

PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION

Part Number: [0878980554](#)
Status: **Active**
Overview: [kk](#)
Description: 2.54mm (.100") Pitch KK® Header, Surface Mount, Breakaway, Vertical, 5 Circuits, 0.38µm (15µ") Gold (Au) Plating, Tape on Reel Packaging, with Cap, Lead-free

Documents:

[Drawing \(PDF\)](#) [RoHS Certificate of Compliance \(PDF\)](#)

General

Product Family PCB Headers
Series [87898](#)
Application Board-to-Board, Wire-to-Board
Overview [kk](#)
Product Name KK®

Physical

Breakaway Yes
Circuits (Loaded) 5
Circuits (maximum) 5
Color - Resin Black
First Mate / Last Break No
Glow-Wire Compliant No
Guide to Mating Part No
Keying to Mating Part None
Lock to Mating Part None
Material - Metal Copper Alloy
Material - Plating Mating Gold
Material - Plating Termination Tin
Material - Resin Nylon
Number of Rows 1
Orientation Vertical
PCB Locator No
PCB Retention None
Packaging Type Embossed Tape on Reel
Pitch - Mating Interface (in) 0.100 In
Pitch - Mating Interface (mm) 2.54 mm
Pitch - Term. Interface (in) 0.100 In
Pitch - Term. Interface (mm) 2.54 mm
Polarized to Mating Part No
Polarized to PCB No
Robotic Placement Pick and Place Cap
Shrouded No
Stackable No
Temperature Range - Operating -55°C to +105°C
Termination Interface: Style Surface Mount

Electrical

Current - Maximum per Contact 3A
Voltage - Maximum 250V

Solder Process Data

Duration at Max. Process Temperature (seconds) 10
Lead-free Process Capability Reflow Capable (SMT only)
Max. Cycles at Max. Process Temperature 3
Process Temperature max. C 260

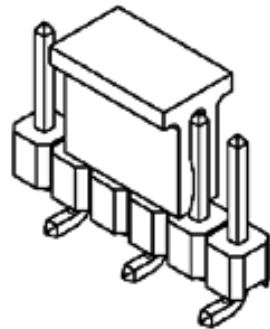


image - Reference only

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

[87898Series](#)

Mates With

KK® PCB Receptacles [4455](#). SL™ IDT
Housings [70430](#) , [7720](#), [70400](#). C-Grid®
PCB Receptacles [90147](#), [90148](#)

Material Info

Reference - Drawing Numbers

Packaging Specification	PK-89990-486
Sales Drawing	SD-87898-001

This document was generated on 05/25/2010

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10 9 8 7 6 5 4 3 2 1

F

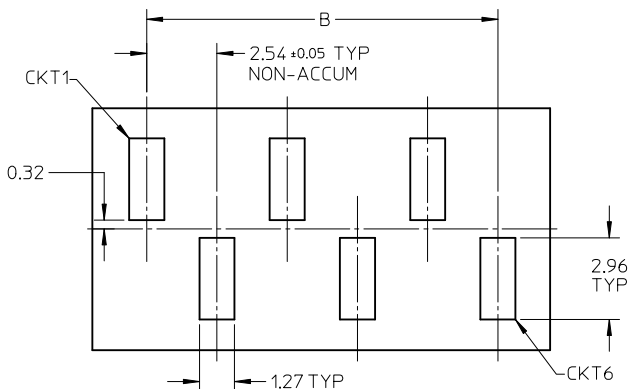
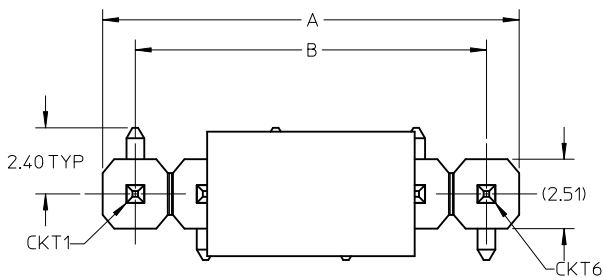
E

D

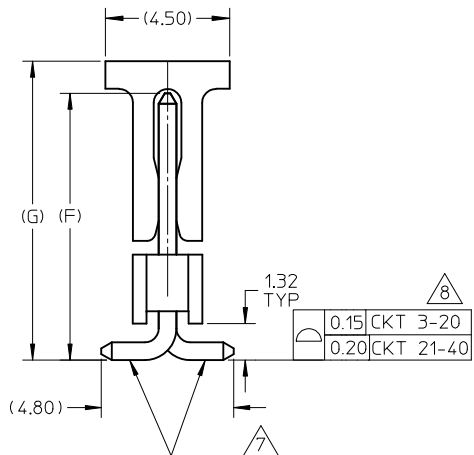
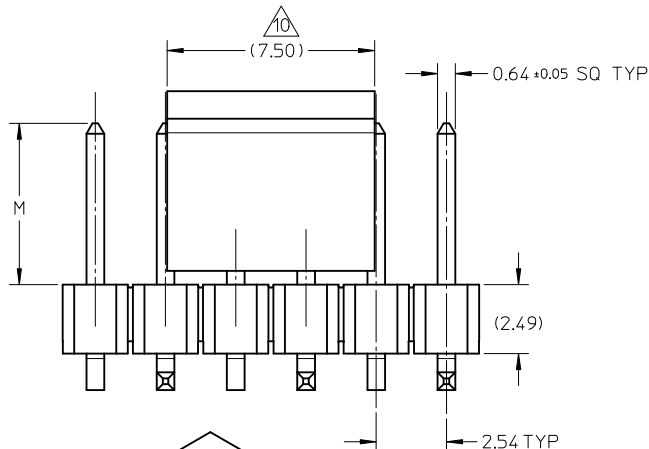
C

B

A



RECOMMENDED PCB LAYOUT: COMPONENT SIDE



NOTES:

1. MATERIAL:

HSG: NYLON, GLASS-FILLED, UL94V-0, COLOR: BLACK
CAP: NYLON, GLASS-FILLED, UL94V-0, COLOR: BLACK
PIN: 0.64MM SQ, COPPER ALLOY

2. PLATING TYPE:

- (1) GOLD FLASH OVER
1.25µm MIN. NICKEL OVERALL.
- (2) GOLD FLASH ON CONTACT AND
2.50µm MIN. TIN ON SOLDER TAIL OVER
1.25µm MIN. NICKEL OVERALL.
- (4) 0.38µm MIN. GOLD PLATE ON CONTACT AND
2.00µm MIN. TIN ON SOLDER TAIL OVER
1.25µm MIN. NICKEL OVERALL.
- (5) 0.75µm MIN. GOLD PLATE ON CONTACT AND
2.00µm MIN. TIN ON SOLDER TAIL OVER
1.25µm MIN. NICKEL OVERALL.
- (6) 2.50µm MIN. TIN OVERALL
1.25µm MIN. NICKEL OVERALL

3. PRODUCT SPECIFICATION: PS-87920-019

4. PACKAGING TYPE: SEE TABLE

5. PACKAGING SPEC:

TUBE WITH CAP VERSION: PK-89990-558
TUBE W/O CAP VERSION: PK-89990-545
EMBOSS TAPE WITH CAP: PK-89990-486

6. WAFER TO BE FLAT WITHIN 0.003 mm/mm

△ BEND DEPRESSION IS ACCEPTED SO LONG AS IT DOES NOT AFFECT THE OVERALL COPLANARITY OF TAIL

△ 8. COPLANARITY IS TO BE MEASURED BY RESTING THE SOLDER TAIL ON A FLAT SURFACE

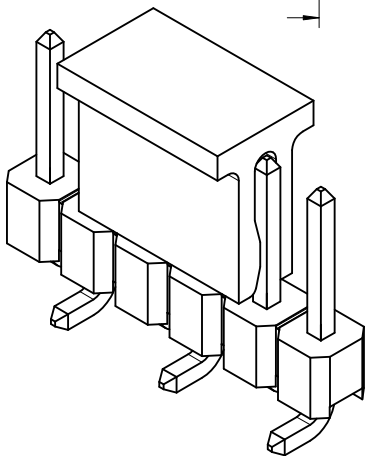
△ 9. IRREGULAR CIRCUIT CUTOFF WITHIN BREAKAWAY SECTION IS PERMISSIBLE. CUTTING OR CHIPPING OF THE MAIN BODY IS NOT ACCEPTABLE

△ 10. CAP LOCATION IS CENTERED ALONG THE MATING ENDS AS SHOWN. TOP SURFACE OF CAP TO BE FLAT FOR THE PURPOSE OF PICK & PLACE BY VACUUM SUCTION NOZZLE

