

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

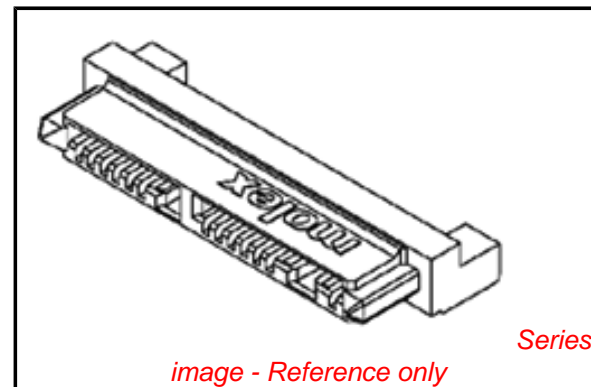


image - Reference only

EU RoHS

ELV and RoHS Compliant

REACH SVHC

Not Reviewed

Halogen-Free

Status

Not Halogen-Free

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

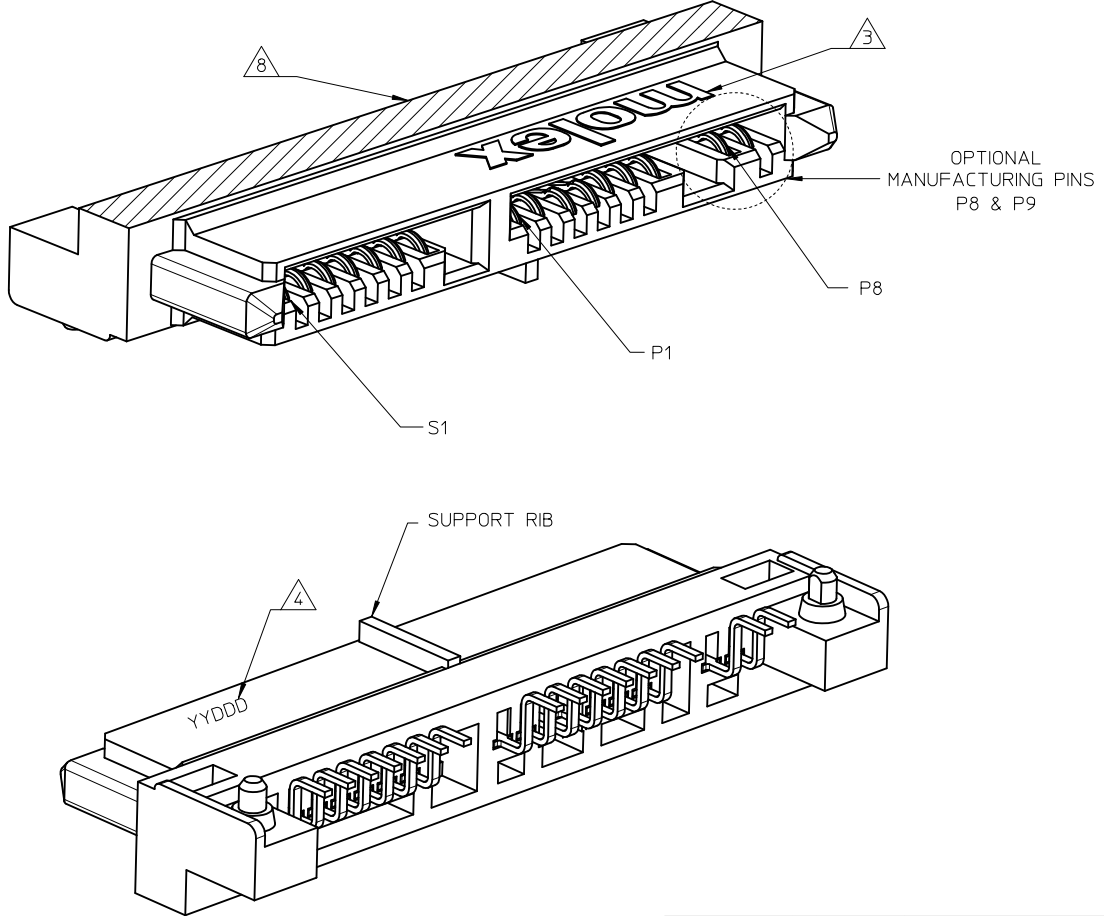
Material Info**Reference - Drawing Numbers**

