

**PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION**

**Part Number:** [0781641051](#)  
**Status:** **Active**  
**Description:** 1.27mm (.050") Pitch SAS Combo Device Plug, Vertical, SMT, Standard Height 7.88mm (.310"), with Solder Tab and Pick-and-Place Cap, 29 Circuits, Lead free

**Documents:**

[3D Model](#) [Product Specification PS-78012-002 \(PDF\)](#)  
[Drawing \(PDF\)](#) [RoHS Certificate of Compliance \(PDF\)](#)

**Agency Certification**

CSA LR19980  
 UL E29179

**General**

Product Family I/O Connectors  
 Series [78164](#)  
 Application Wire-to-Board  
 Comments <LI>With Cap  
 Component Type Plug  
 Product Name SAS  
 Type N/A

**Physical**

Boot Color N/A  
 Circuits (Loaded) 29  
 Circuits (maximum) 29  
 Color - Resin Black  
 Durability (mating cycles max) 500  
 Flammability 94V-0  
 Gender Plug  
 Lock to Mating Part None  
 Material - Plating Mating Gold  
 Material - Plating Termination Tin  
 Number of Rows 1  
 Orientation Vertical  
 PC Tail Length (in) 0.000 In  
 PC Tail Length (mm) 0.00 mm  
 PCB Locator Yes  
 PCB Retention Yes  
 PCB Thickness Recommended (in) 0.000 In  
 PCB Thickness Recommended (mm) 0.00 mm  
 Packaging Type Embossed Tape on Reel  
 Panel Mount Yes  
 Pitch - Mating Interface (in) 0.031 In, 0.050 In  
 Pitch - Mating Interface (mm) 0.80 mm, 1.27 mm  
 Pitch - Term. Interface (in) 0.031 In, 0.050 In  
 Pitch - Term. Interface (mm) 0.80 mm, 1.27 mm  
 Polarized to Mating Part Yes  
 Polarized to PCB Yes  
 Ports 2  
 Surface Mount Compatible (SMC) Yes  
 Temperature Range - Operating -40°C to +85°C  
 Termination Interface: Style Surface Mount  
 Waterproof / Dustproof No  
 Wire Size AWG N/A

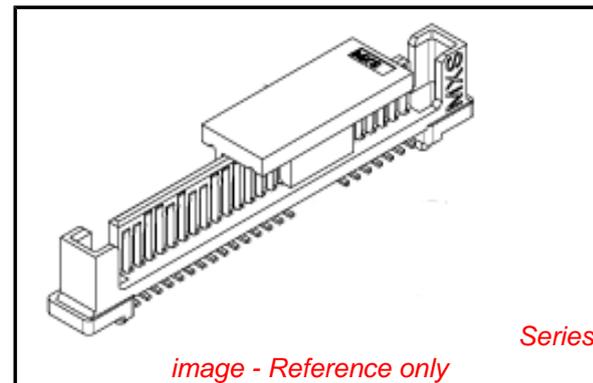


image - Reference only

**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](mailto: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**

[78164Series](#)

**Mates With**

78011 SAS/SATA Receptacle; and 87824, 87839, 87863, 87970, 87945, 87975 SAS Receptacles

**Electrical**

Current - Maximum per Contact	1.5A
Shielded	No
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

