

PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION

Part Number:

0781090001

Status:

Active

Overview:

micro_sata

Description:

1.27mm (.050") Pitch Micro Serial ATA Device Receptacle for 1.8" HDD/SSD, Right Angle, SMT, Mid-Mount, 16 Circuits, Lead free

Documents:

3D Model

Drawing (PDF)

Product Specification PS-78109-001 (PDF)

RoHS Certificate of Compliance (PDF)

General

Product Family

Series

Application

Overview

Product Name

PCB Receptacles

78109

Board-to-Board

micro_sata

Micro Serial ATA, Serial ATA

Physical

Circuits (Loaded)

Circuits (maximum)

Circuits Detail

Color - Resin

Durability (mating cycles max)

Glow-Wire Compliant

Guide to Mating Part

Keying to Mating Part

Lock to Mating Part

Material - Metal

Material - Plating Mating

Material - Plating Termination

Material - Resin

Number of Rows

Orientation

PCB Locator

PCB Retention

Packaging Type

Pitch - Mating Interface (in)

Pitch - Mating Interface (mm)

Plating min: Mating (µin)

Plating min: Mating (µm)

Plating min: Termination (µin)

Plating min: Termination (µm)

Polarized to Mating Part

Polarized to PCB

Stackable

Temperature Range - Operating

Termination Interface: Style

16

16

With Optional Manufacturing Pins (S1 to S7, P1 to P9)

Black

500

No

Yes

Yes

Yes

Copper Alloy

Gold

Tin

Nylon

1

Right Angle

Yes

Yes

Tray

0.050 In

1.27 mm

30

0.76

100

2.54

Yes

Yes

No

-40°C to +105°C

Surface Mount

Electrical

Current - Maximum per Contact

Grounding to PCB

Voltage - Maximum

1.5A

Yes

30V

Solder Process Data

Duration at Max. Process Temperature (seconds)

Lead-free Process Capability

10

Reflow Capable (SMT only)