11. RECOMMENDED PCB THICKNESS IS 1.60mm ± 0.10

12. THE ABOVE CKT 6 IS FOR ILLUSTRATION PURPOSE ONLY

13. TUBE LENGTH AS PER STANDARD 560mm



EWR#1228, +0209 EC NO: S2010-0966 DRWN:ATSEE 2010/05/20 CHKD:PTLIM 2010/03/29 APPR:MLONG 2010/06/08 REV B3			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 DATE		TITLE CUSTOM HEADER 2.54MM PITCH SINGLE ROW SINGLE WAFER SMT HEADER					
				4 PLACES ± --- ± ---		YLOIAO 2005/03/14							
				3 PLACES ± --- ± ---		CHECKED BY DATE							
				2 PLACES ± 0.2 ± ---		PTLIM 2005/03/29							
				1 PLACE ± --- ± ---		APPROVED BY DATE		MOLEX MOLEX INCORPORATED SD-87898-001					
ANGULAR ± 3 °		MLONG 2010/03/10											
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		MATERIAL NO. SEE TABLE		DOCUMENT NO.									
				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	PACKAGING OPTION PART NO.						CKT SIZE	VOID POSITION	PLATING TYPE	DIMENSION											
	TRAY WITHOUT CAP	TRAY WITH CAP	TUBE WITHOUT CAP	TUBE WITH CAP	TAPE & REEL WITHOUT CAP	TAPE & REEL WITH CAP				A	B	G	F	M							
	-----	-----	87898-0421	87898-0431	-----	87898-0451	4	-----	1	10.16	7.62	10.81	9.65	5.84							
	-----	-----	87898-0422	87898-0432	-----	87898-0452	4	-----	2	10.16	7.62	10.81	9.65	5.84							
	-----	-----	87898-0424	87898-0434	-----	87898-0454	4	-----	4	10.16	7.62	10.81	9.65	5.84							
	-----	-----	87898-0425	87898-0435	-----	87898-0455	4	-----	5	10.16	7.62	10.81	9.65	5.84							
	-----	-----	87898-0426	87898-0436	-----	87898-0456	4	-----	6	10.16	7.62	10.81	9.65	5.84							
E																					
	-----	-----	87898-0521	87898-0531	-----	87898-0551	5	-----	1	12.70	10.16	10.81	9.65	5.84							
	-----	-----	87898-0522	87898-0532	-----	87898-0552	5	-----	2	12.70	10.16	10.81	9.65	5.84							
	-----	-----	87898-0524	87898-0534	-----	87898-0554	5	-----	4	12.70	10.16	10.81	9.65	5.84							
	-----	-----	87898-0525	87898-0535	-----	87898-0555	5	-----	5	12.70	10.16	10.81	9.65	5.84							
D	-----	-----	87898-0526	87898-0536	-----	87898-0556	5	-----	6	12.70	10.16	10.81	9.65	5.84							
	-----	-----	87898-0621	87898-0631	-----	87898-0651	6	-----	1	15.24	12.70	10.81	9.65	5.84							
	-----	-----	87898-0622	87898-0632	-----	87898-0652	6	-----	2	15.24	12.70	10.81	9.65	5.84							
	-----	-----	87898-0624	87898-0634	-----	87898-0654	6	-----	4	15.24	12.70	10.81	9.65	5.84							
C	-----	-----	87898-0625	87898-0635	-----	87898-0655	6	-----	5	15.24	12.70	10.81	9.65	5.84							
	-----	-----	87898-0626	87898-0636	-----	87898-0656	6	-----	6	15.24	12.70	10.81	9.65	5.84							
B																					
A																					
fb_frame_A3_P_AM_T Rev. F 2009/06/18		9	8	7	6	5	4	3	2	1											

EWR#1228, +0209 EC NO: S2010-0966 DRWN:ATSEE 2010/05/20 CHKD:PTLIM 2005/03/29 APPR:MLONG 2010/06/08 B3	QUALITY SYMBOLS $\nabla_A=0$ $\nabla_F=0$ $\nabla_P=0$	DESCRIPTION	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	 THIRD ANGLE PROJECTION	
			4 PLACES 3 PLACES 2 PLACES 1 PLACE	$\pm$ --- $\pm$ --- $\pm$ 0.2 $\pm$ ---	$\pm$ --- $\pm$ --- $\pm$ --- $\pm$ ---	DRAWN BY YLOIAO	DATE 2005/03/14	TITLE CUSTOM HEADER 2.54MM PITCH SINGLE ROW SINGLE WAFER SMT HEADER MOLEX INCORPORATED DOCUMENT NO. SD-87898-001		SHEET NO. 3 OF 20
						CHECKED BY PTLIM	DATE 2005/03/29			
						APPROVED BY MLONG	DATE 2010/03/10			
						MATERIAL NO. SEE TABLE				
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	PACKAGING OPTION PART NO.						CKT SIZE	VOID POSITION	PLATING TYPE	DIMENSION																																	
	TRAY WITHOUT CAP	TRAY WITH CAP	TUBE WITHOUT CAP	TUBE WITH CAP	TAPE & REEL WITHOUT CAP	TAPE & REEL WITH CAP				A	B	G	F	M																													
	-----	-----	87898-0721	87898-0731	-----	87898-0751	7	-----	1	17.78	15.24	10.81	9.65	5.84																													
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E	-----	-----	87898-0724	87898-0734	-----	87898-0754	7	-----	4	17.78	15.24	10.81	9.65	5.84																													
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D	-----	-----	87898-0821	87898-0831	-----	87898-0851	8	-----	1	20.32	17.78	10.81	9.65	5.84																													
	-----	-----	87898-0822	87898-0832	-----	87898-0852	8	-----	2	20.32	17.78	10.81	9.65	5.84																													
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	-----	-----	87898-0825	87898-0835	-----	87898-0855	8	-----	5	20.32	17.78	10.81	9.65	5.84																													
C	-----	-----	87898-0826	87898-0836	-----	87898-0856	8	-----	6	20.32	17.78	10.81	9.65	5.84																													
	-----	-----	87898-0921	87898-0931	-----	87898-0951	9	-----	1	22.86	20.32	10.81	9.65	5.84																													
B	-----	-----	87898-0922	87898-0932	-----	87898-0952	9	-----	2	22.86	20.32	10.81	9.65	5.84																													
	-----	-----	87898-0924	87898-0934	-----	87898-0954	9	-----	4	22.86	20.32	10.81	9.65	5.84																													
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A																																											
<table><tr><td rowspan="4">EWR#1228, +0209 EC NO: S2010-0966 DRWN:ATSEE CHKD:PTLIM APPR:MLONG B3</td><td rowspan="4">2010/05/20 2005/03/29 2010/06/08</td><td rowspan="4">DESCRIPTION REV</td><td>QUALITY SYMBOLS</td><td colspan="2">GENERAL TOLERANCES (UNLESS SPECIFIED)</td><td colspan="2">DIMENSION STYLE MM ONLY</td><td>SCALE NTS</td><td>DESIGN UNITS METRIC</td><td colspan="2">THIRD ANGLE PROJECTION</td></tr><tr><td rowspan="3">$F_A=0$ $F_G=0$ $F_P=0$</td><td rowspan="3">4 PLACES 3 PLACES 2 PLACES 1 PLACE</td><td rowspan="3">mm INCH</td><td rowspan="3">$\pm$ --- $\pm$ --- ± 0.2 $\pm$ ---</td><td rowspan="3">$\pm$ --- $\pm$ --- $\pm$ --- $\pm$ ---</td><td rowspan="3">DRAWN BY YLQIAO CHECKED BY PTLIM APPROVED BY MLONG</td><td rowspan="3">DATE 2005/03/14 2005/03/29 2010/03/10</td><td rowspan="3">TITLE CUSTOM HEADER 2.54MM PITCH SINGLE ROW SINGLE WAFER SMT HEADER MOLEX INCORPORATED</td></tr><tr><td colspan="2">ANGULAR $\pm 3^\circ$</td><td rowspan="2">MATERIAL NO. SEE TABLE</td><td rowspan="2">DOCUMENT NO. SD-87898-001</td><td rowspan="2">SHEET NO. 4 OF 20</td></tr><tr><td colspan="2">DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS</td><td colspan="2">THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION</td></tr></table>															EWR#1228, +0209 EC NO: S2010-0966 DRWN:ATSEE CHKD:PTLIM APPR:MLONG B3	2010/05/20 2005/03/29 2010/06/08	DESCRIPTION REV	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION		$F_A=0$ $F_G=0$ $F_P=0$	4 PLACES 3 PLACES 2 PLACES 1 PLACE	mm INCH	$\pm$ --- $\pm$ --- ± 0.2 $\pm$ ---	$\pm$ --- $\pm$ --- $\pm$ --- $\pm$ ---	DRAWN BY YLQIAO CHECKED BY PTLIM APPROVED BY MLONG	DATE 2005/03/14 2005/03/29 2010/03/10	TITLE CUSTOM HEADER 2.54MM PITCH SINGLE ROW SINGLE WAFER SMT HEADER MOLEX INCORPORATED	ANGULAR $\pm 3^\circ$		MATERIAL NO. SEE TABLE	DOCUMENT NO. SD-87898-001	SHEET NO. 4 OF 20	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	
EWR#1228, +0209 EC NO: S2010-0966 DRWN:ATSEE CHKD:PTLIM APPR:MLONG B3	2010/05/20 2005/03/29 2010/06/08	DESCRIPTION REV	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION																																	
			$F_A=0$ $F_G=0$ $F_P=0$	4 PLACES 3 PLACES 2 PLACES 1 PLACE	mm INCH	$\pm$ --- $\pm$ --- ± 0.2 $\pm$ ---	$\pm$ --- $\pm$ --- $\pm$ --- $\pm$ ---	DRAWN BY YLQIAO CHECKED BY PTLIM APPROVED BY MLONG	DATE 2005/03/14 2005/03/29 2010/03/10	TITLE CUSTOM HEADER 2.54MM PITCH SINGLE ROW SINGLE WAFER SMT HEADER MOLEX INCORPORATED																																	
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fb_frame_A3_P_AM_T Rev. F 2009/06/18	9	8	7	6	5	4	3	2	1																																		

