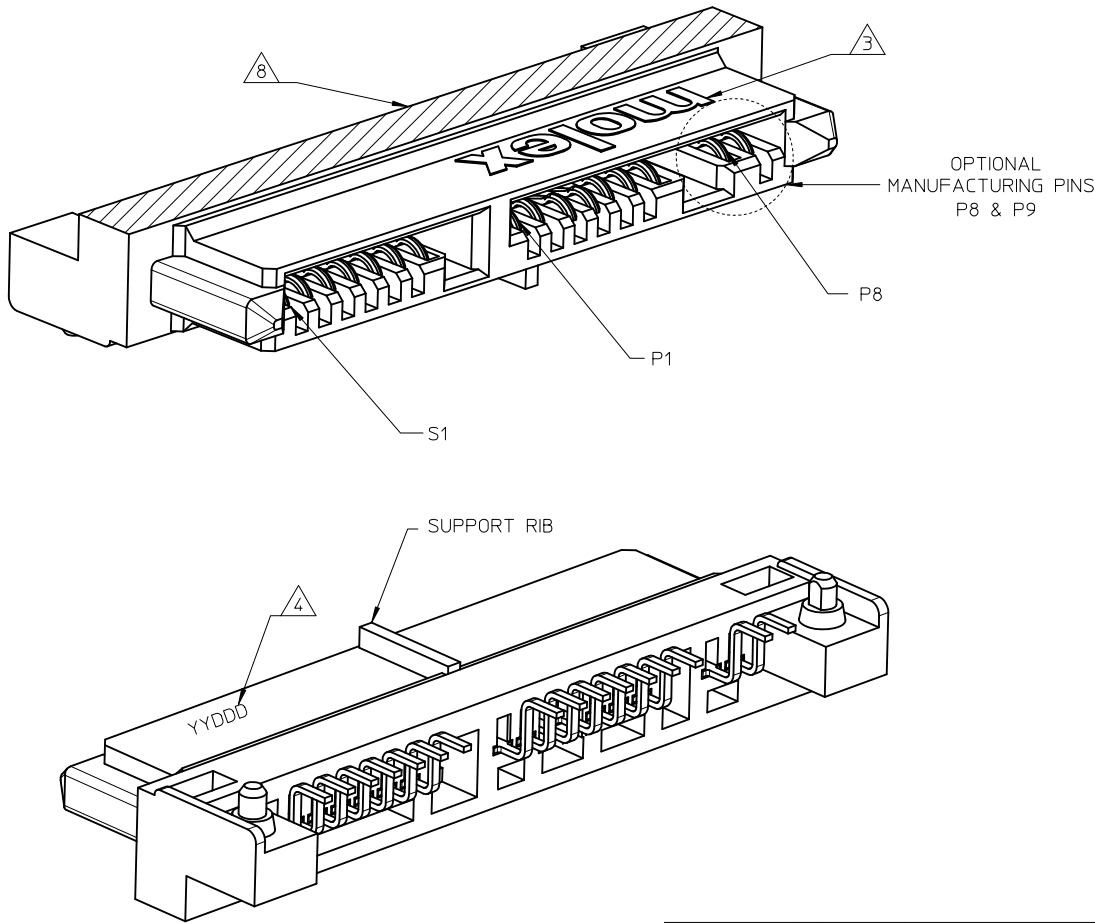
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10	9	8	7	6	5	4	3	2	1
					PART NUMBER	TOTAL PINS	DESCRIPTION		
					78320-0002	16	WITH OPTIONAL MANUFACTURING PINS (S1 TO S7 & P1 TO P9)		
					78320-1002	14	WITHOUT OPTIONAL MANUFACTURING PINS (S1 TO S7 & P1 TO P7)		



- NOTES:
- 1. MATERIAL : NYLON (PA) 9T, GLASS FILLED, UL 94V-0, BLACK
TERMINAL : COPPER ALLOY
 - 2. PLATING :
TERMINAL : 0.76µm MIN. SELECTIVE GOLD OVER
1.27µm MIN. NICKEL UNDERPLATE
2.54µm MIN. TIN OVER
1.27µm MIN. NICKEL UNDERPLATE
 - 3. MOLEX LOGO LOCATED APPROXIMATELY AS SHOWN
 - 4. DATE CODE LOCATED APPROXIMATELY AS SHOWN
 - 5. PACKAGING : TAPE AND REEL
 - 6. THIS PRODUCT IS COMPLIANT TO RoHS DIRECTIVE WITH THE FOLLOWING BANNED SUBSTANCES - LEAD, MERCURY, CADMIUM, HEXAVALENT CHROMIUM, POLYBROMINATED BIPHENYLS AND POLYBROMINATED DIPHENYLS ETHERS.
 - 7. NON FUNCTIONAL CORING MAY VARY.
 - 8. PROPOSED PICK & PLACE SURFACE.
 - 9. PRODUCT SPECIFICATION: PS-78320-002