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

This document was generated on 05/21/2010

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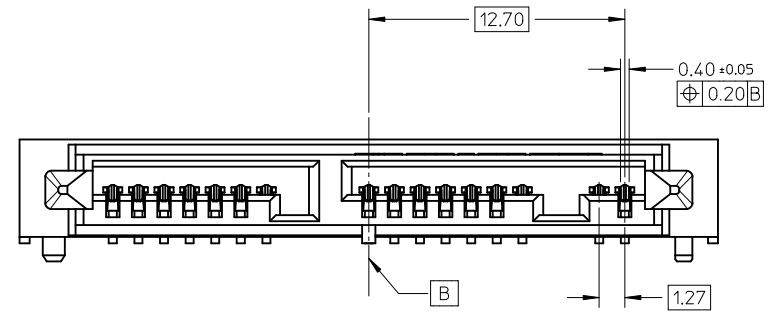
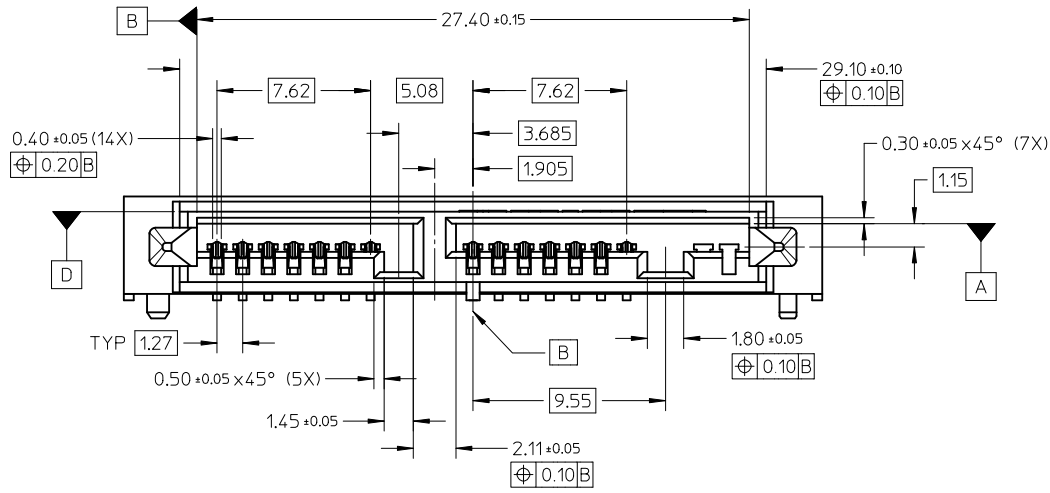
5	4	3	2	1
PART NUMBER	TOTAL PINS	DESCRIPTION		
78320-0002	16	WITH OPTIONAL MANUFACTURING PINS (S1 TO S7 & P1 TO P9)		
78320-1002	14	WITHOUT OPTIONAL MANUFACTURING PINS (S1 TO S7 & P1 TO P7)		