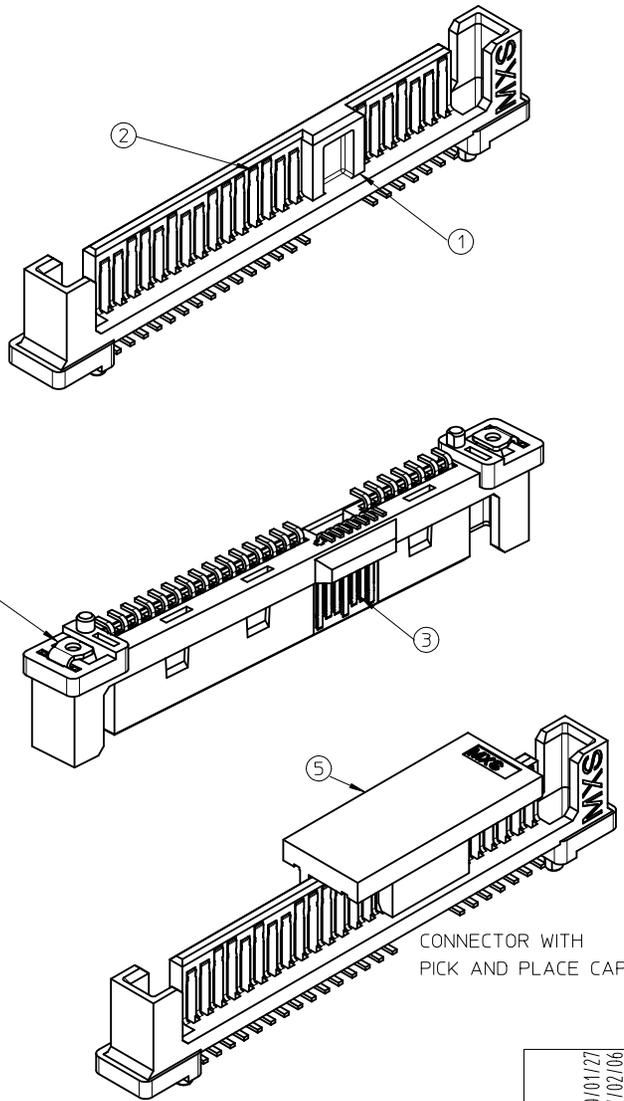
**Material Info****Reference - Drawing Numbers**

Product Specification	PS-78012-002
Sales Drawing	SD-78164-100

This document was generated on 04/02/2010

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NO.	PART NAME	QTY.	MATERIAL
1	HOUSING	1	NYLON(PA), UL 94V-0, COLOR: BLACK
2	CONTACT A	22	COPPER ALLOY
3	CONTACT B	7	COPPER ALLOY
4	FITTING-NAIL	2	COPPER ALLOY
5	PICK & PLACE CAP	1	PA46, UL 94V-0, COLOR: BLACK



NOTES:

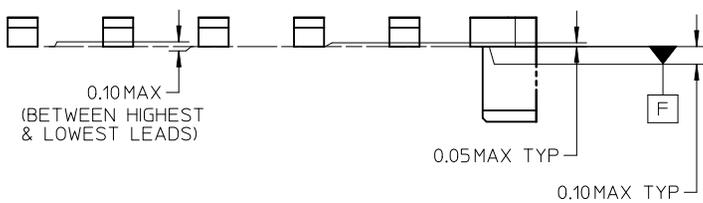
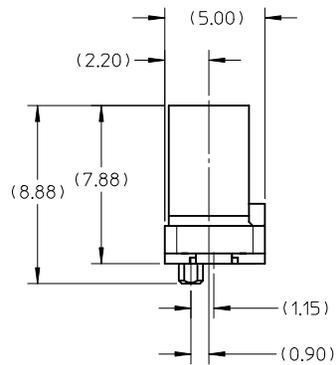
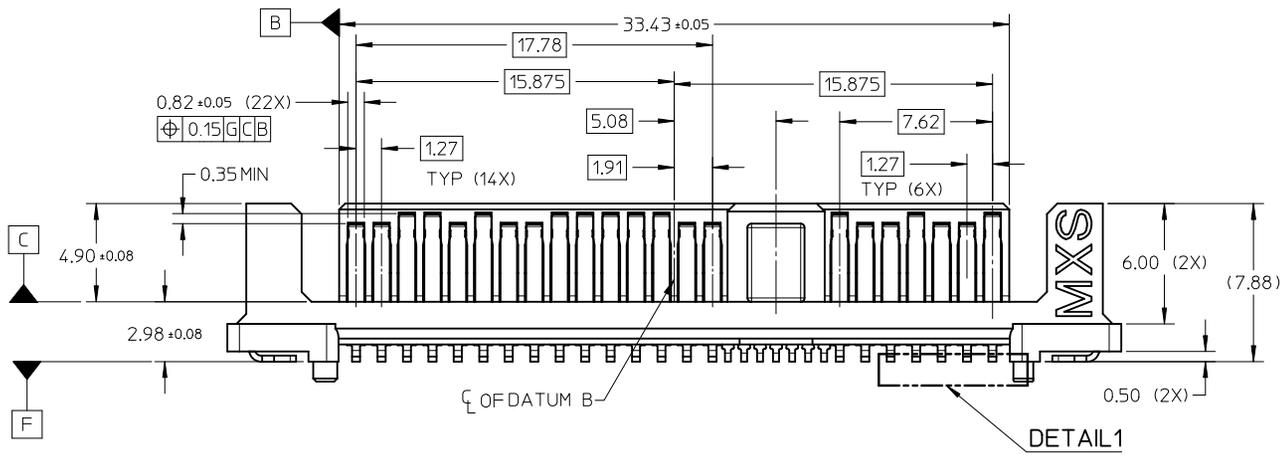
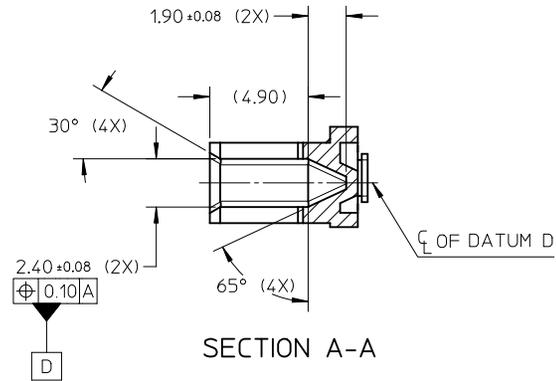
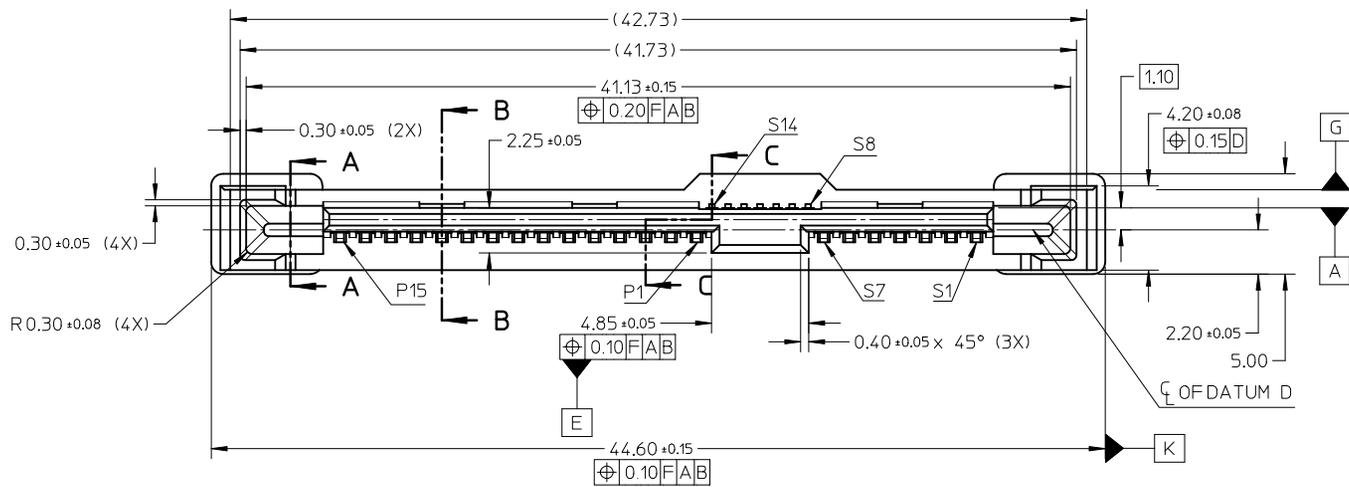
1. MATERIAL: REFER TO THE ABOVE PART-LIST.
2. PLATING SPECIFICATION: REFER TO TABLE-1.
3. APPLICABLE INDUSTRY SPECIFICATION :  
SFF-8482 UNSHIELDED DUAL PORT SERIAL ATTACHMENT CONNECTOR.
4. PRODUCT SPECIFICATION: PS-78012-002.
5. PACKING: REFER TO PACKING INFORMATION (SHEET 5/5).
6. DATE CODE FORMAT: YEAR & DAY OF MANUFACTURE.
7. MOLEX LOGO IS LOCATED APPROXIMATELY AS SHOW.
8. MAXIMUM WARPAGE OF 0.13mm OVER THE LENGTH OF THE CONNECTOR IN ANY DIRECTION BEFORE AND AFTER EXPOSURE TO MAX. 260°C FOR 10 SECONDS.