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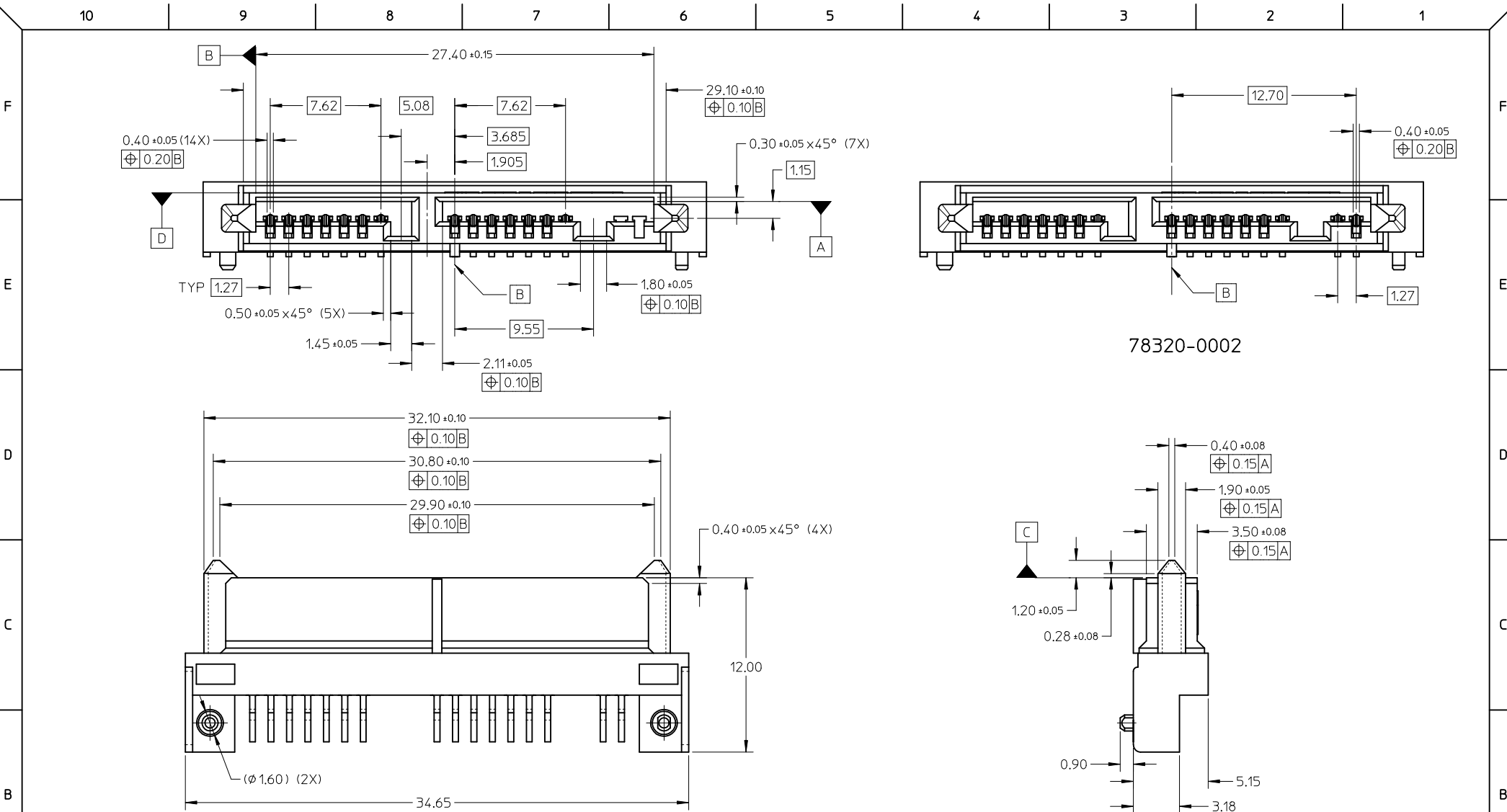
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UPDATE VIEWS EC NO: S2010-0590 DRAWN:GMENARLY CHKD:CGOH APPR:BOKOK A2	2010/01/12	2010/01/25	2010/01/28	DESCRIPTION REV	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION					
	F _A =0		mm		INCH		DRAWN BY GMENARLY		DATE 2007/10/08		TITLE SERIAL ATA RECEPTACLE 1.8 INCH HDD/SSD R/A, SMT, 3.80MM HEIGHT MOLEX INCORPORATED						
	F _G =0		4 PLACES ± ---		± ---		CHECKED BY YKOH		DATE 2007/11/21								
	F _P =0		3 PLACES ± ---		± ---		APPROVED BY BOKOK		DATE 2010/01/26								
			2 PLACES ± 0.20		± ---												
			1 PLACE ± ---		± ---												
			ANGULAR ± 3 °				MATERIAL NO.		DOCUMENT NO.		SHEET NO.						
	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS				SEE TABLE				SD-78320-002				1 OF 5				
					SIZE A3		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION										