	10	9	8	7	6	5	4	3	2	1					
	PACKAGING OPTION PART NO.						CKT SIZE	VOID POSITION	PLATING TYPE	DIMENSION					
F	TRAY WITHOUT CAP	TRAY WITH CAP	TUBE WITHOUT CAP	TUBE WITH CAP	TAPE & REEL WITHOUT CAP	TAPE & REEL WITH CAP				A	B	G	F	M	
	-----	-----	87898-1021	87898-1031	-----	87898-1051	10	-----	1	25.40	22.86	10.81	9.65	5.84	
	-----	-----	87898-1022	87898-1032	-----	87898-1052	10	-----	2	25.40	22.86	10.81	9.65	5.84	
	-----	-----	87898-1024	87898-1034	-----	87898-1054	10	-----	4	25.40	22.86	10.81	9.65	5.84	
	-----	-----	87898-1025	87898-1035	-----	87898-1055	10	-----	5	25.40	22.86	10.81	9.65	5.84	
	-----	-----	87898-1026	87898-1036	-----	87898-1056	10	-----	6	25.40	22.86	10.81	9.65	5.84	
E															
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	-----	-----	87898-1122	87898-1132	-----	87898-1152	11	-----	2	27.94	25.40	10.81	9.65	5.84	
	-----	-----	87898-1124	87898-1134	-----	87898-1154	11	-----	4	27.94	25.40	10.81	9.65	5.84	
	-----	-----	87898-1125	87898-1135	-----	87898-1155	11	-----	5	27.94	25.40	10.81	9.65	5.84	
D	-----	-----	87898-1126	87898-1136	-----	87898-1156	11	-----	6	27.94	25.40	10.81	9.65	5.84	
	-----	-----	87898-1221	87898-1231	-----	87898-1251	12	-----	1	30.48	27.94	10.81	9.65	5.84	
	-----	-----	87898-1222	87898-1232	-----	87898-1252	12	-----	2	30.48	27.94	10.81	9.65	5.84	
	-----	-----	87898-1224	87898-1234	-----	87898-1254	12	-----	4	30.48	27.94	10.81	9.65	5.84	
C	-----	-----	87898-1225	87898-1235	-----	87898-1255	12	-----	5	30.48	27.94	10.81	9.65	5.84	
	-----	-----	87898-1226	87898-1236	-----	87898-1256	12	-----	6	30.48	27.94	10.81	9.65	5.84	
B															
A															
		EWR#1228, +0209 EC NO: S2010-0966 DRWN:ATSE 2010/05/20 CHKD:PTLM 2005/03/29 APPR:MLONG 2010/06/08		REV	DESCRIPTION	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION		
						 	mm INCH	4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.2 ± --- 1 PLACE ± --- ± ---	DRAWN BY DATE YLQIAO 2005/03/14	TITLE	CUSTOM HEADER 2.54MM PITCH SINGLE ROW SINGLE WAFER SMT HEADER MOLEX INCORPORATED				
						ANGULAR ± 3 °	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	CHECKED BY DATE PTLIM 2005/03/29	APPROVED BY DATE MLONG 2010/03/10	MATERIAL NO. SEE TABLE					DOCUMENT NO. SD-87898-001
		B3						SIZE A3	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION						

fb_frame_A3_P_AM_T
Rev. F 2009/06/18

987654321

	10	9	8	7	6	5	4	3	2	1							
F	PACKAGING OPTION PART NO.						CKT SIZE	VOID POSITION	PLATING TYPE	DIMENSION							
	TRAY WITHOUT CAP	TRAY WITH CAP	TUBE WITHOUT CAP	TUBE WITH CAP	TAPE & REEL WITHOUT CAP	TAPE & REEL WITH CAP				A	B	G	F	M			
	-----	-----	87898-1321	87898-1331	-----	87898-1351	13	-----	1	33.02	30.48	10.81	9.65	5.84			
	-----	-----	87898-1322	87898-1332	-----	87898-1352	13	-----	2	33.02	30.48	10.81	9.65	5.84			
	-----	-----	87898-1324	87898-1334	-----	87898-1354	13	-----	4	33.02	30.48	10.81	9.65	5.84			
	-----	-----	87898-1325	87898-1335	-----	87898-1355	13	-----	5	33.02	30.48	10.81	9.65	5.84			
	-----	-----	87898-1326	87898-1336	-----	87898-1356	13	-----	6	33.02	30.48	10.81	9.65	5.84			
E																	
	-----	-----	87898-1421	87898-1431	-----	87898-1451	14	-----	1	35.56	33.02	10.81	9.65	5.84			
	-----	-----	87898-1422	87898-1432	-----	87898-1452	14	-----	2	35.56	33.02	10.81	9.65	5.84			
	-----	-----	87898-1424	87898-1434	-----	87898-1454	14	-----	4	35.56	33.02	10.81	9.65	5.84			
	-----	-----	87898-1425	87898-1435	-----	87898-1455	14	-----	5	35.56	33.02	10.81	9.65	5.84			
	-----	-----	87898-1426	87898-1436	-----	87898-1456	14	-----	6	35.56	33.02	10.81	9.65	5.84			
D																	
	-----	-----	87898-1521	87898-1531	-----	87898-1551	15	-----	1	38.10	35.56	10.81	9.65	5.84			
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	-----	-----	87898-1524	87898-1534	-----	87898-1554	15	-----	4	38.10	35.56	10.81	9.65	5.84			
	-----	-----	87898-1525	87898-1535	-----	87898-1555	15	-----	5	38.10	35.56	10.81	9.65	5.84			
	-----	-----	87898-1526	87898-1536	-----	87898-1556	15	-----	6	38.10	35.56	10.81	9.65	5.84			
C																	
B																	
A																	
							EWR#1228, +0209 EC NO: S2010-0966 DRWN:ATSEE 2010/05/20 CHKD:PTLIM 2005/03/29 APPR:MLONG 2010/06/08 DESCRIPTION REV	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	DATE			TITLE								
4 PLACES			± ---	± ---	YLOIAO	2005/03/14			CUSTOM HEADER 2.54MM PITCH SINGLE ROW SINGLE WAFER SMT HEADER MOLEX MOLEX INCORPORATED DOCUMENT NO. SD-87898-001 SHEET NO. 6 OF 20								
3 PLACES			± ---	± ---	CHECKED BY	DATE											
2 PLACES			± 0.2	± ---	PTLIM	2005/03/29											
1 PLACE			± ---	± ---	APPROVED BY	DATE											
			ANGULAR ± 3 °			MATERIAL NO.	2010/03/10										
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								
fb_frame_A3_P_AM_T Rev. F 2009/06/18		9	8	7	6	5	4	3	2	1							

	10	9	8	7	6	5	4	3	2	1					
F	PACKAGING OPTION PART NO.						CKT SIZE	VOID POSITION	PLATING TYPE	DIMENSION					
	TRAY WITHOUT CAP	TRAY WITH CAP	TUBE WITHOUT CAP	TUBE WITH CAP	TAPE & REEL WITHOUT CAP	TAPE & REEL WITH CAP				A	B	G	F	M	
-----	-----	87898-1621	87898-1631	-----	87898-1651	16	-----	1	40.64	38.10	10.81	9.65	5.84		
-----	-----	87898-1622	87898-1632	-----	87898-1652	16	-----	2	40.64	38.10	10.81	9.65	5.84		
-----	-----	87898-1624	87898-1634	-----	87898-1654	16	-----	4	40.64	38.10	10.81	9.65	5.84		
-----	-----	87898-1625	87898-1635	-----	87898-1655	16	-----	5	40.64	38.10	10.81	9.65	5.84		
-----	-----	87898-1626	87898-1636	-----	87898-1656	16	-----	6	40.64	38.10	10.81	9.65	5.84		
-----	-----	87898-1721	87898-1731	-----	87898-1751	17	-----	1	43.18	40.64	10.81	9.65	5.84		
-----	-----	87898-1722	87898-1732	-----	87898-1752	17	-----	2	43.18	40.64	10.81	9.65	5.84		
-----	-----	87898-1724	87898-1734	-----	87898-1754	17	-----	4	43.18	40.64	10.81	9.65	5.84		
-----	-----	87898-1725	87898-1735	-----	87898-1755	17	-----	5	43.18	40.64	10.81	9.65	5.84		
-----	-----	87898-1726	87898-1736	-----	87898-1756	17	-----	6	43.18	40.64	10.81	9.65	5.84		
-----	-----	87898-1821	87898-1831	-----	87898-1851	18	-----	1	45.72	43.18	10.81	9.65	5.84		
-----	-----	87898-1822	87898-1832	-----	87898-1852	18	-----	2	45.72	43.18	10.81	9.65	5.84		
-----	-----	87898-1824	87898-1834	-----	87898-1854	18	-----	4	45.72	43.18	10.81	9.65	5.84		
-----	-----	87898-1825	87898-1835	-----	87898-1855	18	-----	5	45.72	43.18	10.81	9.65	5.84		
-----	-----	87898-1826	87898-1836	-----	87898-1856	18	-----	6	45.72	43.18	10.81	9.65	5.84		