TABLE-1: ( CONTACT AND FITTING-NAIL PLATING SPECIFICATION )

PART NAME	MATING AREA	TERMINAL AREA	OTHERS AREA
CONTACT	GOLD (0.76µm MIN.)	TIN (1.91µm MIN.)	NICKEL PLATING
	OVER 1.27µm MIN. NICKEL UNDERPLATE		
FITTING-NAIL	TIN OVER NICKEL UNDERPLATE		

UPDATE VIEWS EC NO: S2010-0638 DRW:CGOH CHKD:JTAN02 APPR:BOKOK 2010/01/27 2007/02/06 2010/02/02	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)	DIMENSION STYLE	SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION
	$F_A=0$ $F_C=0$ $F_P=0$	mm    INCH 4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.20 ± --- 1 PLACE ± --- ± --- ANGULAR ± 3 °	MM ONLY	NTS	METRIC	
	DESCRIPTION	DRAWN BY	DATE	TITLE		
	REV	CGOH	2007/01/12	SERIAL ATA SCSI (SAS) PLUG, VERTICAL MOUNT SMT		
A2	BOKOK	2010/02/02	MOLEX INCORPORATED			
			MATERIAL NO.	DOCUMENT NO.	SHEET NO.	
			78164-1051	SD-78164-100	1 OF 5	
			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