UPDATE VIEWS EC NO: S2010-0590 DRWNG:GMENARLY CHKD:CGOH APPR:BOKOK	DESCRIPTION	QUALITY SYMBOLS F=0 F=0 F=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION				
				mm	INCH	DRAWN BY GMENARLY	DATE 2007/10/08	TITLE SERIAL ATA RECEPTACLE 1.8 INCH HDD/SSD R/A, SMT, 3.80MM HEIGHT					
			4 PLACES	± ---	± ---	CHECKED BY YKOH	DATE 2007/11/21						
			3 PLACES	± ---	± ---	APPROVED BY BOKOK		DATE 2010/01/26	MOLEX INCORPORATED				
			2 PLACES	± 0.20	± ---	MATERIAL NO.		DOCUMENT NO.					
			1 PLACE	± ---	± ---	SEE TABLE		SD-78320-002	2 OF 5				
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										

10 9 8 7 6 5 4 3 2 1

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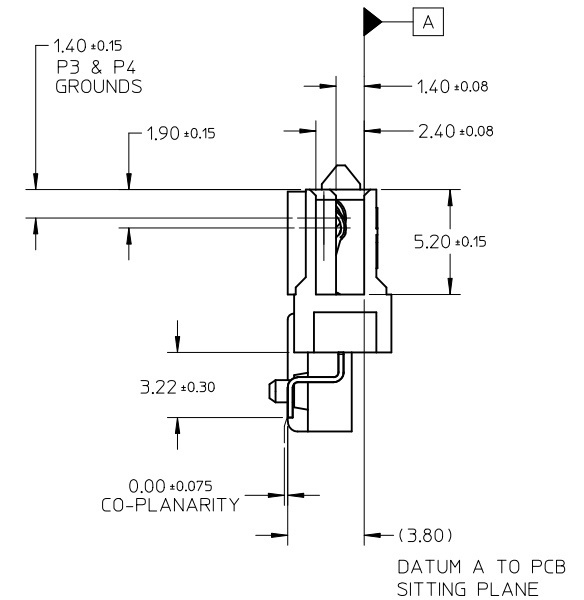