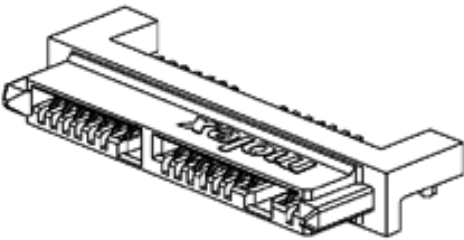


image - Reference only

Series

EU RoHS

ELV and RoHS

Compliant

REACH SVHC

Not Reviewed

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

78109Series

Mates With

78103 , 78283 and 78285 Micro SATA Device Plugs

Max. Cycles at Max. Process Temperature	1
Process Temperature max. C	260

Material Info

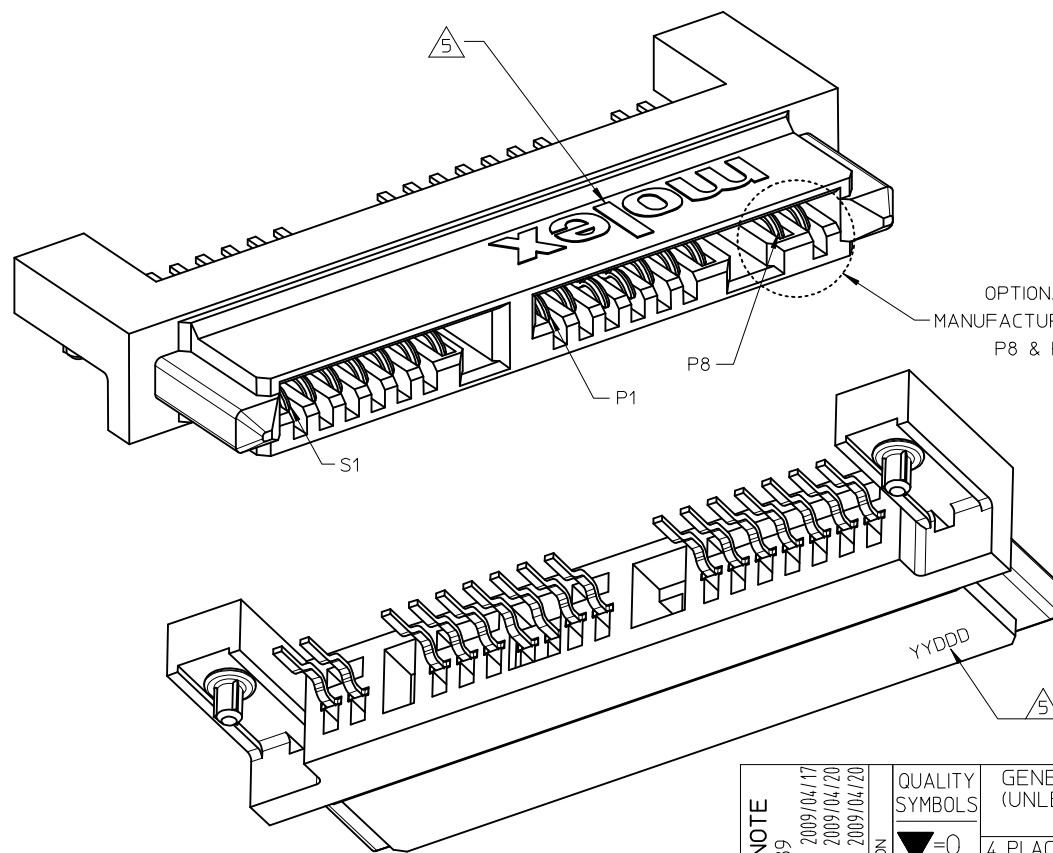
Reference - Drawing Numbers

Product Specification	PS-78109-001
Sales Drawing	SD-78109-001

This document was generated on 05/21/2010

PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION

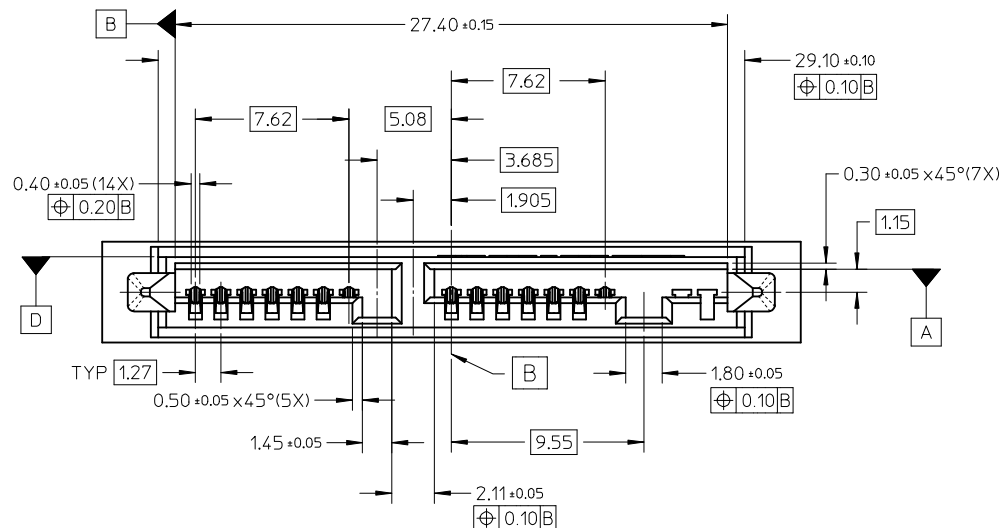
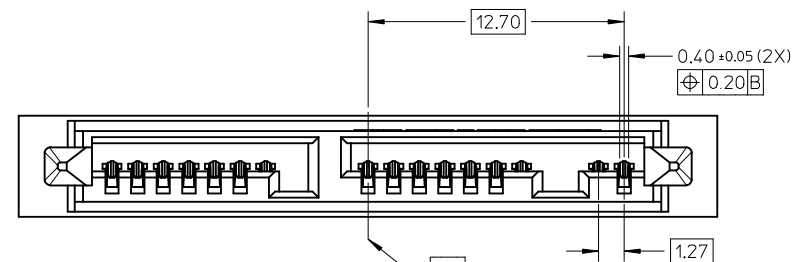
	10	9	8	7	6	5	4		3	2	1	
F	PART NUMBER	TOTAL PINS	DESCRIPTION		HOUSING MATERIAL			PACKAGING		REMARKS		F
	78109-0001	16	WITH OPTIONAL MANUFACTURING PINS (S1 TO S7 & P1 TO P9)		NYLON (PA) 9T, GLASS FILLED, UL 94V-0, BLACK.			TRAY		WITHOUT CAP		
	78109-0012							TAPE AND REEL		WITH CAP		
	78109-1001	14	WITHOUT OPTIONAL MANUFACTURING PINS (S1 TO S7 & P1 TO P7)					TRAY		WITHOUT CAP		
	78109-1012							TAPE AND REEL		WITH CAP		