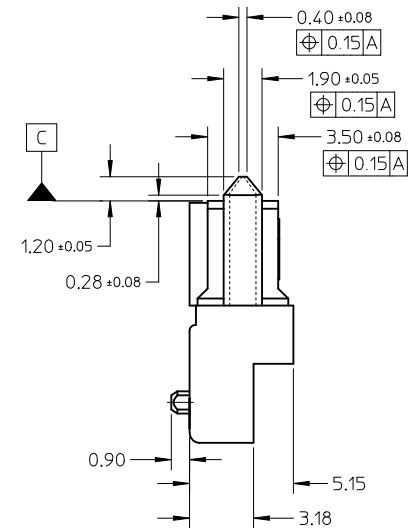
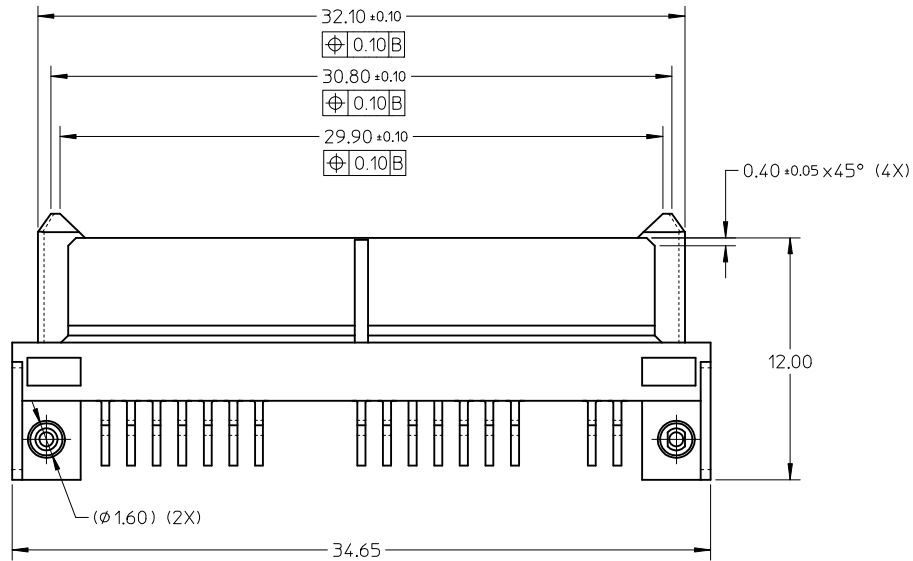
- NOTES:
- MATERIAL : NYLON (PA) 9T, GLASS FILLED, UL 94V-0, BLACK
TERMINAL : COPPER ALLOY
 - PLATING :
TERMINAL : 0.76µm MIN. SELECTIVE GOLD OVER
1.27µm MIN. NICKEL UNDERPLATE
2.54µm MIN. TIN OVER
1.27µm MIN. NICKEL UNDERPLATE
 - MOLEX LOGO LOCATED APPROXIMATELY AS SHOWN
 - DATE CODE LOCATED APPROXIMATELY AS SHOWN
 - PACKAGING : TAPE AND REEL
 - 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.
 - PROPOSED PICK & PLACE SURFACE.
 - PRODUCT SPECIFICATION: PS-78320-002

UPDATE VIEWS EC NO: S2010-0590 DRWN:GMENARLY 2010/01/12 CH'KD:CGOH 2010/01/25 APPR:BOKOK 2010/01/26	DESCRIPTION A2	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	DATE	TITLE				
		4 PLACES	± ---	± ---	GMENARLY	2007/10/08	SERIAL ATA RECEPTACLE 1.8 INCH HDD/SSD R/A, SMT, 3.80MM HEIGHT MOLEX INCORPORATED				
		3 PLACES	± ---	± ---	CHECKED BY	DATE					
2 PLACES	± 0.20	± ---	YKOH	2007/11/21	SD-78320-002						
1 PLACE	± ---	± ---	APPROVED BY	DATE							
ANGULAR ± 3 °			DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SEE TABLE		DOCUMENT NO.		SHEET NO.		
					SIZE	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



78320-0002

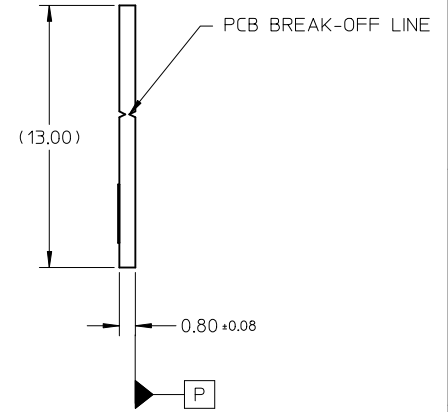
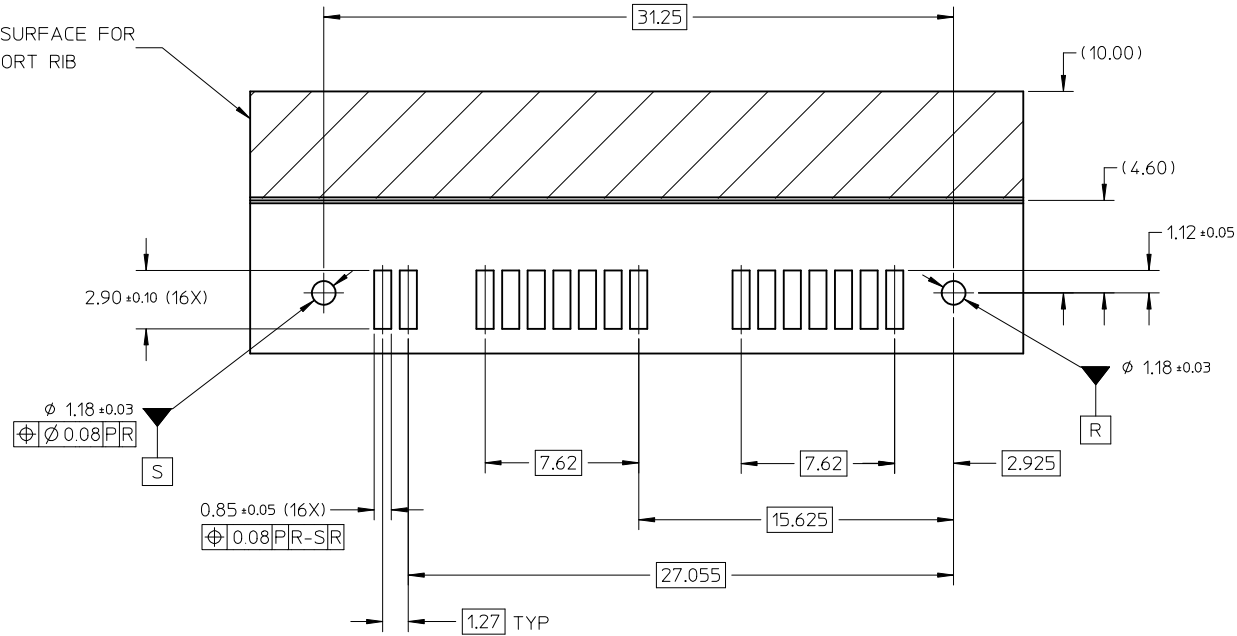


UPDATE VIEWS EC NO: S2010-0590 DRWN:GMENARLY 2010/01/12 CHKD:CGOH 2010/01/25 APPR:BOKOK 2010/01/28	QUALITY SYMBOLS $F_A=0$ $F_C=0$ $F_P=0$	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION	
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		3 PLACES ± --- ± ---		CHECKED BY YKOH	DATE 2007/11/21	MOLEX INCORPORATED			
		2 PLACES ± 0.20 ± --- 1 PLACE ± --- ± ---		APPROVED BY BOKOK	DATE 2010/01/26	MATERIAL NO. SEE TABLE	DOCUMENT NO. SD-78320-002	SHEET NO. 2 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

RESTING SURFACE FOR
SUPPORT RIB



RECOMMENDED PCB LAYOUT

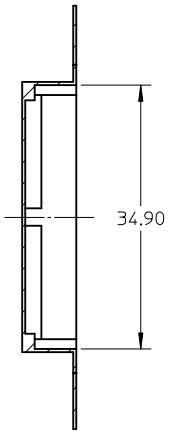
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		CHECKED BY YKOH	DATE 2007/11/21	molex MOLEX INCORPORATED																	
		APPROVED BY BOKOK	DATE 2010/01/26	MATERIAL NO. SEE TABLE	DOCUMENT NO. SD-78320-002	SHEET NO. 4 OF 5															

DRAFT WHERE APPLICABLE
MUST REMAIN
WITHIN DIMENSIONS

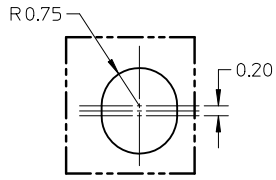
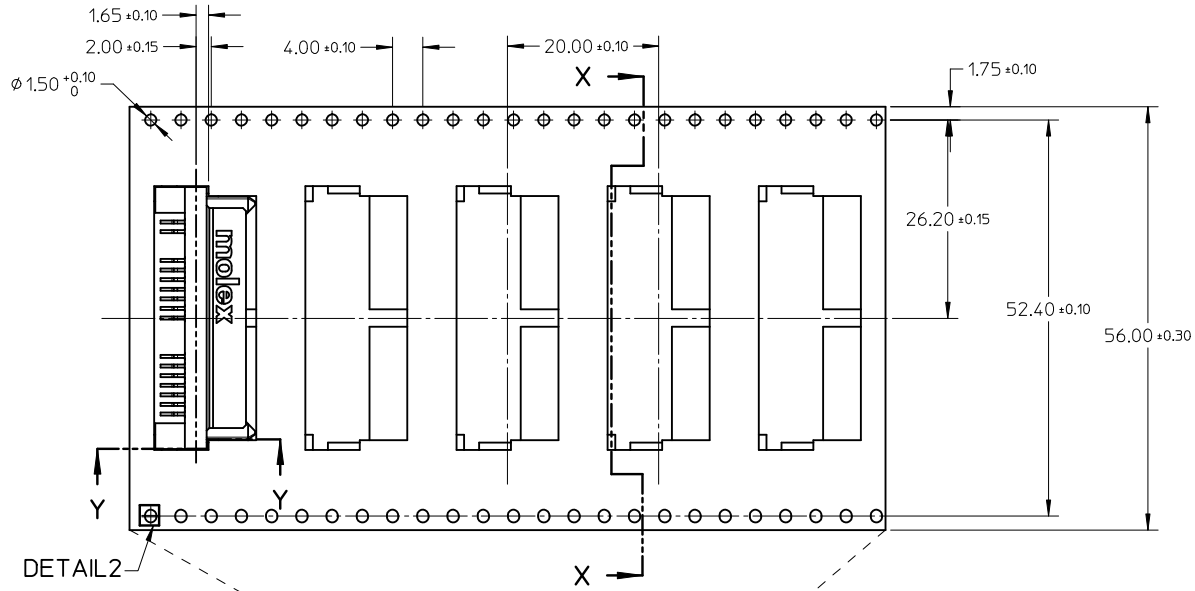
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9 8 7 6 5 4 3 2 1

PACKAGING INFORMATION



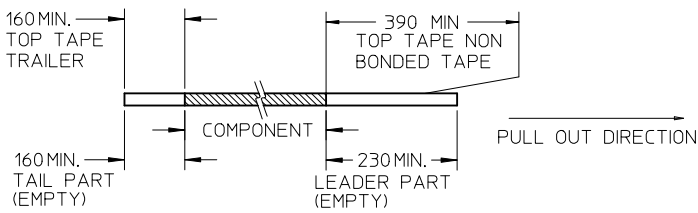
SECTION X-X



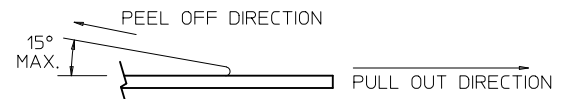
DETAIL2

NOTES:

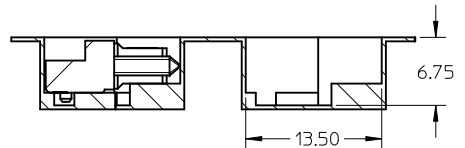
1. LEADER AND TRAILER TAPE



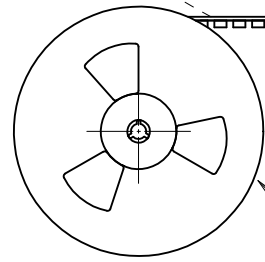
2. PEELING OFF FORCE OF THE TOP TAPE: 20 - 80gf.
(PEELING DIRECTION AS SHOWN IN FOLLOWING FIGURE)



- 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.



PARTIAL1 OF SECTION Y-Y



PULL OUT DIRECTION



REEL

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