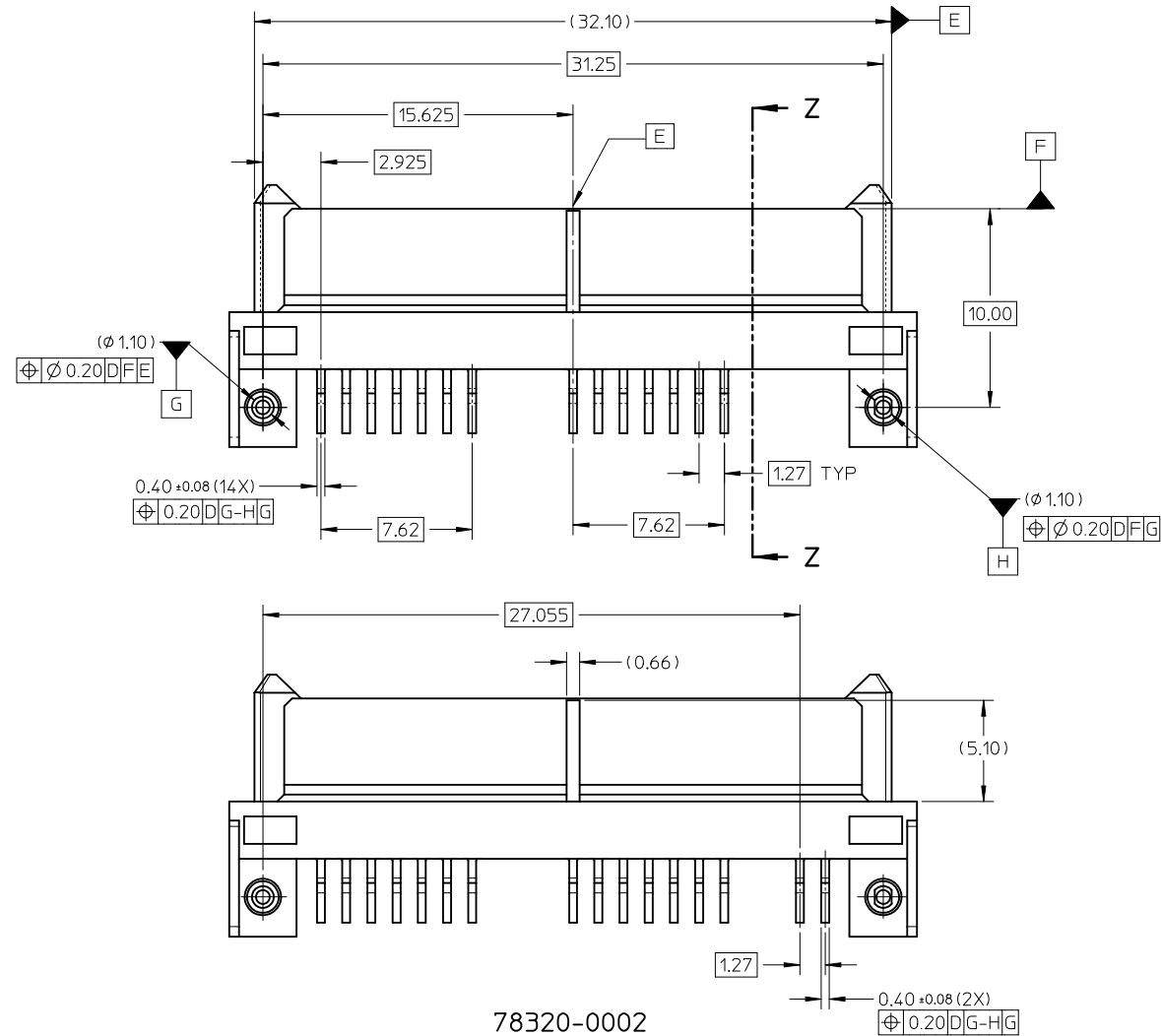
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SECTION Z-Z

78320-0002

UPDATE VIEWS EC NO: S2010-0590 DRWN:GMENARLY CHKD:CGOH APPR:BOKOK		2010/01/12 2010/01/25 2010/01/28	DESCRIPTION	QUALITY SYMBOLS F_A=0 F_G=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 2007/10/08	TITLE SERIAL ATA RECEPTACLE 1.8 INCH HDD/SSD R/A, SMT, 3.80MM HEIGHT	
					4 PLACES	± ---	± ---	CHECKED BY YKOH	DATE 2007/11/21		
					3 PLACES	± ---	± ---	APPROVED BY BOKOK	DATE 2010/01/26		
					2 PLACES	± 0.20	± ---	MOLEX INCORPORATED			
	1 PLACE	± ---	± ---	ANGULAR ± 3 °		MATERIAL NO.	DOCUMENT NO.	SHEET NO. 3 OF 5			
A2		REV	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