	10	9	8	7	6	5	4	3	2	1										
F	PACKAGING OPTION PART NO.						CKT SIZE	VOID POSITION	PLATING TYPE	DIMENSION										
	TRAY WITHOUT CAP	TRAY WITH CAP	TUBE WITHOUT CAP	TUBE WITH CAP	TAPE & REEL WITHOUT CAP	TAPE & REEL WITH CAP				A	B	G	F	M						
	-----	-----	87898-1921	87898-1931	-----	87898-1951	19	-----	1	48.26	45.72	10.81	9.65	5.84						
	-----	-----	87898-1922	87898-1932	-----	87898-1952	19	-----	2	48.26	45.72	10.81	9.65	5.84						
	-----	-----	87898-1924	87898-1934	-----	87898-1954	19	-----	4	48.26	45.72	10.81	9.65	5.84						
	-----	-----	87898-1925	87898-1935	-----	87898-1955	19	-----	5	48.26	45.72	10.81	9.65	5.84						
	-----	-----	87898-1926	87898-1936	-----	87898-1956	19	-----	6	48.26	45.72	10.81	9.65	5.84						
E																				
	-----	-----	87898-2021	87898-2031	-----	87898-2051	20	-----	1	50.80	48.26	10.81	9.65	5.84						
	-----	-----	87898-2022	87898-2032	-----	87898-2052	20	-----	2	50.80	48.26	10.81	9.65	5.84						
	-----	-----	87898-2024	87898-2034	-----	87898-2054	20	-----	4	50.80	48.26	10.81	9.65	5.84						
	-----	-----	87898-2025	87898-2035	-----	87898-2055	20	-----	5	50.80	48.26	10.81	9.65	5.84						
	-----	-----	87898-2026	87898-2036	-----	87898-2056	20	-----	6	50.80	48.26	10.81	9.65	5.84						
D	-----	-----	87898-2121	87898-2131	-----	87898-2151	21	-----	1	53.34	50.80	10.81	9.65	5.84						
	-----	-----	87898-2122	87898-2132	-----	87898-2152	21	-----	2	53.34	50.80	10.81	9.65	5.84						
	-----	-----	87898-2124	87898-2134	-----	87898-2154	21	-----	4	53.34	50.80	10.81	9.65	5.84						
	-----	-----	87898-2125	87898-2135	-----	87898-2155	21	-----	5	53.34	50.80	10.81	9.65	5.84						
C	-----	-----	87898-2126	87898-2136	-----	87898-2156	21	-----	6	53.34	50.80	10.81	9.65	5.84						
B																				
A																				
EWR#1228, +0209 EC NO: S2010-0966 DRWN:ATSEE CHKD:PTLIM APPR:MLONG 2010/05/20 2005/03/29 2010/06/08 DESCRIPTION REV							QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)	DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION		CUSTOM HEADER 2.54MM PITCH SINGLE ROW SINGLE WAFER SMT HEADER			MOLEX INCORPORATED		SHEET NO. 8 OF 20
	F_A=0 F_G=0 F_P=0	mm INCH 4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.2 ± --- 1 PLACE ± --- ± --- ANGULAR ± 3 °	DRAWN BY DATE YLOIAO 2005/03/14 CHECKED BY DATE PTLIM 2005/03/29 APPROVED BY DATE MLONG 2010/03/10 MATERIAL NO.	SIZE A3	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION															
fb_frame_A3_P_AM_T Rev. F 2009/06/18							6	5	4	3	2	1								

	10	9	8	7	6	5	4	3	2	1									
F	PACKAGING OPTION PART NO.						CKT SIZE	VOID POSITION	PLATING TYPE	DIMENSION									
	TRAY WITHOUT CAP	TRAY WITH CAP	TUBE WITHOUT CAP	TUBE WITH CAP	TAPE & REEL WITHOUT CAP	TAPE & REEL WITH CAP				A	B	G	F	M					
	-----	-----	87898-2221	87898-2231	-----	-----				22	-----	1	55.88	53.34		10.81	9.65	5.84	
	-----	-----	87898-2222	87898-2232	-----	-----	22	-----	2	55.88	53.34	10.81	9.65	5.84					
	-----	-----	87898-2224	87898-2234	-----	-----	22	-----	4	55.88	53.34	10.81	9.65	5.84					
	-----	-----	87898-2225	87898-2235	-----	-----	22	-----	5	55.88	53.34	10.81	9.65	5.84					
	-----	-----	87898-2226	87898-2236	-----	-----	22	-----	6	55.88	53.34	10.81	9.65	5.84					
E																			
	-----	-----	87898-2321	87898-2331	-----	-----	23	-----	1	58.42	55.88	10.81	9.65	5.84					
	-----	-----	87898-2322	87898-2332	-----	-----	23	-----	2	58.42	55.88	10.81	9.65	5.84					
	-----	-----	87898-2324	87898-2334	-----	-----	23	-----	4	58.42	55.88	10.81	9.65	5.84					
	-----	-----	87898-2325	87898-2335	-----	-----	23	-----	5	58.42	55.88	10.81	9.65	5.84					
	-----	-----	87898-2326	87898-2336	-----	-----	23	-----	6	58.42	55.88	10.81	9.65	5.84					
D	-----	-----	87898-2421	87898-2431	-----	-----	24	-----	1	60.96	58.42	10.81	9.65	5.84					
	-----	-----	87898-2422	87898-2432	-----	-----	24	-----	2	60.96	58.42	10.81	9.65	5.84					
	-----	-----	87898-2424	87898-2434	-----	-----	24	-----	4	60.96	58.42	10.81	9.65	5.84					
	-----	-----	87898-2425	87898-2435	-----	-----	24	-----	5	60.96	58.42	10.81	9.65	5.84					
	-----	-----	87898-2426	87898-2436	-----	-----	24	-----	6	60.96	58.42	10.81	9.65	5.84					
C																			
B																			
A																			
fb_frame_A3_P_AM_T Rev. F 2009/06/18											9	8	7	6	5	4	3	2	1

EWR#1228, +0209 EC NO: S2010-0966 DRW:ATSEE 2010/05/20 CHKD:PTLIM 2005/03/29 APPR:MLONG 2010/06/08 B3	DESCRIPTION REV	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION	
		$\nabla_A=0$ $\nabla_F=0$ $\nabla_P=0$			DRAWN BY DATE		TITLE CUSTOM HEADER 2.54MM PITCH SINGLE ROW SINGLE WAFER SMT HEADER MOLEX INCORPORATED	DOCUMENT NO. SD-87898-001	SHEET NO. 9 OF 20	
					YLOIAO 2005/03/14					
					CHECKED BY DATE					
					PTLIM 2005/03/29					
				APPROVED BY DATE		MATERIAL NO.				
				MLONG 2010/03/10						
		ANGULAR $\pm$ 3 °		SEE TABLE						
		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				

[illegible]