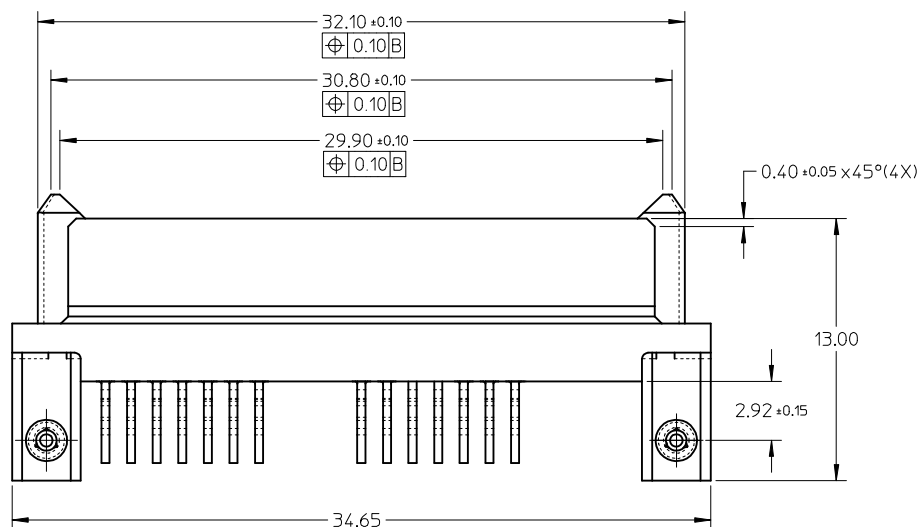
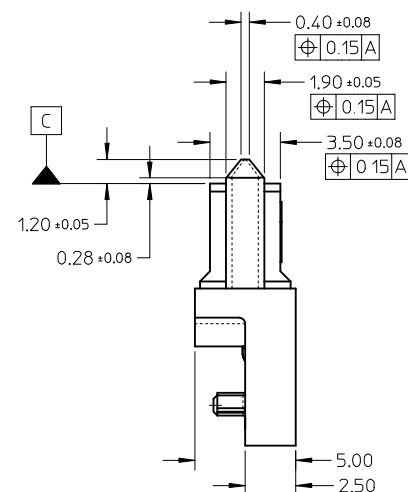
NOTES:

- MATERIAL : SEE TABLE
TERMINAL/LOCATING PIN : COPPER ALLOY
- PLATING :
TERMINAL : 0.76 μ m MIN. SELECTIVE GOLD OVER
1.27 μ m MIN. NICKEL UNDERPLATE
: 2.54 μ m MIN. TIN OVER
1.27 μ m MIN. NICKEL UNDERPLATE
LOCATING PIN : 3.81 μ m MIN. TIN OVER
2.00 μ m MIN. NICKEL UNDERPLATE
- PRODUCT SPECIFICATION : PS-78109-001
- MATES WITH MICRO SATA PLUG SERIES : 78283
- MOLEX LOGO LOCATED APPROXIMATELY AS SHOWN
- DATE CODE LOCATED APPROXIMATELY AS SHOWN
- PACKAGING : SEE TABLE
- 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.

ADD P/NO. & NOTE EC NO: S2009-0789 DRWN:JTAN02 CHKD:KHLIM APPR:BOKOK		DESCRIPTION	QUALITY SYMBOLS <div>▽=0</div> <div>▽=0</div>	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE		SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION	
						MM ONLY		NTS	METRIC		
						DRAWN BY		DATE		TITLE SERIAL ATA RECEPTACLE 1.8 INCH HDD RIGHT-ANGLE, SMT	
						CHECKED BY		DATE			
						APPROVED BY		DATE			
						MATERIAL NO.		DOCUMENT NO.			
		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SEE TABLE		SD-78109-001		SHEET NO. 1 OF 6			
A		REV		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION							



78109-0001



ADD P/NO. & NOTE	
EC NO: S2009-0789	2009/04/17
DRWN: JIAN02	2009/04/20
CHKD: KHLIM	2009/04/20
APPR: BOKOK	2009/04/20
REV	DESCRIPTION
A	