10 9 8 7 6 5 4 3 2 1

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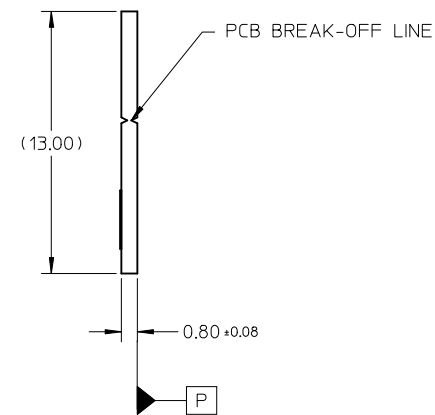
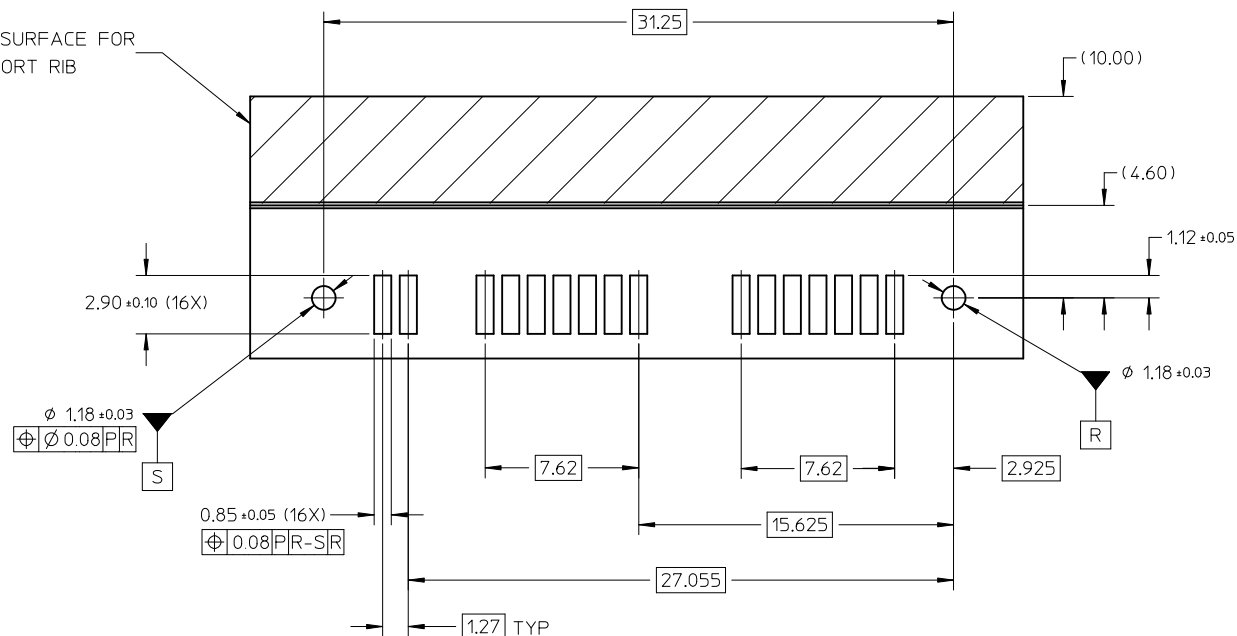
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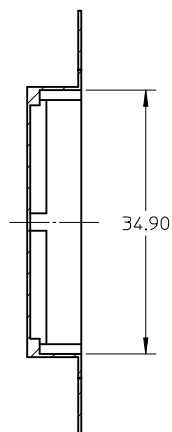
RESTING SURFACE FOR
SUPPORT RIB



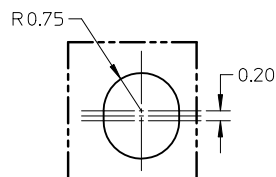
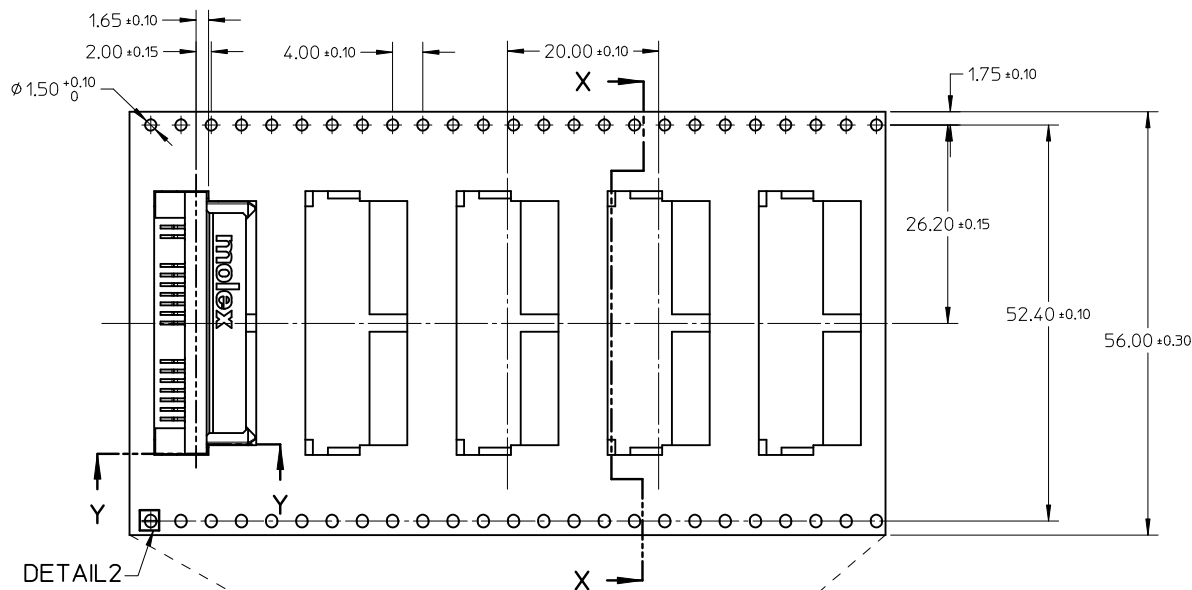
RECOMMENDED PCB LAYOUT