	10	9	8	7	6	5	4	3	2	1																																																																
F	PACKAGING OPTION PART NO.						CKT SIZE	VOID POSITION	PLATING TYPE	DIMENSION																																																																
	TRAY WITHOUT CAP	TRAY WITH CAP	TUBE WITHOUT CAP	TUBE WITH CAP	TAPE & REEL WITHOUT CAP	TAPE & REEL WITH CAP				A	B	G	F	M																																																												
	-----	-----	87898-2821	87898-2831	-----	-----	28	-----	1	71.12	68.58	10.81	9.65	5.84																																																												
	-----	-----	87898-2822	87898-2832	-----	-----	28	-----	2	71.12	68.58	10.81	9.65	5.84																																																												
	-----	-----	87898-2824	87898-2834	-----	-----	28	-----	4	71.12	68.58	10.81	9.65	5.84																																																												
	-----	-----	87898-2825	87898-2835	-----	-----	28	-----	5	71.12	68.58	10.81	9.65	5.84																																																												
	-----	-----	87898-2826	87898-2836	-----	-----	28	-----	6	71.12	68.58	10.81	9.65	5.84																																																												
E																																																																										
	-----	-----	87898-2921	87898-2931	-----	-----	29	-----	1	73.66	71.12	10.81	9.65	5.84																																																												
	-----	-----	87898-2922	87898-2932	-----	-----	29	-----	2	73.66	71.12	10.81	9.65	5.84																																																												
	-----	-----	87898-2924	87898-2934	-----	-----	29	-----	4	73.66	71.12	10.81	9.65	5.84																																																												
	-----	-----	87898-2925	87898-2935	-----	-----	29	-----	5	73.66	71.12	10.81	9.65	5.84																																																												
D	-----	-----	87898-2926	87898-2936	-----	-----	29	-----	6	73.66	71.12	10.81	9.65	5.84																																																												
	-----	-----	87898-3021	87898-3031	-----	-----	30	-----	1	76.20	73.66	10.81	9.65	5.84																																																												
	-----	-----	87898-3022	87898-3032	-----	-----	30	-----	2	76.20	73.66	10.81	9.65	5.84																																																												
	-----	-----	87898-3024	87898-3034	-----	-----	30	-----	4	76.20	73.66	10.81	9.65	5.84																																																												
C	-----	-----	87898-3025	87898-3035	-----	-----	30	-----	5	76.20	73.66	10.81	9.65	5.84																																																												
	-----	-----	87898-3026	87898-3036	-----	-----	30	-----	6	76.20	73.66	10.81	9.65	5.84																																																												
B																																																																										
A																																																																										
<table><tr><td rowspan="5">EWB#1228, +0209 EC NO: S2010-0966 DRWN:ATSEE CHKD:PTLIM APPR:MLONG</td><td rowspan="5">DESCRIPTION REV</td><td rowspan="5">QUALITY SYMBOLS F=0 F=0 F=0</td><td colspan="2">GENERAL TOLERANCES (UNLESS SPECIFIED)</td><td colspan="2">DIMENSION STYLE MM ONLY</td><td>SCALE NTS</td><td>DESIGN UNITS METRIC</td><td colspan="2">THIRD ANGLE PROJECTION</td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>4 PLACES</td><td>± ---</td><td>± ---</td><td>DRAWN BY YLQIAO</td><td>DATE 2005/03/14</td><td colspan="3" rowspan="2">TITLE CUSTOM HEADER 2.54MM PITCH SINGLE ROW SINGLE WAFER SMT HEADER</td></tr><tr><td>3 PLACES</td><td>± ---</td><td>± ---</td><td>CHECKED BY PTLIM</td><td>DATE 2005/03/29</td></tr><tr><td>2 PLACES</td><td>± 0.2</td><td>± ---</td><td colspan="2">APPROVED BY MLONG</td><td>DATE 2010/03/10</td><td colspan="3" rowspan="2">MOLEX INCORPORATED</td></tr><tr><td>1 PLACE</td><td>± ---</td><td>± ---</td><td colspan="2">MATERIAL NO. SEE TABLE</td><td>DOCUMENT NO. SD-87898-001</td><td>SHEET NO. 11 OF 20</td></tr><tr><td colspan="2">B3</td><td></td><td colspan="2">DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS</td><td>SIZE A3</td><td colspan="8">THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION</td></tr></table>															EWB#1228, +0209 EC NO: S2010-0966 DRWN:ATSEE CHKD:PTLIM APPR:MLONG	DESCRIPTION REV	QUALITY SYMBOLS F=0 F=0 F=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION								4 PLACES	± ---	± ---	DRAWN BY YLQIAO	DATE 2005/03/14	TITLE CUSTOM HEADER 2.54MM PITCH SINGLE ROW SINGLE WAFER SMT HEADER			3 PLACES	± ---	± ---	CHECKED BY PTLIM	DATE 2005/03/29	2 PLACES	± 0.2	± ---	APPROVED BY MLONG		DATE 2010/03/10	MOLEX INCORPORATED			1 PLACE	± ---	± ---	MATERIAL NO. SEE TABLE		DOCUMENT NO. SD-87898-001	SHEET NO. 11 OF 20	B3			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							
EWB#1228, +0209 EC NO: S2010-0966 DRWN:ATSEE CHKD:PTLIM APPR:MLONG	DESCRIPTION REV	QUALITY SYMBOLS F=0 F=0 F=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION																																																																	
			4 PLACES	± ---	± ---	DRAWN BY YLQIAO	DATE 2005/03/14	TITLE CUSTOM HEADER 2.54MM PITCH SINGLE ROW SINGLE WAFER SMT HEADER																																																																		
			3 PLACES	± ---	± ---	CHECKED BY PTLIM	DATE 2005/03/29																																																																			
			2 PLACES	± 0.2	± ---	APPROVED BY MLONG		DATE 2010/03/10	MOLEX INCORPORATED																																																																	
1 PLACE	± ---	± ---	MATERIAL NO. SEE TABLE		DOCUMENT NO. SD-87898-001	SHEET NO. 11 OF 20																																																																				
B3			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																																																																				
fb_frame_A3_P_AM_T Rev. F 2009/06/18	9	8	7	6	5	4	3	2	1																																																																	

	10	9	8	7	6	5	4	3	2	1																											
F	PACKAGING OPTION PART NO.						CKT SIZE	VOID POSITION	PLATING TYPE	DIMENSION																											
	TRAY WITHOUT CAP	TRAY WITH CAP	TUBE WITHOUT CAP	TUBE WITH CAP	TAPE & REEL WITHOUT CAP	TAPE & REEL WITH CAP				A	B	G	F	M																							
	-----	-----	87898-3121	87898-3131	-----	-----	31	-----	1	78.74	76.20	10.81	9.65	5.84																							
	-----	-----	87898-3122	87898-3132	-----	-----	31	-----	2	78.74	76.20	10.81	9.65	5.84																							
	-----	-----	87898-3124	87898-3134	-----	-----	31	-----	4	78.74	76.20	10.81	9.65	5.84																							
	-----	-----	87898-3125	87898-3135	-----	-----	31	-----	5	78.74	76.20	10.81	9.65	5.84																							
	-----	-----	87898-3126	87898-3136	-----	-----	31	-----	6	78.74	76.20	10.81	9.65	5.84																							
E																																					
	-----	-----	87898-3221	87898-3231	-----	-----	32	-----	1	81.28	78.74	10.81	9.65	5.84																							
	-----	-----	87898-3222	87898-3232	-----	-----	32	-----	2	81.28	78.74	10.81	9.65	5.84																							
D	-----	-----	87898-3224	87898-3234	-----	-----	32	-----	4	81.28	78.74	10.81	9.65	5.84																							
	-----	-----	87898-3225	87898-3235	-----	-----	32	-----	5	81.28	78.74	10.81	9.65	5.84																							
	-----	-----	87898-3226	87898-3236	-----	-----	32	-----	6	81.28	78.74	10.81	9.65	5.84																							
	-----	-----	87898-3321	87898-3331	-----	-----	33	-----	1	83.82	81.28	10.81	9.65	5.84																							
C	-----	-----	87898-3322	87898-3332	-----	-----	33	-----	2	83.82	81.28	10.81	9.65	5.84																							
	-----	-----	87898-3324	87898-3334	-----	-----	33	-----	4	83.82	81.28	10.81	9.65	5.84																							
	-----	-----	87898-3325	87898-3335	-----	-----	33	-----	5	83.82	81.28	10.81	9.65	5.84																							
	-----	-----	87898-3326	87898-3336	-----	-----	33	-----	6	83.82	81.28	10.81	9.65	5.84																							
B																																					
A																																					
<table><tr><td rowspan="4">EWR#1228, +0209 EC NO: S2010-0966 DRWN:ATSE 2010/05/20 CHKD:PTLM 2005/03/29 APPR:MLONG 2010/06/08 B3</td><td rowspan="4">QUALITY SYMBOLS F=0 F=0 F=0</td><td rowspan="4">GENERAL TOLERANCES (UNLESS SPECIFIED) mm INCH 4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.2 ± --- 1 PLACE ± --- ± --- ANGULAR ± 3 ° DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS</td><td colspan="2">DIMENSION STYLE MM ONLY</td><td>SCALE NTS</td><td>DESIGN UNITS METRIC</td><td colspan="2">THIRD ANGLE PROJECTION</td></tr><tr><td colspan="2">DRAWN BY DATE YLQIAO 2005/03/14</td><td rowspan="2">TITLE CUSTOM HEADER 2.54MM PITCH SINGLE ROW SINGLE WAFER SMT HEADER</td><td rowspan="2">MOLEX INCORPORATED</td><td rowspan="2">SHEET NO. 12 OF 20</td></tr><tr><td colspan="2">CHECKED BY DATE PTLIM 2005/03/29</td></tr><tr><td colspan="2">APPROVED BY DATE MLONG 2010/03/10</td><td colspan="2">MATERIAL NO. SEE TABLE</td><td colspan="2">DOCUMENT NO. SD-87898-001</td></tr></table>																EWR#1228, +0209 EC NO: S2010-0966 DRWN:ATSE 2010/05/20 CHKD:PTLM 2005/03/29 APPR:MLONG 2010/06/08 B3	QUALITY SYMBOLS F=0 F=0 F=0	GENERAL TOLERANCES (UNLESS SPECIFIED) mm INCH 4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.2 ± --- 1 PLACE ± --- ± --- ANGULAR ± 3 ° DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION		DRAWN BY DATE YLQIAO 2005/03/14		TITLE CUSTOM HEADER 2.54MM PITCH SINGLE ROW SINGLE WAFER SMT HEADER	MOLEX INCORPORATED	SHEET NO. 12 OF 20	CHECKED BY DATE PTLIM 2005/03/29		APPROVED BY DATE MLONG 2010/03/10		MATERIAL NO. SEE TABLE		DOCUMENT NO. SD-87898-001	
EWR#1228, +0209 EC NO: S2010-0966 DRWN:ATSE 2010/05/20 CHKD:PTLM 2005/03/29 APPR:MLONG 2010/06/08 B3	QUALITY SYMBOLS F=0 F=0 F=0	GENERAL TOLERANCES (UNLESS SPECIFIED) mm INCH 4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.2 ± --- 1 PLACE ± --- ± --- ANGULAR ± 3 ° DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION																														
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fb_frame_A3_P_AM_T Rev. F 2009/06/18	9	8	7	6	5	4	3	2	1
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	10	9	8	7	6	5	4	3	2	1																																													
	PACKAGING OPTION PART NO.						CKT SIZE	VOID POSITION	PLATING TYPE	DIMENSION																																													
	TRAY WITHOUT CAP	TRAY WITH CAP	TUBE WITHOUT CAP	TUBE WITH CAP	TAPE & REEL WITHOUT CAP	TAPE & REEL WITH CAP				A	B	G	F	M																																									
F	-----	-----	87898-3721	87898-3731	-----	-----	37	-----	1	93.98	91.44	10.81	9.65	5.84	F																																								
	-----	-----	87898-3722	87898-3732	-----	-----	37	-----	2	93.98	91.44	10.81	9.65	5.84																																									
	-----	-----	87898-3724	87898-3734	-----	-----	37	-----	4	93.98	91.44	10.81	9.65	5.84																																									
	-----	-----	87898-3725	87898-3735	-----	-----	37	-----	5	93.98	91.44	10.81	9.65	5.84																																									
	-----	-----	87898-3726	87898-3736	-----	-----	37	-----	6	93.98	91.44	10.81	9.65	5.84																																									
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D	-----	-----	87898-3826	87898-3836	-----	-----	38	-----	6	96.52	93.98	10.81	9.65	5.84	D																																								
	-----	-----	87898-3921	87898-3931	-----	-----	39	-----	1	99.06	96.52	10.81	9.65	5.84																																									
	-----	-----	87898-3922	87898-3932	-----	-----	39	-----	2	99.06	96.52	10.81	9.65	5.84																																									
	-----	-----	87898-3924	87898-3934	-----	-----	39	-----	4	99.06	96.52	10.81	9.65	5.84																																									
C	-----	-----	87898-3925	87898-3935	-----	-----	39	-----	5	99.06	96.52	10.81	9.65	5.84	C																																								
	-----	-----	87898-3926	87898-3936	-----	-----	39	-----	6	99.06	96.52	10.81	9.65	5.84																																									
B															B																																								
A															A																																								
<table><tr><td rowspan="5">EWR#1228, +0209 EC NO: S2010-0966 DRWN:ATSEE 2010/05/20 CHKDPTLIM 2005/03/29 APPR:MLONG 2010/06/08 B3</td><td rowspan="5">DESCRIPTION REV</td><td>QUALITY SYMBOLS</td><td colspan="2">GENERAL TOLERANCES (UNLESS SPECIFIED)</td><td colspan="2">DIMENSION STYLE MM ONLY</td><td>SCALE NTS</td><td>DESIGN UNITS METRIC</td><td colspan="2">THIRD ANGLE PROJECTION</td></tr><tr><td rowspan="4">$\nabla=0$ $\nabla=0$ $\nabla=0$</td><td></td><td></td><td>DRAWN BY YLQIAO</td><td>DATE 2005/03/14</td><td rowspan="4">TITLE CUSTOM HEADER 2.54MM PITCH SINGLE ROW SINGLE WAFER SMT HEADER MOLEX INCORPORATED SD-87898-001</td></tr><tr><td>4 PLACES</td><td>$\pm \text{---}$</td><td>$\pm \text{---}$</td><td>CHECKED BY PTLIM</td><td>DATE 2005/03/29</td></tr><tr><td>3 PLACES</td><td>$\pm \text{---}$</td><td>$\pm \text{---}$</td><td>APPROVED BY MLONG</td><td>DATE 2010/03/10</td></tr><tr><td>2 PLACES</td><td>± 0.2</td><td>$\pm \text{---}$</td><td>MATERIAL NO.</td><td>DOCUMENT NO.</td></tr><tr><td colspan="3">DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS</td><td colspan="2">ANGULAR $\pm 3^\circ$</td><td colspan="2">SEE TABLE</td><td colspan="2">THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION</td></tr></table>															EWR#1228, +0209 EC NO: S2010-0966 DRWN:ATSEE 2010/05/20 CHKDPTLIM 2005/03/29 APPR:MLONG 2010/06/08 B3	DESCRIPTION REV	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION		$\nabla=0$ $\nabla=0$ $\nabla=0$			DRAWN BY YLQIAO	DATE 2005/03/14	TITLE CUSTOM HEADER 2.54MM PITCH SINGLE ROW SINGLE WAFER SMT HEADER MOLEX INCORPORATED SD-87898-001	4 PLACES	$\pm \text{---}$	$\pm \text{---}$	CHECKED BY PTLIM	DATE 2005/03/29	3 PLACES	$\pm \text{---}$	$\pm \text{---}$	APPROVED BY MLONG	DATE 2010/03/10	2 PLACES	± 0.2	$\pm \text{---}$	MATERIAL NO.	DOCUMENT NO.	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS			ANGULAR $\pm 3^\circ$		SEE TABLE		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION	
EWR#1228, +0209 EC NO: S2010-0966 DRWN:ATSEE 2010/05/20 CHKDPTLIM 2005/03/29 APPR:MLONG 2010/06/08 B3	DESCRIPTION REV	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION																																														
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fb_frame_A3_P_AM_T Rev. F 2009/06/18		9	8	7	6	5	4	3	2	1																																													