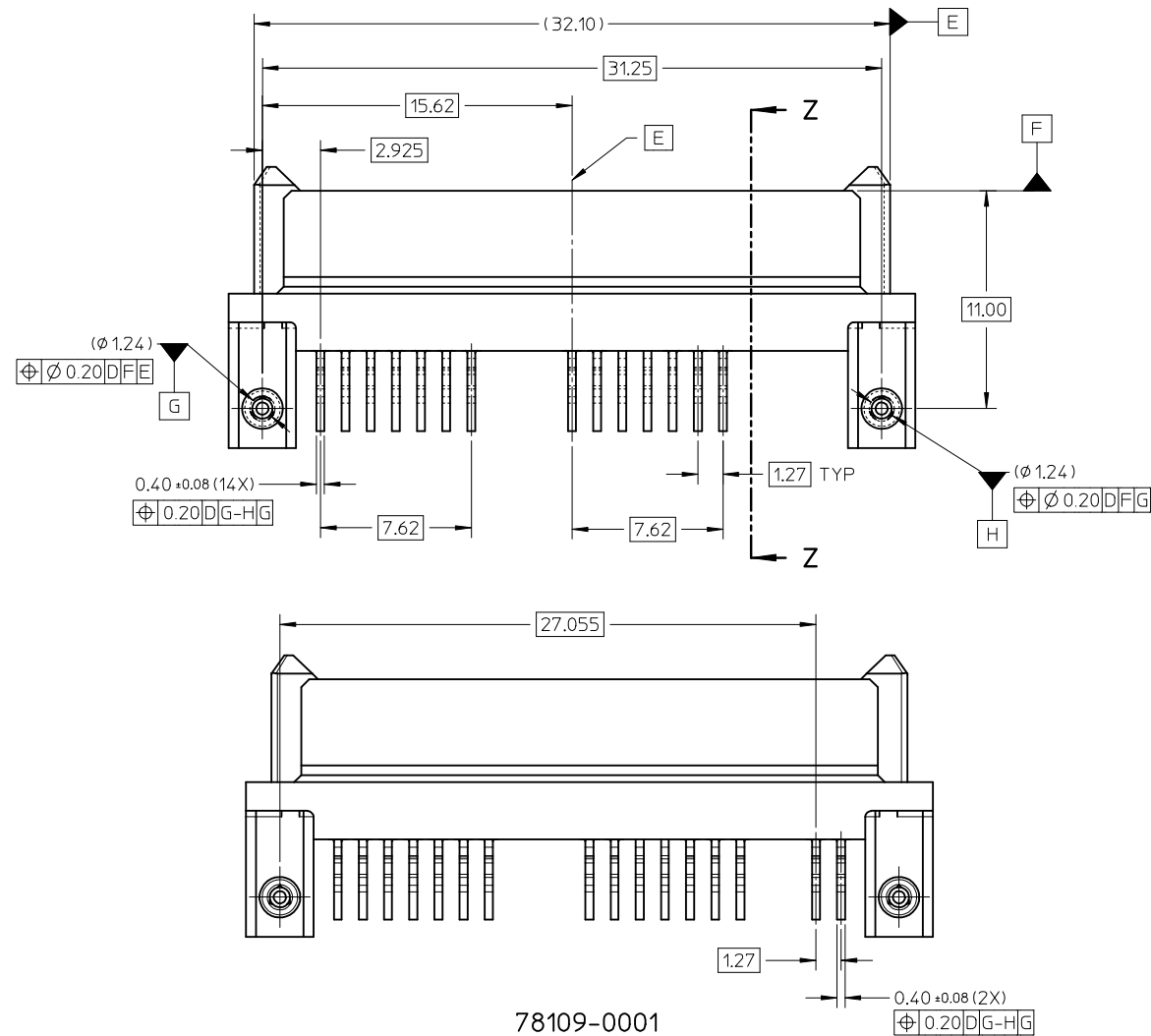
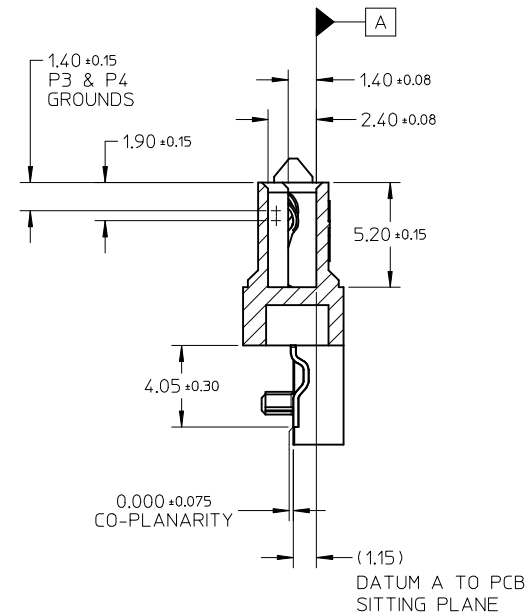
QUALITY SYMBOLS
$\nabla=0$
$\nabla C=0$