UPDATE VIEWS EC NO: S2010-0590 DRAWN:GMENARLY CHKD:CGOH APPR:BOKOK	DESCRIPTION REV	QUALITY SYMBOLS 	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION			
					DRAWN BY GMENARLY		DATE 2007/10/08		TITLE SERIAL ATA RECEPTACLE 1.8 INCH HDD/SSD R/A, SMT, 3.80MM HEIGHT			
					CHECKED BY YKOH		DATE 2007/11/21					
					APPROVED BY BOKOK		DATE 2010/01/26		molex MOLEX INCORPORATED			
					MATERIAL NO.		DOCUMENT NO.					
A2		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SEE TABLE		SD-78320-002		4 OF 5				
THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION												

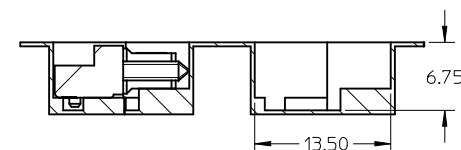
PACKAGING INFORMATION



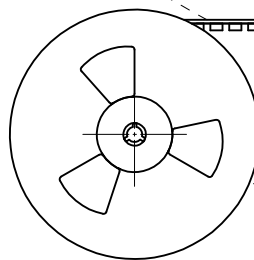
SECTION X-X



DETAIL2



PARTIAL1
OF SECTION Y-Y

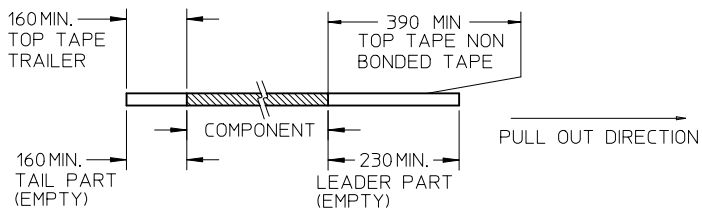


PULL OUT DIRECTION

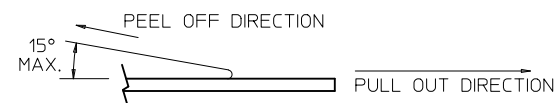


NOTES:

1. LEADER AND TRAILER TAPE



2. PEELING OFF FORCE OF THE TOP TAPE: 20 - 80gf. (PEELING DIRECTION AS SHOWN IN FOLLOWING FIGURE)



3. TAPE AND REEL SPECIFICATION IS AS PER EIA-481.

4. TAPE AND REEL QUANTITY : SPQ=500PCS/REEL, MDQ=100PCS/CARTON : QTY/REEL=500PCS, REELS/CARTON=2

5. THE TAPE IS TREATED FOR ANTI-STATIC.

UPDATE VIEWS EC NO: S2010-0590 DRWN:GMENARLY CHYKD:CGOH APPR:BOKOK 2010/01/12 2010/01/25 2010/01/28	DESCRIPTION	QUALITY SYMBOLS 	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION		
					DRAWN BY DATE		TITLE SERIAL ATA RECEPTACLE 1.8 INCH HDD/SSD R/A, SMT, 3.80MM HEIGHT				
					GMENARLY 2007/10/08						
					CHECKED BY DATE		MOLEX MOLEX INCORPORATED				
					YKOH 2007/11/21						
					APPROVED BY DATE		DOCUMENT NO. SD-78320-002				
		BOKOK 2010/01/26									
		MATERIAL NO.		SHEET NO. 5 OF 5							
		SEE TABLE									
A2		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							