tb_frame_A3_P_AM_T
Rev. F 2009/06/18

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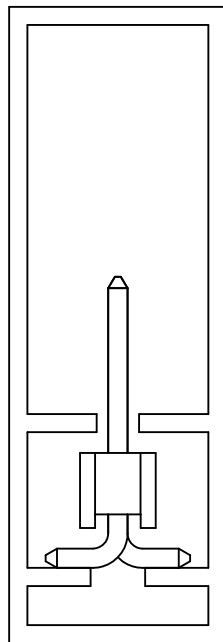
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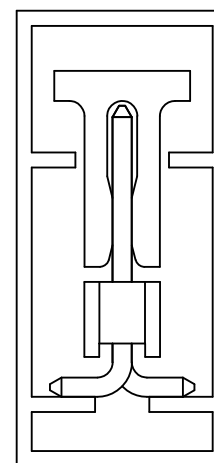
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1

PART WITHOUT CAP
IN TUBE ORIENTATION



PART WITH CAP
IN TUBE ORIENTATION



EWR#1228, +0209 EC NO: S2010-0966 2010/05/20 DRWN:ATSEE CHKD:PTLIM 2005/03/29 APPR:MLONG 2010/06/08	DESCRIPTION REV	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION	
			mm	INCH	DRAWN BY YLQIAO	DATE 2005/03/14	TITLE CUSTOM HEADER 2.54MM PITCH SINGLE ROW SINGLE WAFER SMT HEADER			
			4 PLACES	± ---	± ---	CHECKED BY PTLIM				DATE 2005/03/29
			3 PLACES	± ---	± ---	APPROVED BY MLONG				DATE 2010/03/10
			2 PLACES	± 0.2	± ---	MOLEX MOLEX INCORPORATED				
		1 PLACE	± ---	± ---	ANGULAR ± 3 °		DOCUMENT NO. SD-87898-001		SHEET NO. 16 OF 20	
		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS			SEE TABLE					
B3		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION								

9

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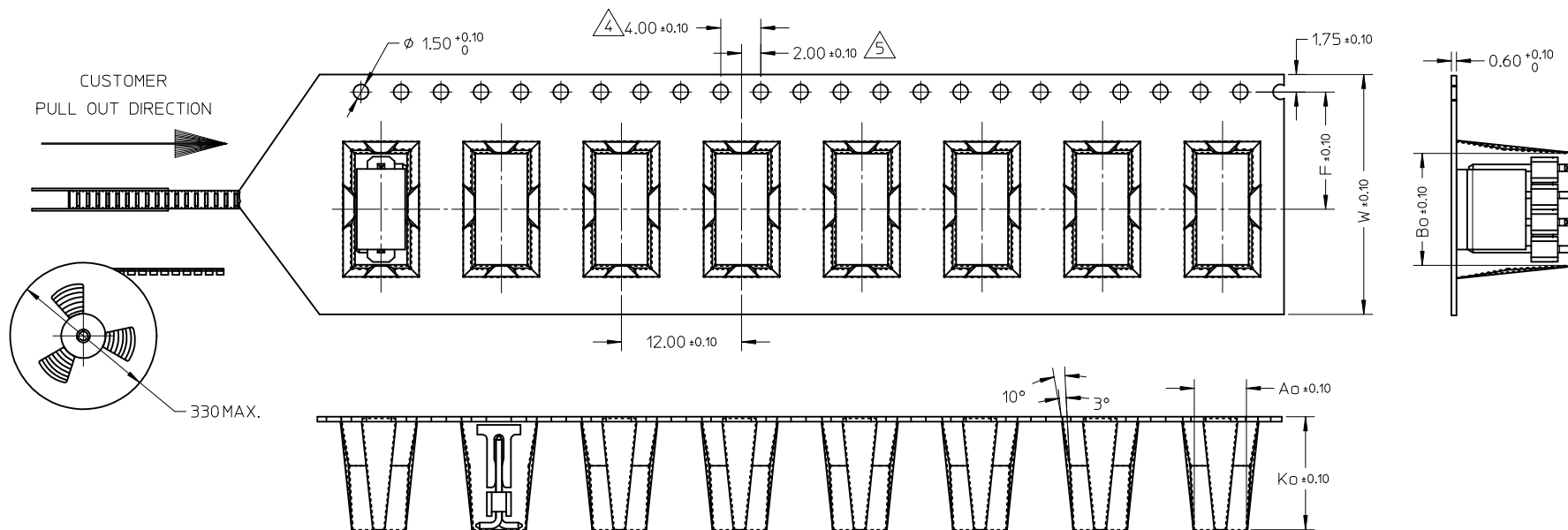
2

1

10 9 8 7 6 5 4 3 2 1

CKT	DIMENSION				
	Bo	Ao	Ko	F	W
2	8.02	5.20	13.60	11.50	24.00
4	10.55	5.20	11.30	11.50	24.00

EMBOSSED CARRIER TYPE 'A'



NOTES:

1. LEADER AND TRAILER TAPE

160 MIN. TOP TAPE TRAILER

390 MIN TOP TAPE NON BONDED TAPE

160 MIN. TAIL PART (EMPTY)

230 MIN. LEADER PART (EMPTY)

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

PEEL OFF DIRECTION

15° MAX.