REV	DESCRIPTION	DATE	BY	APP
A2	UPDATE VIEWS	2010/01/27	DRWN:CGOH	APPR:BOKOK
		2007/02/06	CHKD:JTAN02	
		2010/02/02		

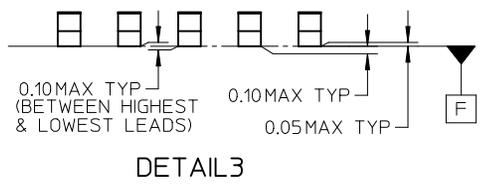
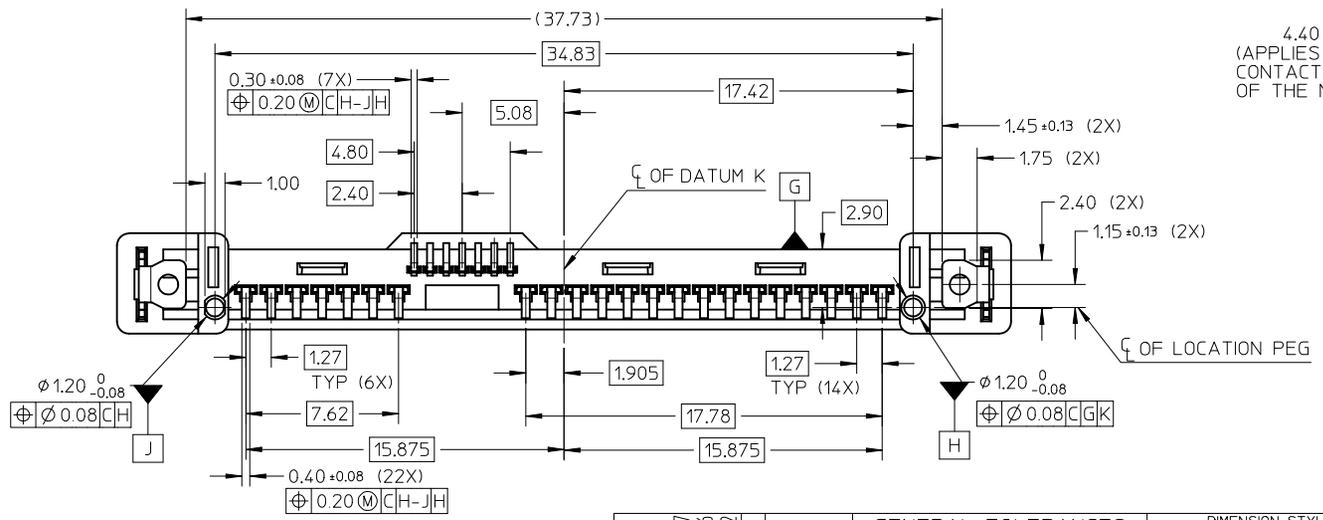
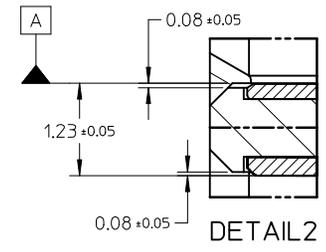
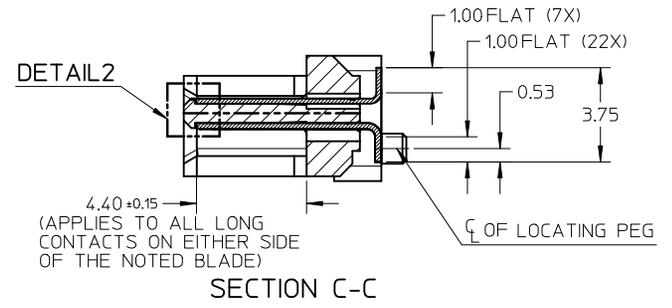
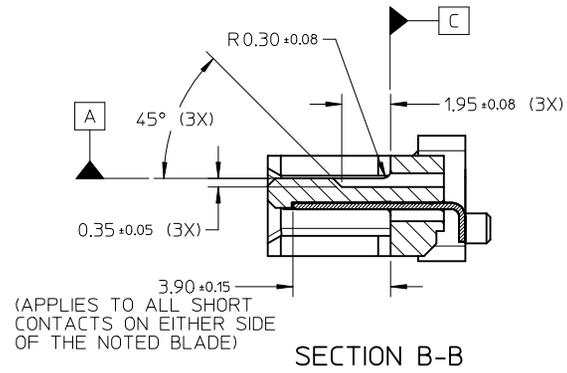
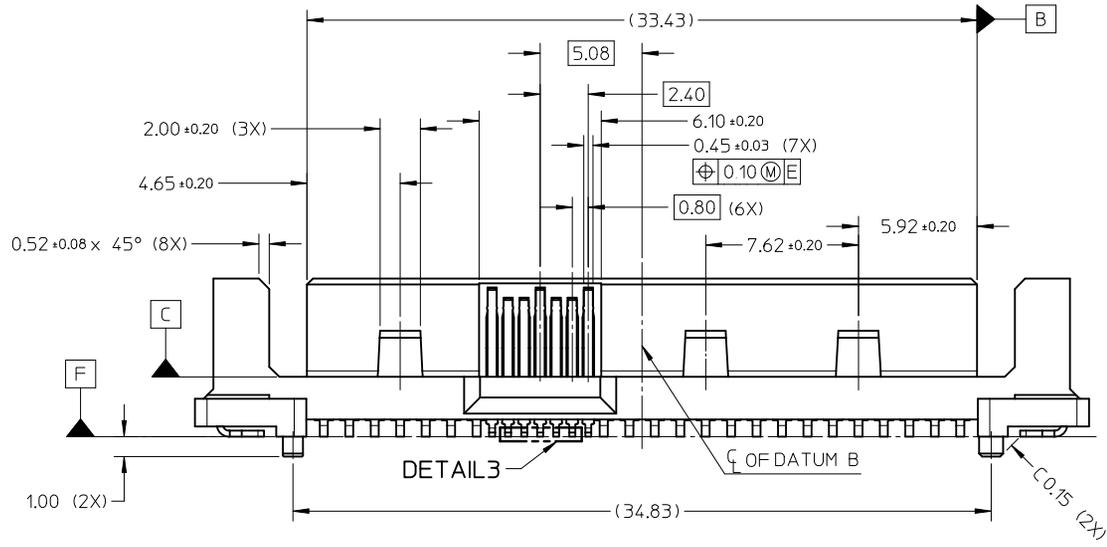
QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)	
	mm	INCH
$F_A=0$	4 PLACES ± ---	± ---
$F_G=0$	3 PLACES ± ---	± ---
$F_B=0$	2 PLACES ± 0.20	± ---
	1 PLACE ± ---	± ---
	ANGULAR ± 3°	

DIMENSION STYLE		SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION
MM ONLY		NTS	METRIC	
DRAWN BY	DATE	TITLE		
CGOH	2007/01/12	SERIAL ATA SCSI (SAS) PLUG, VERTICAL MOUNT SMT		
CHECKED BY	DATE	MOLEX INCORPORATED		
CGTAN	2007/02/06	DOCUMENT NO. SD-78164-100		
APPROVED BY	DATE	SHEET NO. 2 OF 5		
BOKOK	2010/02/02	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		
MATERIAL NO.	78164-1051			

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

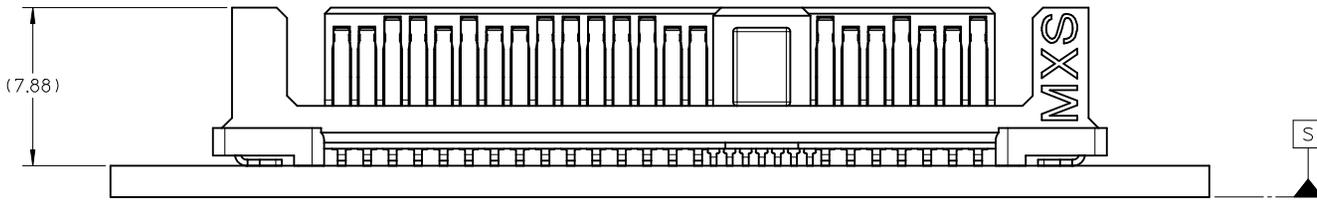
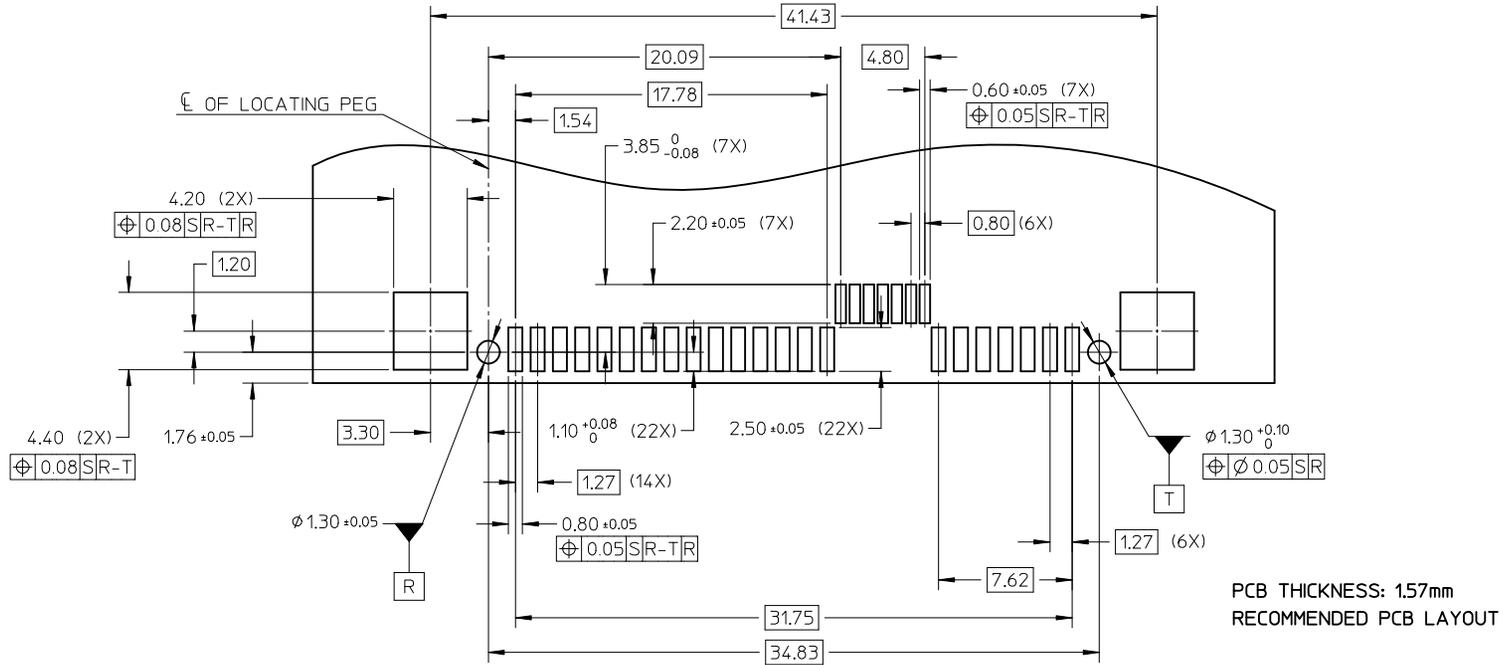
9 8 7 6 5 4 3 2 1

10 9 8 7 6 5 4 3 2 1



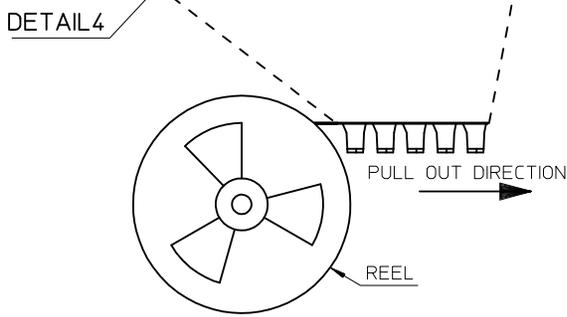
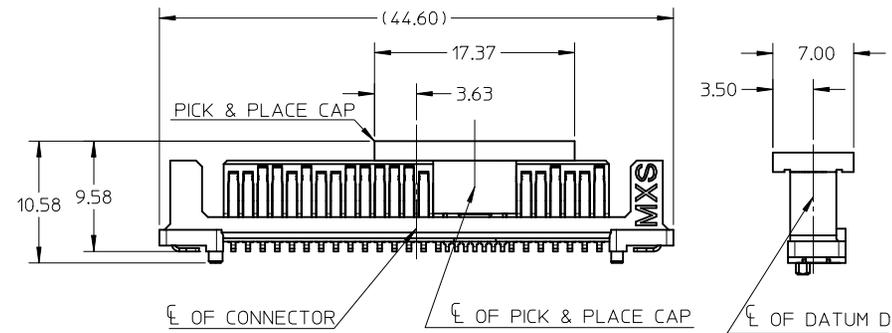
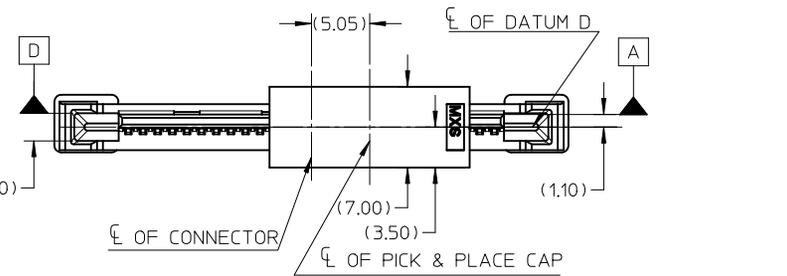
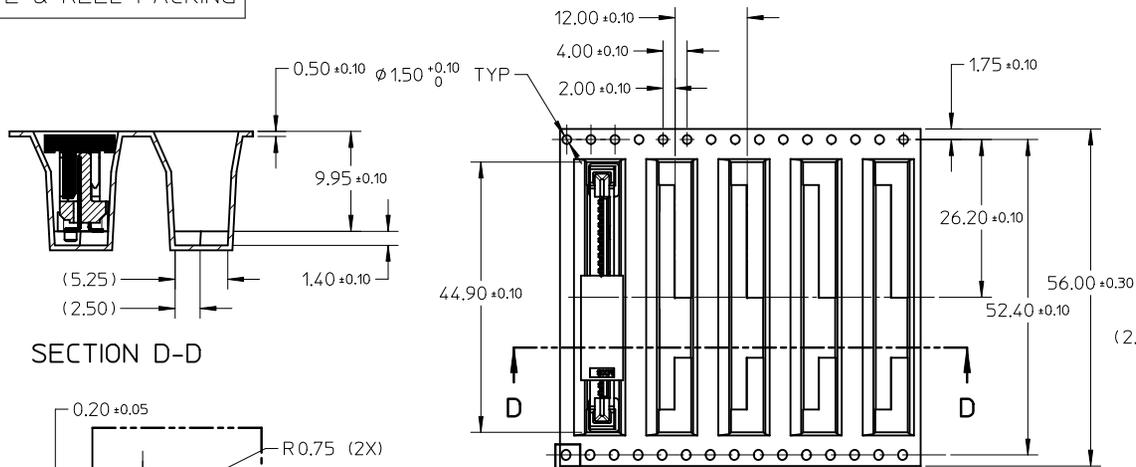
<b>UPDATE VIEWS</b> EC NO: S2010-0638 DRWN: CGOH 2010/01/27 CHYD: JTAN02 2007/02/06 APPR: BOKOK 2010/02/02	<b>QUALITY SYMBOLS</b> $F_A=0$ $F_G=0$ $F_P=0$	<b>GENERAL TOLERANCES (UNLESS SPECIFIED)</b>		<b>DIMENSION STYLE</b> MM ONLY	<b>SCALE</b> NTS	<b>DESIGN UNITS</b> METRIC	THIRD ANGLE PROJECTION
		4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.20 ± --- 1 PLACE ± --- ± ---	mm INCH DRAWN BY DATE CGOH 2007/01/12 CHECKED BY DATE CGTAN 2007/02/06 APPROVED BY DATE BOKOK 2010/02/02	<b>TITLE</b> SERIAL ATA SCSI (SAS) PLUG, VERTICAL MOUNT SMT			
		MATERIAL NO. 78164-1051		DOCUMENT NO. SD-78164-100		SHEET NO. 3 OF 5	
		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS					

9 8 7 6 5 4 3 2 1



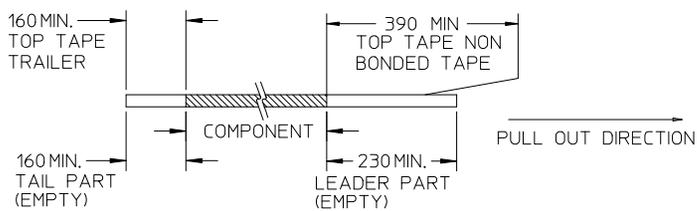
<b>UPDATE VIEWS</b> EC NO: S2010-0638 DRWN: CGOH CHKD: JTAN02 APPR: BOKOK	2010/01/27 2007/02/06 2010/02/02	DESCRIPTION A2	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)	DIMENSION STYLE	SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION
			$F_A=0$ $F_C=0$ $F_P=0$	mm    INCH 4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.20 ± --- 1 PLACE ± --- ± --- ANGULAR ± 3°	MM ONLY	NTS	METRIC	
			DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	DRAWN BY: CGOH    DATE: 2007/01/12 CHECKED BY: CGTAN    DATE: 2007/02/06 APPROVED BY: BOKOK    DATE: 2010/02/02	TITLE	SERIAL ATA SCSI (SAS) PLUG, VERTICAL MOUNT SMT		
			MATERIAL NO. <b>78164-1051</b>	DOCUMENT NO. <b>SD-78164-100</b>	MOLEX INCORPORATED			
		SIZE	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION					

TAPE & REEL PACKING

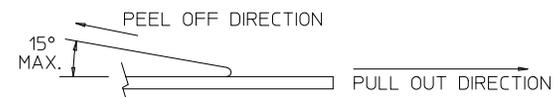


NOTES:

1. LEADER AND TRAILER TAPE



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



- 3. TAPE AND REEL SPECIFICATION IS AS PER EIA-481.
- 4. TAPE AND REEL QUANTITY : 400 PCS/ REEL.
- 5. THE TAPE IS TREATED FOR ANTI-STATIC.

UPDATE VIEWS EC NO: S2010-0638 DRWN:CGOH CHKD:JTAN02 APPR:BOKOK	2010/01/27 2007/02/06 2010/02/02	DESCRIPTION A2	QUALITY SYMBOLS	$\nabla_A = 0$ $\nabla_C = 0$ $\nabla_P = 0$	GENERAL TOLERANCES (UNLESS SPECIFIED)	DIMENSION STYLE	SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION	
					mm    INCH 4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.20 ± --- 1 PLACE ± --- ± --- ANGULAR ± 3 °	MM ONLY	NTS	METRIC		
					DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	DRAWN BY: CGOH    DATE: 2007/01/12 CHECKED BY: CGTAN    DATE: 2007/02/06 APPROVED BY: BOKOK    DATE: 2010/02/02	TITLE	SERIAL ATA SCSI (SAS) PLUG, VERTICAL MOUNT SMT		
						MATERIAL NO. 78164-1051	DOCUMENT NO. SD-78164-100	MOLEX INCORPORATED		SHEET NO. 5 OF 5