GENERAL TOLERANCES (UNLESS SPECIFIED)		
	mm	INCH
4 PLACES	± ---	± ---
3 PLACES	± ---	± ---
2 PLACES	± 0.20	± ---
1 PLACE	± ---	± ---
ANGULAR ± 3 °		
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		

DIMENSION STYLE	
MM ONLY	
DRAWN BY	DATE
YKOH	2006/06/27
CHECKED BY	DATE
SHONG	2006/07/28
APPROVED BY	DATE
KCLING	2006/07/28
MATERIAL NO.	
SEE TABLE	
SIZE	
A3	

SCALE NTS	DESIGN UNITS METRIC		THIRD ANGLE PROJECTION
TITLE SERIAL ATA RECEPTACLE 1.8 INCH HDD RIGHT-ANGLE, SMT			
	MOLEX INCORPORATED		
DOCUMENT NO. SD-78109-001			SHEET NO. 2 OF 6

10 9 8 7 6 5 4 3 2 1



SECTION Z-Z

78109-0001

ADD P/NO. & NOTE EC NO: S2009-0789 DRWN: JANO2 CHKD: KHLIM APPR: BOKOK	REV A	DESCRIPTION QUALITY SYMBOLS ▽=0 ◻=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION				
				mm	INCH	DRAWN BY YKOH	DATE 2006/06/27	TITLE SERIAL ATA RECEPTACLE 1.8 INCH HDD RIGHT-ANGLE, SMT MOLEX INCORPORATED					
			4 PLACES	± ---	± ---	CHECKED BY SHONG	DATE 2006/07/28						
			3 PLACES	± ---	± ---	APPROVED BY KCLING	DATE 2006/07/28						
			2 PLACES	± 0.20	± ---	MATERIAL NO.		DOCUMENT NO.		SHEET NO.			
			1 PLACE	± ---	± ---	SEE TABLE		SD-78109-001		3 OF 6			
			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				

9 8 7 6 5 4 3 2 1

10 9 8 7 6 5 4 3 2 1

F

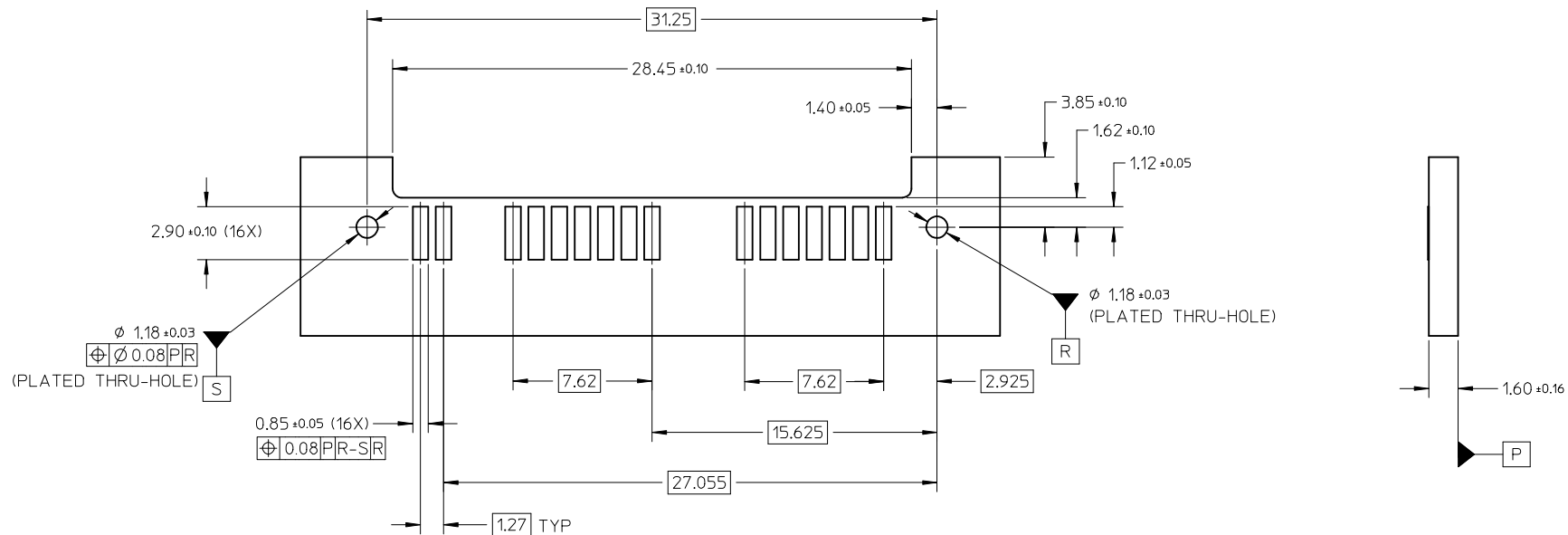
E

D

C

B

A

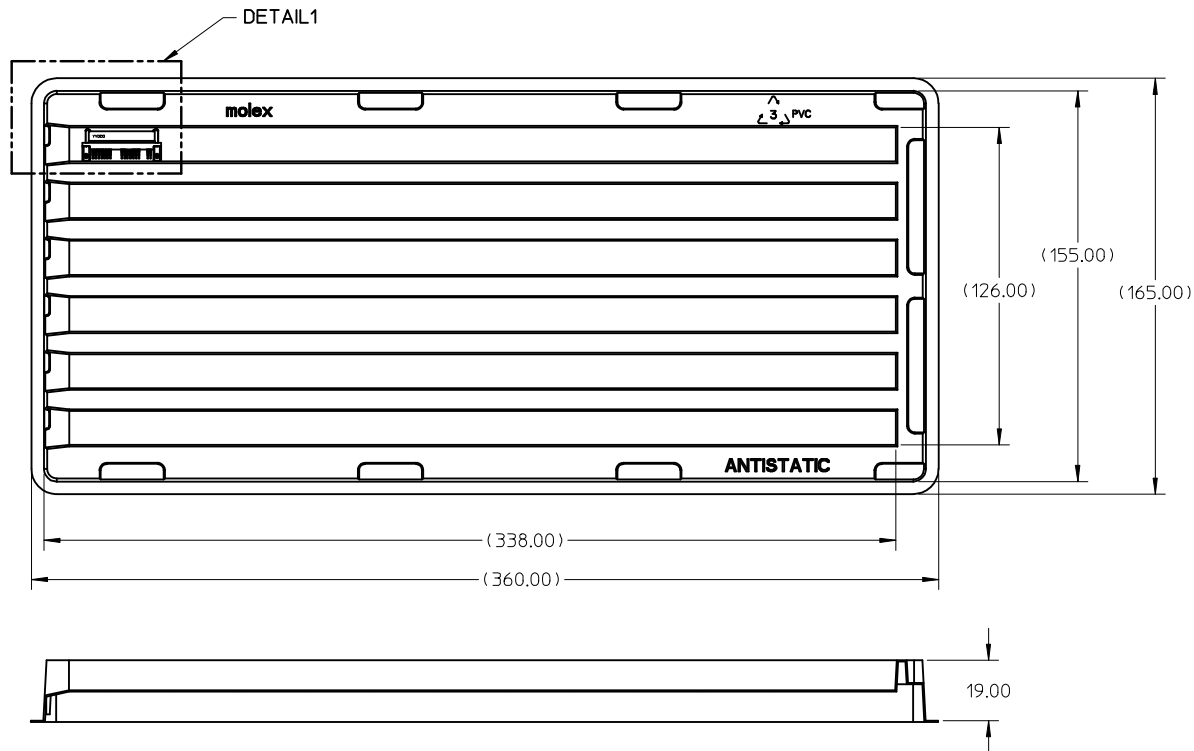
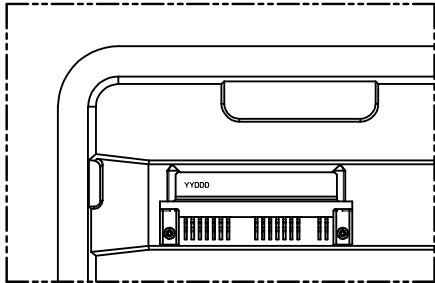


RECOMMENDED PCB LAYOUT

ADD P/NO. & NOTE EC NO: S2009-0789 DRWN: JANO2 CHKD: KHLIM APPR: BOKOK A	DESCRIPTION REV	QUALITY SYMBOLS ▽=0 ◻=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION			
				mm	INCH	DRAWN BY YKOH	DATE 2006/06/27	TITLE SERIAL ATA RECEPTACLE 1.8 INCH HDD RIGHT-ANGLE, SMT				
			4 PLACES	± ---	± ---	CHECKED BY	DATE					
			3 PLACES	± ---	± ---	SHONG	2006/07/28					
			2 PLACES	± 0.20	± ---	APPROVED BY	DATE	MOLEX MOLEX INCORPORATED DOCUMENT NO. SD-78109-001 SHEET NO. 4 OF 6				
			1 PLACE	± ---	± ---	KCLING	2006/07/28					
			ANGULAR ± 3 °		MATERIAL NO.							
			DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS			SEE TABLE						
						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

PACKAGING INFORMATION : TRAY

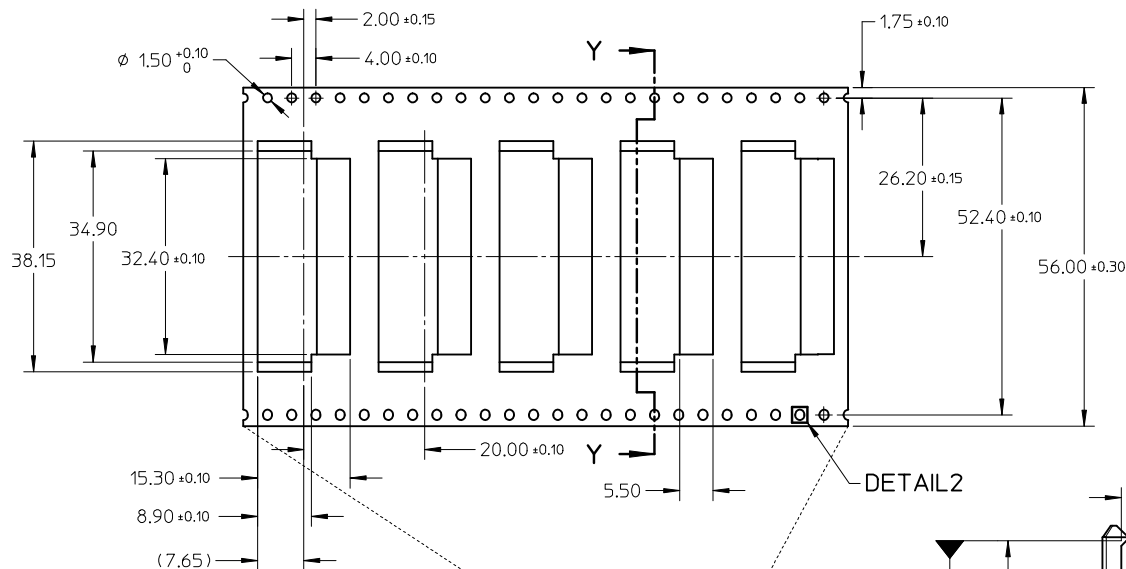


DETAIL1

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

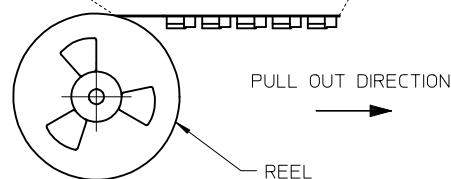
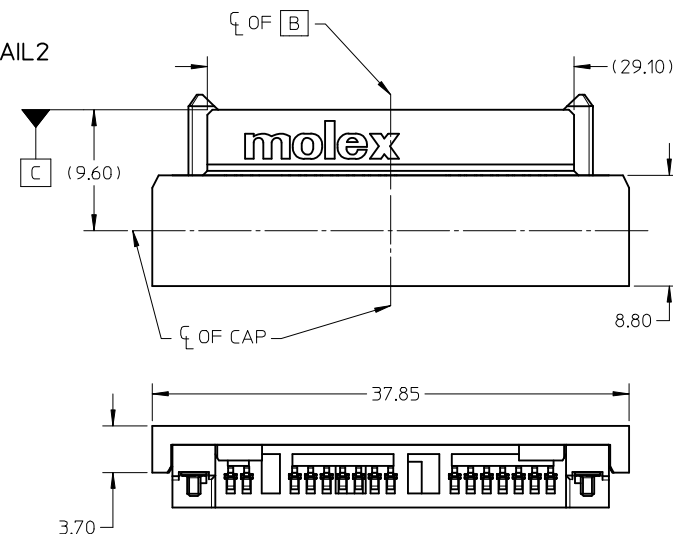
ADD P/NO. & NOTE EC NO: S2009-0789 DRWN: JIAN02 CHKD: KHLIM APPR: BOKOK A		DESCRIPTION REV	QUALITY SYMBOLS <div>▽=0</div> <div>◻=0</div>	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION		
					mm	INCH	DRAWN BY YKOH		DATE 2006/06/27		TITLE SERIAL ATA RECEPTACLE 1.8 INCH HDD RIGHT-ANGLE, SMT	
				4 PLACES	± ---	± ---	CHECKED BY SHONG		DATE 2006/07/28			
				3 PLACES	± ---	± ---	APPROVED BY KCLING		DATE 2006/07/28		MOLEX MOLEX INCORPORATED	
A				2 PLACES	± 0.20	± ---					DOCUMENT NO. SD-78109-001	SHEET NO. 5 OF 6
				1 PLACE	± ---	± ---						
				ANGULAR ± 3 °								
				DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		MATERIAL NO. SEE TABLE						
						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
----	---	---	---	---	---	---	---	---	---

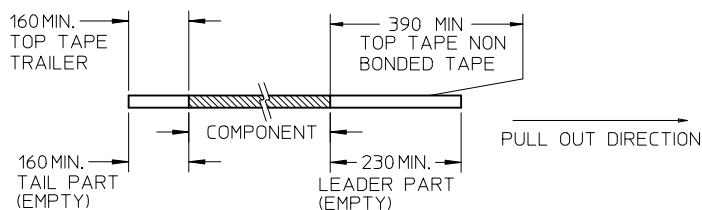


Technical drawing of a square plate with a central hole. The hole has a radius of $R0.75$. The distance from the center of the hole to the right edge is 0.20 ± 0.05 .

DETAIL2



1. LEADER AND TRAILER TAPE



-

3. TAPE AND REEL SPECIFICATION IS AS PER EIA-481.
4. TAPE AND REEL QUANTITY : 480 PCS/ REEL.
5. THE TAPE IS TREATED FOR ANTI-STATIC.

ADD P/NO. & NOTE EC NO: S2009-0789 DRWN: JIAN2 CHK'D: KHL IM APPR: BOKIM 2009/04/17 2009/04/20 2009/04/20	QUALITY SYMBOLS ▽=0 ▽=0	DESCRIPTION SERIAL ATA RECEPTACLE 1.8 INCH HDD RIGHT-ANGLE, SMT MOLEX INCORPORATED SD-78109-001	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION			
			<div>mmINCH</div>		<div>DRAWN BYDATE</div> <div>YKOH2006/06/27</div>		TITLE SERIAL ATA RECEPTACLE 1.8 INCH HDD RIGHT-ANGLE, SMT					
			<div>4 PLACES± --- ± ---</div>		<div>CHECKED BYDATE</div> <div>SHONG2006/07/28</div>							
			<div>3 PLACES± --- ± ---</div>		<div>APPROVED BYDATE</div> <div>KCLING2006/07/28</div>		<div>MOLEXMOLEX INCORPORATED</div>		<div>DOCUMENT NO.</div> <div>SD-78109-001</div>		<div>SHEET NO.</div> <div>6 OF 6</div>	
			<div>2 PLACES± 0.20 ± ---</div>									
A	REV		<div>1 PLACE± --- ± ---</div> <div>ANGULAR ± 3 °</div>		<div>MATERIAL NO.</div> <div>SEE TABLE</div>							
			<div>DRAFT WHERE APPLICABLE</div> <div>MUST REMAIN</div> <div>WITHIN DIMENSIONS</div>		<div>SIZE</div> <div>A3</div>		<div>THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION</div>					