PULL OUT DIRECTION

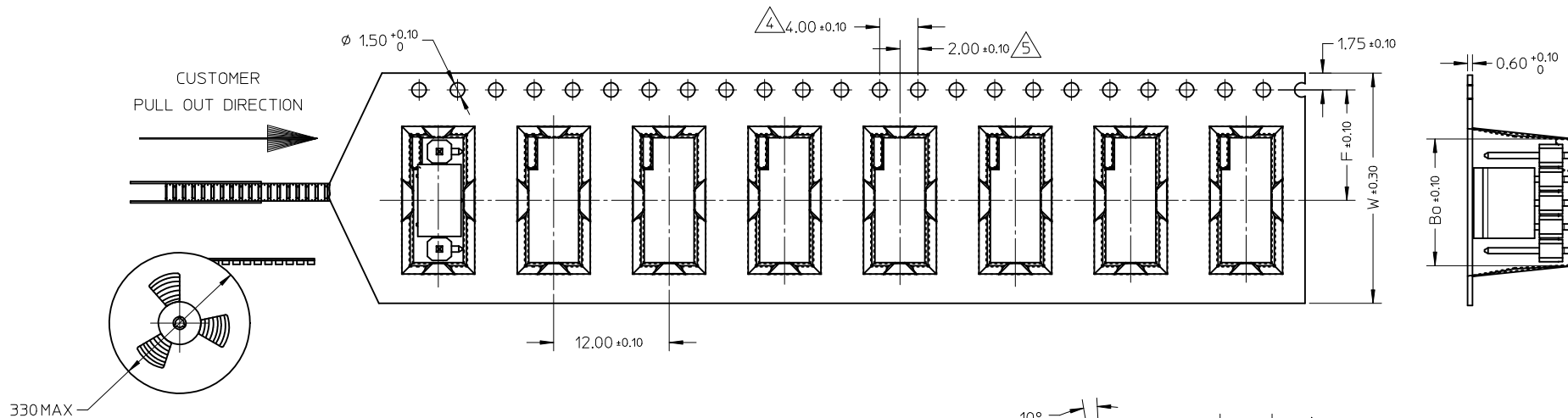
- MATERIAL: BLACK P.S CONDUCTIVE, BLACK
- MEASURED FROM CENTRELINE OF SPROCKET HOLE TO CENTRELINE OF SPOCKET
- CUMULATIVE TOLERANCE OF 10 SPROCKET HOLE IS $\pm 0.20 \text{ mm}$
- A0 AND B0 ARE MEASURED FROM ABOVE POCKET BASE 0.30 mm
- TAPE AND REEL SPECIFICATION IS AS PER EIA-481.
- TAPE AND REEL QUANTITY : 440PCS/REEL
- THE TAPE IS TREATED FOR ANTI-STATIC.
- ALL RADIUS ARE 0.30 mm UNLESS SPECIFY
- SURFACE RESISTIVITY 10^3 TO 10^9 OHMS.

PART PACK IN E/TAPE ORIENTATION (FOR REF USE)

EWR#1228, +0209 EC NO: S2010-0966 DRWN:ATSEE CHKD:PTLIM APPR:MLONG REV B3	QUALITY SYMBOLS =0 =0 =0	DESCRIPTION 2010/05/20 2005/03/29 2010/06/08	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION			
				mm	INCH	DRAWN BY YLOIAO	DATE 2005/03/14	TITLE CUSTOM HEADER 2.54MM PITCH SINGLE ROW SINGLE WAFER SMT HEADER				
			4 PLACES	± ---	± ---	CHECKED BY PTLIM	DATE 2005/03/29					
			3 PLACES	± ---	± ---	APPROVED BY MLONG	DATE 2010/03/10					
			2 PLACES	± 0.2	± ---	MATERIAL NO. SEE TABLE		DOCUMENT NO. SD-87898-001		SHEET NO. 17 OF 20		
1 PLACE	± ---	± ---	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					

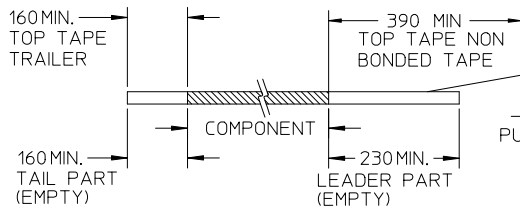
10 9 8 7 6 5 4 3 2 1

CKT	DIMENSION				
	Bo	Ao	Ko	F	W
5	13.10	5.20	11.30	11.50	24.00

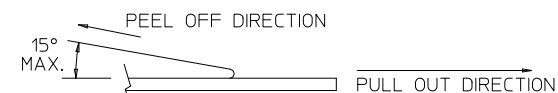


NOTES:

1. LEADER AND TRAILER TAPE



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

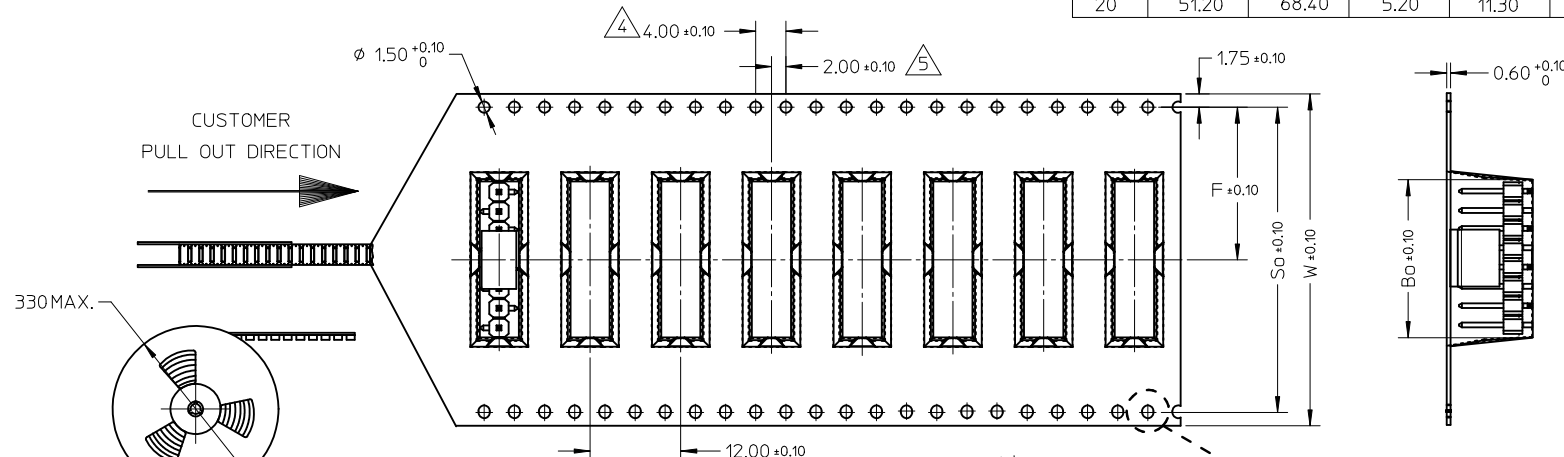


3. MATERIAL: BLACK P.S CONDUCTIVE, BLACK
4. MEASURED FROM CENTRELINE OF SPROCKET HOLE TO CENTRELINE OF SPOCKET
5. CUMULATIVE TOLERANCE OF 10 SPROCKET HOLE IS $\pm 0.20\text{mm}$
6. A0 AND B0 ARE MEASURED FROM ABOVE POCKET BASE 0.30mm
7. TAPE AND REEL SPECIFICATION IS AS PER EIA-481.
8. TAPE AND REEL QUANTITY : 440PCS/REEL
9. THE TAPE IS TREATED FOR ANTI-STATIC.
10. ALL RADIUS ARE 0.30mm UNLESS SPECIFY
11. SURFACE RESISTIVITY 10^3 TO 10^9 OHMS.

**PART PACK
IN E/TAPE
ORIENTATION
(FOR REF USE)**

EWR#1228, +0209 EC NO: S2010-0966 DRAWN:ATSEE CHKD:PTL IM B3	2010/05/20	2005/03/29	2010/06/08	DESCRIPTION REV	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION	
			mm INCH		DRAWN BY DATE		TITLE CUSTOM HEADER 2.54MM PITCH SINGLE ROW SINGLE WAFER SMT HEADER						
			4 PLACES ± --- ± ---		YLO1A0 2005/03/14								
			3 PLACES ± --- ± ---		CHECKED BY DATE								
			2 PLACES ± 0.2 ± ---		PTL IM 2005/03/29		MOLEX MOLEX INCORPORATED						
			1 PLACE ± --- ± ---		APPROVED BY DATE								
			ANGULAR ± 3 °		MLONG 2010/03/10		DOCUMENT NO.		SHEET NO.				
		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		MATERIAL NO.		SEE TABLE		SD-87898-001		18 OF 20			
				SIZE A3		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION							

CKT	DIMENSION					
	Bo	So	Ao	Ko	F	W
6	15.65	28.40	5.20	11.30	14.20	32.00
8	20.70	40.40	5.20	11.30	20.20	44.00
10	25.80	40.40	5.20	11.30	20.20	44.00
12	30.90	52.40	5.20	11.30	26.20	56.00
14	35.95	52.40	5.20	11.30	26.20	56.00
16	41.05	52.40	5.20	11.30	26.20	56.00
18	46.20	68.40	5.20	11.30	34.20	72.00
20	51.20	68.40	5.20	11.30	34.20	72.00



NOTES:

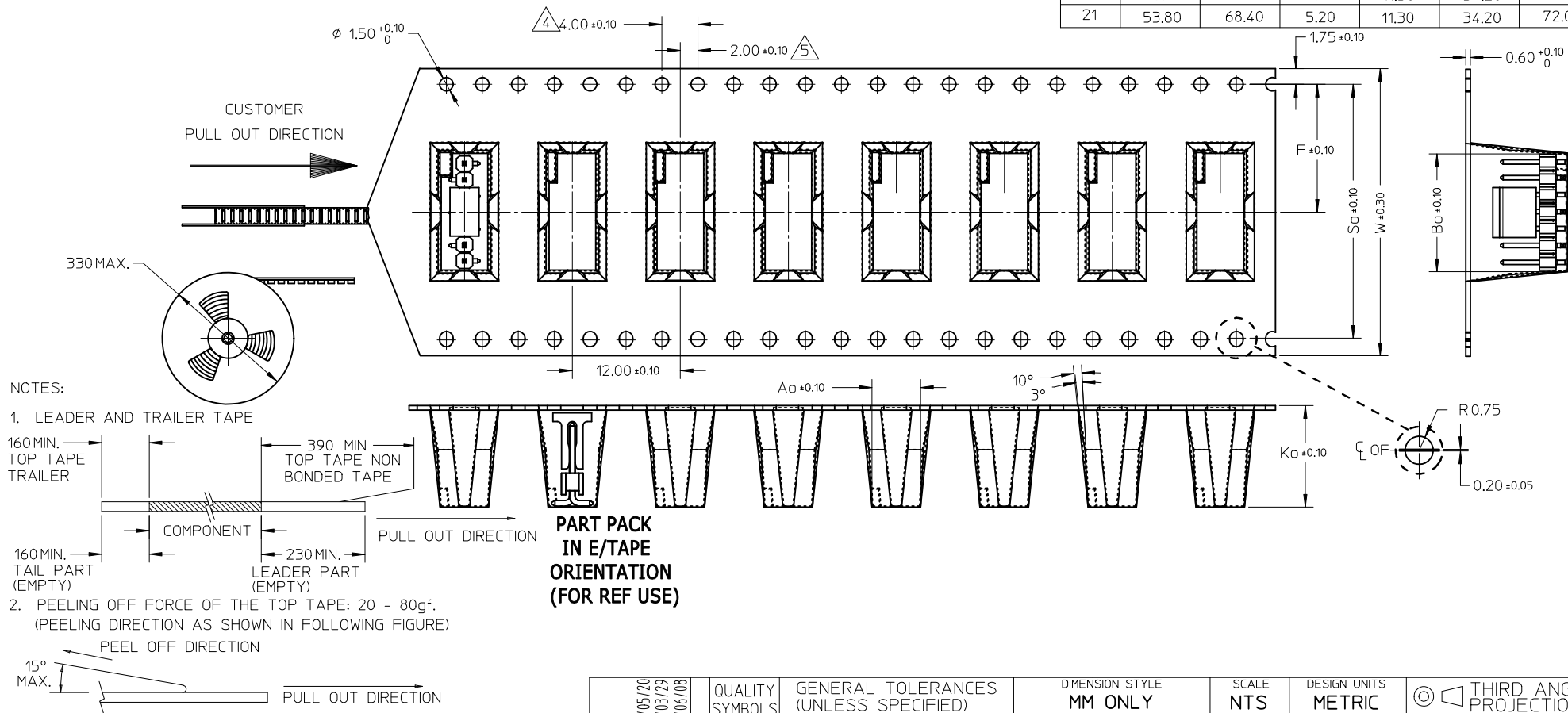
- LEADER AND TRAILER TAPE
160 MIN. TOP TAPE TRAILER
390 MIN. TOP TAPE NON BONDED TAPE
160 MIN. TAIL PART (EMPTY)
230 MIN. LEADER PART (EMPTY)
PULL OUT DIRECTION
- PEELING OFF FORCE OF THE TOP TAPE: 20 - 80gf.
(PEELING DIRECTION AS SHOWN IN FOLLOWING FIGURE)
PEEL OFF DIRECTION
15° MAX.

PART PACK
IN E/TAPE
ORIENTATION
(FOR REF USE)

- MATERIAL: BLACK P.S CONDUCTIVE, BLACK
- MEASURED FROM CENTRELINE OF SPROCKET HOLE TO CENTRELINE OF SPOCKET
- CUMULATIVE TOLERANCE OF 10 SPROCKET HOLE IS ± 0.20 mm
- A0 AND B0 ARE MEASURED FROM ABOVE POCKET BASE 0.30mm
- TAPE AND REEL SPECIFICATION IS AS PER EIA-481.
- TAPE AND REEL QUANTITY : 440PCS/REEL
- THE TAPE IS TREATED FOR ANTI-STATIC.
- ALL RADIUS ARE 0.30MM UNLESS SPECIFY
- SURFACE RESISTIVITY 10^3 TO 10^9 OHMS.

EWR#1228, +0209 EC NO: S2010-0966 DRW: NATSEE CHKD: PTLM APPR: MLONG 2010/05/20 2005/03/29 2010/06/08		QUALITY SYMBOLS $\nabla F=0$ $\nabla F=0$ $\nabla F=0$	GENERAL TOLERANCES (UNLESS SPECIFIED) mm INCH 4 PLACES $\pm$ --- $\pm$ --- 3 PLACES $\pm$ --- $\pm$ --- 2 PLACES ± 0.2 $\pm$ --- 1 PLACE $\pm$ --- $\pm$ --- ANGULAR $\pm 3^\circ$	DIMENSION STYLE MM ONLY DRAWN BY YLQIAO DATE 2005/03/14 CHECKED BY PTLIM DATE 2005/03/29 APPROVED BY MLONG DATE 2010/03/10	SCALE NTS DESIGN UNITS METRIC THIRD ANGLE PROJECTION	TITLE CUSTOM HEADER 2.54MM PITCH SINGLE ROW SINGLE WAFER SMT HEADER MOLEX INCORPORATED SD-87898-001	SHEET NO. 19 OF 20
B3		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			

CKT	DIMENSION					
	Bo	So	Ao	Ko	F	W
7	18.20	40.40	5.20	11.30	20.20	44.00
9	23.25	40.40	5.20	11.30	20.20	44.00
11	28.35	40.40	5.20	11.30	20.20	44.00
13	33.40	52.40	5.20	11.30	26.20	56.00
15	38.50	52.40	5.20	11.30	26.20	56.00
17	43.60	68.40	5.20	11.30	34.20	72.00
19	48.70	68.40	5.20	11.30	34.20	72.00
21	53.80	68.40	5.20	11.30	34.20	72.00



NOTES:

1. LEADER AND TRAILER TAPE

160 MIN. TOP TAPE TRAILER

390 MIN. TOP TAPE NON BONDED TAPE

160 MIN. TAIL PART (EMPTY)

230 MIN. LEADER PART (EMPTY)

2. PEELING OFF FORCE OF THE TOP TAPE: 20 - 80gf.

(PEELING DIRECTION AS SHOWN IN FOLLOWING FIGURE)

PEEL OFF DIRECTION

15° MAX.

PULL OUT DIRECTION

3. MATERIAL: BLACK P.S CONDUCTIVE, BLACK MEASURED FROM CENTRELINE OF SPROCKET HOLE TO CENTRELINE OF SPOCKET

CUMULATIVE TOLERANCE OF 10 SPROCKET HOLE IS ± 0.20mm

4. AO AND BO ARE MEASURED FROM ABOVE POCKET BASE 0.30mm

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

6. TAPE AND REEL QUANTITY : 440PCS/REEL

7. THE TAPE IS TREATED FOR ANTI-STATIC.

8. ALL RADIUS ARE 0.30MM UNLESS SPECIFY

9. SURFACE RESISTIVITY 10³ TO 10 OHMS.

**PART PACK
IN E/TAPE
ORIENTATION
(FOR REF USE)**

EWR#1228, +0209 EC NO: S2010-0966 DRWN:ATSEE CHKD:PTLM APPR:MLONG		2010/05/20 2005/03/29 2005/06/08	DESCRIPTION	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE		SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION	
							MM ONLY		NTS	METRIC		
				F=0	mm	INCH	DRAWN BY	DATE	TITLE CUSTOM HEADER 2.54MM PITCH SINGLE ROW SINGLE WAFER SMT HEADER			
				F=0	4 PLACES	± ---	± ---	YLOIAO				
F=0	3 PLACES	± ---	± ---	CHECKED BY	DATE	MOLEX INCORPORATED						
F=0	2 PLACES	± 0.2	± ---	PTLIM	2005/03/29							
	1 PLACE	± ---	± ---	APPROVED BY	DATE	SD-87898-001						
	ANGULAR ± 3 °			MLONG	2010/03/10							
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS					MATERIAL NO.		DOCUMENT NO.				SHEET NO.	
					SEE TABLE		SD-87898-001				20 OF 20	
B3		REV				SIZE A3	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION					