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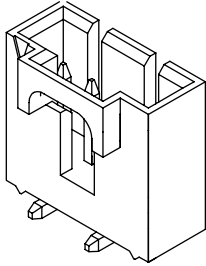
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Jameco Part Number 1976195

2.54mm (.100") Pitch SL™ Wire-to-Board Shrouded Header

74099 Single Row, .120" Pocket Vertical, SMT



Features and Benefits

- Size 3 to 24 circuits
- Locking crown secures positive latch to header
- Polarization slots guide front ribs of mating connector to prevent pin damage
- Standoffs minimize flux interference
- Surface Mount Compatible

Reference Information

Product Specification: PS-70541
Packaging: Tube
UL File No.: E29179
CSA File No.: LR19980
Mates with: 70066G, 70066N, 70400G and 70430G
Designed In: Inches

Electrical

Voltage: 250V
Current: 3.0A
Contact Resistance: 15 milliohms max.
Dielectric Withstanding Voltage: 1500V
Insulation Resistance: 1000 Megohms min.

Mechanical

Durability: Tin—25 cycles; Gold—50 cycles

Physical

Housing: Black polyester, UL 94V-0
Contact: Copper Alloy
Plating: See Table
Operating Temperature: -40 to +105°C

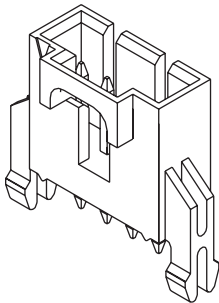
Not For Use With C-Grid III™ Components

	Tin	15µm Gold	30µm Gold	Lead-free
3	74099-0003	74099-1003	74099-2003	Yes
4	74099-0004	74099-1004	74099-2004	
5	74099-0005	74099-1005	74099-2005	
6	74099-0006	74099-1006	74099-2006	
7	74099-0007	74099-1007	74099-2007	
8	74099-0008	74099-1008	74099-2008	
9	74099-0009	74099-1009	74099-2009	
10	74099-0010	74099-1010	74099-2010	
11	74099-0011	74099-1011	74099-2011	
12	74099-0012	74099-1012	74099-2012	
13	74099-0013	74099-1013	74099-2013	

	Tin	15µm Gold	30µm Gold	Lead-free
14	74099-0014	74099-1014	74099-2014	Yes
15	74099-0015	74099-1015	74099-2015	
16	74099-0016	74099-1016	74099-2016	
17	74099-0017	74099-1017	74099-2017	
18	74099-0018	74099-1018	74099-2018	
19	74099-0019	74099-1019	74099-2019	
20	74099-0020	74099-1020	74099-2020	
21	74099-0021	74099-1021	74099-2021	
22	74099-0022	74099-1022	74099-2022	
23	74099-0023	74099-1023	74099-2023	
24	74099-0024	74099-1024	74099-2024	

2.54mm (.100") Pitch SL™ Wire-to-Board Shrouded Header

70541 Single Row, .120" Pocket Vertical, Split Pegs



Features and Benefits

- Size 2 to 10 circuits
- PCB locks hold header in place until permanently soldered
- Locking crown secures positive latch to header
- Polarization slots guide front ribs of mating connector to prevent pin damage
- Standoffs minimize flux retention

Reference Information

Product Specification: PS-70541
Packaging: Tube
UL File No.: E29179
CSA File No.: LR19980
Mates With: 70066G, 70066N, 70400G and 70430G
Designed In: Inches

Electrical

Voltage: 250V
Current: 3.0A
Contact Resistance: 15 milliohms max.
Dielectric Withstanding Voltage: 1500V
Insulation Resistance: 1000 Megohms min.

Mechanical

Insertion Force to PCB: 44.5 N (10 lb)
Durability: Tin—25 cycles; Gold—50 cycles

Physical

Housing: Black polyester, UL 94V-0
Contact: Copper Alloy
Plating: See Table
Operating Temperature: -40 to +105°C

Not For Use With C-Grid III™ Components

Circuits	Order No.			Lead-free
	15µm Min. Gold	30µm Min. Gold	150µm Tin	
2	70541-0036	70541-0071	70541-0001	Yes
3	70541-0037	70541-0072	70541-0002	
4	70541-0038	70541-0073	70541-0003	
5	70541-0039	70541-0074	70541-0004	
6	70541-0040	70541-0075	70541-0005	

Circuits	Order No.			Lead-free
	15µm Min. Gold	30µm Min. Gold	150µm Tin	
7	70541-0041	70541-0076	70541-0006	Yes
8	70541-0042	70541-0077	70541-0007	
9	70541-0043	70541-0078	70541-0008	
10	70541-0044	70541-0079	70541-0009	



PRODUCT SPECIFICATION

PRODUCT SPECIFICATION FOR SINGLE ROW, HIGH TEMPERATURE “SL” HEADER SYSTEM

1.0 SCOPE

This Product Specification covers the .100/(2.54 mm) grid, single row, fully shrouded, “SL” header system.

2.0 PRODUCT DESCRIPTION

2.1 PRODUCT NAME AND SERIES NUMBER(S)

- 70541 Straight Mount Header, with active latch and PC board snaps
- 70543 Straight Mount Header, with active latch
- 70545 Straight Mount Header, with active latch and PC board retention tri-pegs
- 70546 Straight Mount Header, low profile with PC board retention tri-pegs
- 70551 Right Angle Mount Header, with active latch and PC board snaps
- 70553 Right Angle Mount Header, with active latch
- 70555 Right Angle Mount Header, with active latch and PC board retention tri-pegs
- 70556 Right Angle Mount Header, low profile with PC board retention tri-pegs
- 70563 Straight Mount Header, with active latch
- 70564 Straight Mount Header, low profile
- 70566 Straight Mount Header, low profile with PC board retention tri-pegs
- 70571 Right Angle Mount Header, with active latch and PC board snaps
- 70575 Right Angle Mount Header, with active latch and PC board retention tri-peg
- 70634 Right Angle Mount SMT Header, with active latch and PC board retention tri-peg
- 71164 Straight Mount & Right Angle Headers, with voided circuits
- 74098 Right Angle Mount SMT Header, with active latch and PC board snaps
- 74099 Straight Mount SMT Header, with active latch, and some with Pick & Place Cap
- 74105 Right Angle SMT Header, with active latch

2.2 DIMENSIONS, MATERIALS, PLATINGS AND MARKINGS

2.2.1 Pin Height

2.2.1.1 Maximum pin height: .320/(8.13mm)

2.2.1.2 Minimum pin height: .200/(5.08mm)

2.2.2 Centerline spacing (pitch): .100/(2.54mm)

2.2.3 Termination Method:

2.2.3.1 Thru Hole: Wave Solder

2.2.3.2 SMT: Reflow

REVISION: B	ECR/ECN INFORMATION: EC No: UCP2009-0287 DATE: 2008 / 08 / 01	TITLE: ASSEMBLY CONNECTOR SL SHROUDED HEADER .100/(2.54) GRID: FAMILY INDEX	SHEET No. 1 of 4
DOCUMENT NUMBER: PS-70541	CREATED / REVISED BY: EIK/MIBARRA	CHECKED BY: DMORGAN	APPROVED BY: SMILLER



PRODUCT SPECIFICATION

2.2.4 Housings: Black Glass Filled Polyester, UL 94V-0

2.2.5 Pins: Phosphor Bronze

2.2.6 Plating: Gold and Tin

2.2.6.1 Gold: 30 microinches/0.76 micrometers minimum Gold in select area
75 microinches/1.91 micrometers minimum Tin in select area
Over Nickel underplate overall

or

Gold: 15 microinches/0.38 micrometers minimum Gold in select area
75 microinches/1.91 micrometers minimum Tin in select area
Over Nickel underplate overall

2.2.6.2 Tin: 150 microinches/3.80 micrometers minimum Tin over Nickel underplate overall

2.2.7 Recommended PC Board thickness: .062/(1.57mm)

See the appropriate Sales Drawing(s) for additional information on dimensions and markings.

2.3 SAFETY AGENCY APPROVALS

2.3.1 Underwriters Laboratory: UL# E29179

2.3.2 Canadian Standards Association: CSA# LR19980

3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

All documents referenced shall be of the latest revision. The order of precedence shall be as follows.

- Product Drawings
- This Product Specification
- Reference Documents

3.1 REFERENCE DOCUMENTS

- EIA-364: Electronic Industries Association, Recommended Standard
- MIL-STD-202: Test methods for electronics and electrical component parts
- IEC 68-2-14 and IEC 68-2-42
- UL-94: Tests for flammability of plastic material

4.0 RATINGS

4.1 VOLTAGE

250 Volts

4.2 TEMPERATURE

3.0 Amps Maximum

4.3 TEMPERATURE

Operating Temperature: - 40°C to + 105°C

Processing Temperature: 260°C Maximum for Thru Hole Wave solder only

245°C Maximum for IR reflow SMT and Thru Hole Paste

REVISION: B	ECR/ECN INFORMATION: EC No: UCP2009-0287 DATE: 2008 / 08 / 01	TITLE: ASSEMBLY CONNECTOR SL SHROUDED HEADER .100/(2.54) GRID: FAMILY INDEX	SHEET No. 2 of 4
DOCUMENT NUMBER: PS-70541	CREATED / REVISED BY: EIK/MIBARRA	CHECKED BY: DMORGAN	APPROVED BY: SMILLER



PRODUCT SPECIFICATION

5.0 PERFORMANCE

5.1 ELECTRICAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
1	Insulation Resistance	Per MIL-STD-202, Method 302, Condition B. Resistance measured after sequences 5.2.1 thru 5.2.4.	10000 Megohms MINIMUM
2	Dielectric Withstanding Voltage	AC Voltage increased until breakdown. Per MIL-STD-202, Method 302, Condition B. Voltage measured after sequences 5.2.1 thru 5.2.4	600V AC RMS MINIMUM for 1 minute at sea level to 5,000 feet.

5.2 MECHANICAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
3	Terminal Retention Force (in Housing)	Axial pullout force on the terminal in the housing at a rate of $1 \pm \frac{1}{4}$ inch (25 ± 6 mm) per minute.	17.79 N (4 lbf) MINIMUM retention force
4	Tri-Peg Insertion Force (in PCB)	Recommended Hole size $.134 \pm .002$ inch (3.50 ± 0.05 mm). Insert connector at a rate of $1 \pm \frac{1}{4}$ inch (25 ± 6 mm) per minute.	44.48 N (10 lbf) MAXIMUM insertion force
5	Tri-Peg Retention Force (in PCB)	Recommended Hole size $.134 \pm .002$ inch (3.50 ± 0.05 mm). Pull connector at a rate of $1 \pm \frac{1}{4}$ inch (25 ± 6 mm) per minute.	4.45 N (1 lbf) MINIMUM retention force
6	Board Snap Insertion Force (in PCB)	Recommended Hole size $.134 \pm .002$ inch (3.50 ± 0.05 mm). Insert connector at a rate of $1 \pm \frac{1}{4}$ inch (25 ± 6 mm) per minute.	44.48 N (10 lbf) MAXIMUM insertion force
7	Board Snap Retention Force (in PCB)	Recommended Hole size $.134 \pm .002$ inch (3.50 ± 0.05 mm). Pull connector at a rate of $1 \pm \frac{1}{4}$ inch (25 ± 6 mm) per minute.	20 N (4.5 lbf) MINIMUM retention force

REVISION: B	ECR/ECN INFORMATION: EC No: UCP2009-0287 DATE: 2008 / 08 / 01	TITLE: ASSEMBLY CONNECTOR SL SHROUDED HEADER .100/(2.54) GRID: FAMILY INDEX	SHEET No. 3 of 4
DOCUMENT NUMBER: PS-70541	CREATED / REVISED BY: EIK/MIBARRA	CHECKED BY: DMORGAN	APPROVED BY: SMILLER



PRODUCT SPECIFICATION

5.3 ENVIRONMENTAL REQUIREMENT

Un-mated Environment

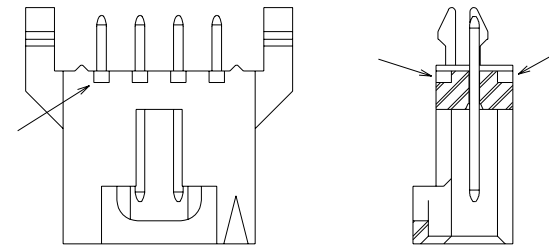
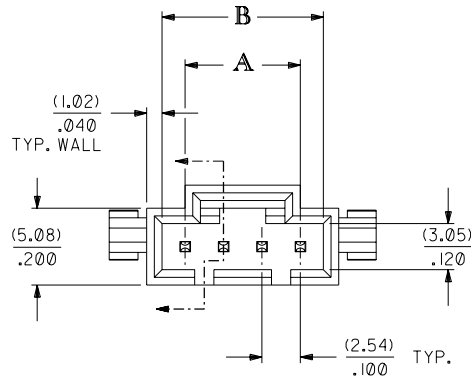
ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT						
8	Shock (Thermal)	Expose to 10 cycles of: <table border="1"> <thead> <tr> <th>Temperature °C</th> <th>Duration (Minutes)</th> </tr> </thead> <tbody> <tr> <td>-40 +0/-3</td> <td>30</td> </tr> <tr> <td>+105 +3/-0</td> <td>30</td> </tr> </tbody> </table> Per IEC 68-2-14.	Temperature °C	Duration (Minutes)	-40 +0/-3	30	+105 +3/-0	30	Visual: No Damage
Temperature °C	Duration (Minutes)								
-40 +0/-3	30								
+105 +3/-0	30								
9	Thermal Aging	Expose to: 240 hours at 105 ± 2°C Per MIL-STD-202F Method 108A.	Visual: No Damage						
10	Humidity (Steady State)	Expose to temperature of 40 ± 3°C at 96 ± 5% relative humidity for 240 hours. Per MIL-STD-202F Method 108A Test Condition A.	Visual: No Damage						
11	Flowers of Sulphur	Exposed to sulphur vapors for 24 hours at 65 ± 3°C. Per IEC 68-2-42.	Visual: No Damage						

6.0 PACKAGING

Parts are packaged to protect against damage during handling, transit, and storage. Connector housing assemblies are packaged in plastic tubes in the "pre-loaded" condition.

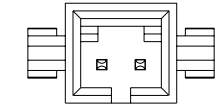
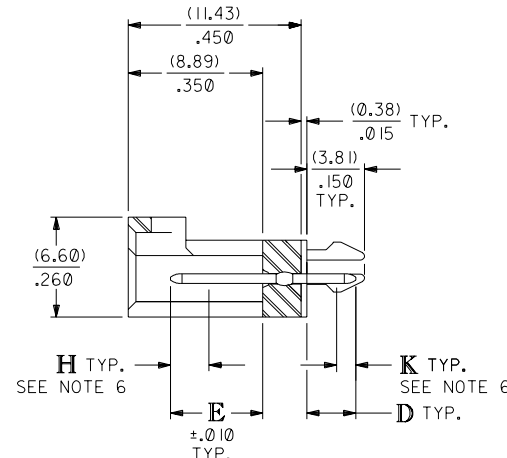
REVISION: B	ECR/ECN INFORMATION: EC No: UCP2009-0287 DATE: 2008 / 08 / 01	TITLE: ASSEMBLY CONNECTOR SL SHROUDED HEADER .100/(2.54) GRID: FAMILY INDEX	SHEET No. 4 of 4
DOCUMENT NUMBER: PS-70541	CREATED / REVISED BY: EIK/MIBARRA	CHECKED BY: DMORGAN	APPROVED BY: SMILLER

SL VERTICAL HEADER
W/LATCH & SPLIT PEGS

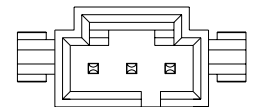


**ALTERNATIVE CORING
MANUFACTURER'S OPTION**

CKT. SIZE	DIM. "A"		DIM. "B"	
	MM	IN.	MM	IN.
2	2.54	.100	5.33	.210
3	5.08	.200	8.13	.320
4	7.62	.300	10.67	.420
5	10.16	.400	13.21	.520
6	12.70	.500	15.75	.620
7	15.24	.600	18.29	.720
8	17.78	.700	20.83	.820
9	20.32	.800	23.37	.920
10	22.86	.900	25.91	1.020



2 CIRCUIT



3 CIRCUIT

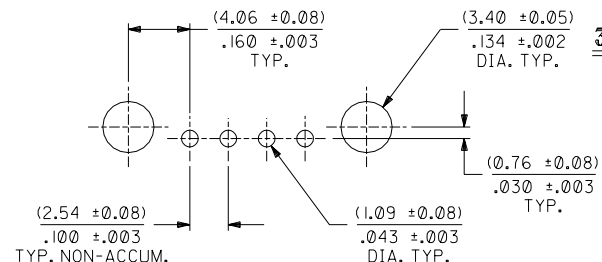
NOTES:

1. HEADER MATERIAL: GLASS FILLED POLYESTER; UL94V-0; COLOR: BLACK
PIN MATERIAL: PHOSPHOR BRONZE
2. HEADER TO BE USED WITH OPTION "G" 70400 AND 70430 SERIES SL CONNECTORS.
3. REFER TO MOLEX PRODUCT SPECIFICATION PS-70541.
4. STANDARD PACKAGING PER PK-70873-0014.
5. DIMENSIONS WITHOUT TOLERANCE ARE SHOWN FOR REFERENCE ONLY.
6. MEASURE POINT FOR PLATING THICKNESS.

PLATING:

- TIN - .000150 MINIMUM TIN PLATE OVER .000050 MINIMUM NICKEL PLATE.
- 15 GOLD - .000015 MINIMUM GOLD PLATE IN SELECT AREA, .000075 MINIMUM TIN PLATE IN SELECT AREA, OVER .000050 MINIMUM NICKEL PLATE OVERALL.
- 30 GOLD - .000030 MINIMUM GOLD PLATE IN SELECT AREA, .000075 MINIMUM TIN PLATE IN SELECT AREA, OVER .000050 MINIMUM NICKEL PLATE OVERALL.

*THE PRIMARY SHIPPING CARTON WILL BE LABELED "COMPLIANT TO ROHS DIRECTIVE 2002/95/EC AND ELV ANNEX II OF DIRECTIVE 2000/53/EC". CARTONS WITHOUT THIS LABEL MAY CONTAIN PRODUCT WITH LEAD.



RECOMMENDED PC BOARD LAYOUT

(FOR USE WITH (1.57)/.062 THICK BOARD)

H ADDED TOLERANCES PER UDT2001-0723 JRWILLIAMS 01/04/26 G MODIFIED HOUSING MATERIAL CALLOUT ECN# UDT1999-0869 DMORGAN 99/04/23 I LEAD FREE UCP2004-1769 RWHITE 04/03/25		F1 ECR U7-1280 MCFARLAN 97/4/23 ADD -0178		DIMENSIONS SHOWN (METRIC) INCH UNLESS OTHERWISE SPECIFIED TOLERANCES: ANGULAR ± 1/2° 3 PLACE ± .005 2 PLACE ± .01 ± 0.13 1 PLACE ± 0.25		REVISIONS LTR. REVISIONS		DIMENSIONS SHOWN (METRIC) INCH UNLESS OTHERWISE SPECIFIED TOLERANCES: ANGULAR ± 1/2° DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS DRWG. BY: AAB CHK'D. BY: MJM APP'D. BY: WAZ SCALE: 4 : 1		FILE NAME: S70541X1 THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INC. AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION.		REVISIONS LTR. REVISIONS		DIMENSIONS SHOWN (METRIC) INCH UNLESS OTHERWISE SPECIFIED TOLERANCES: ANGULAR ± 1/2° DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS DRWG. BY: AAB CHK'D. BY: MJM APP'D. BY: WAZ SCALE: 4 : 1		FILE NAME: S70541X1 THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INC. AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION.	
TITLE: SALES ASSY, SL VERTICAL HEADER W/LATCH & SPLIT PEGS (2.54)/.100 CENTERS				SHEET NO. DATE: 1 OF 2 09/22/87				PART NO. DRWG. NO.: SDA-70541-****				DIV. SIZE: DA C					

J	CIRCUIT SIZE	ASSEMBLY ITEM NUMBER 70541	MANUFACTURE RELEASE STATUS	D REF.	E ± .010	CONNECTOR END PLATING		P.C. BOARD END PLATING	
						TYPE	H MEAS.	TYPE	K MEAS.
	2-10	-0001-0009	R.F.M.	(3.30)	(6.10)	TIN	(2.54)	TIN	(1.27)
	11-25	-0010-0024		.130	.240		.100		.050
I	2-10	-0036-0044	R.F.M.	(3.30)	(6.10)	15 GOLD	(2.54)	TIN	(1.27)
	11-25	-0045-0059		.130	.240		.100		.050
	2-10	-0071-0079	R.F.M.	(3.30)	(6.10)	30 GOLD	(2.54)	TIN	(1.27)
	11-25	-0080-0094		.130	.240		.100		.050
H									
G									
	2-10	-0176-0184	R.F.M.	(3.30)	(6.10)	TIN	(2.54)	TIN	(1.27)
				.130	.240		.100		.050

F	CIRCUIT SIZE	ASSEMBLY ITEM NUMBER	ASSEMBLY ITEM NUMBER	ASSEMBLY ITEM NUMBER	ASSEMBLY ITEM NUMBER	ASSEMBLY ITEM NUMBER	ASSEMBLY ITEM NUMBER
	2	70541-0001	70541-0036	70541-0071			
	3	70541-0002	70541-0037	70541-0072			
	4	70541-0003	70541-0038	70541-0073		70541-0178	
E	5	70541-0004	70541-0039	70541-0074			
	6	70541-0005	70541-0040	70541-0075			
	7	70541-0006	70541-0041	70541-0076			
	8	70541-0007	70541-0042	70541-0077			
	9	70541-0008	70541-0043	70541-0078			
	10	70541-0009	70541-0044	70541-0079			
D	11	X 70541-0010	X 70541-0045	X 70541-0080			
	12	X 70541-0011	X 70541-0046	X 70541-0081			
	13	X 70541-0012	X 70541-0047	X 70541-0082			
	14	X 70541-0013	X 70541-0048	X 70541-0083			
	15	X 70541-0014	X 70541-0049	X 70541-0084			
	16	X 70541-0015	X 70541-0050	X 70541-0085			
C	17	X 70541-0016	X 70541-0051	X 70541-0086			
	18	X 70541-0017	X 70541-0052	X 70541-0087			
	19	X 70541-0018	X 70541-0053	X 70541-0088			
	20	X 70541-0019	X 70541-0054	X 70541-0089			
	21	X 70541-0020	X 70541-0055	X 70541-0090			
	22	X 70541-0021	X 70541-0056	X 70541-0091			
	23	X 70541-0022	X 70541-0057	X 70541-0092			
B	24	X 70541-0023	X 70541-0058	X 70541-0093			
	25	X 70541-0024	X 70541-0059	X 70541-0094			

X IN COLUMN UNDER *ASSEMBLY ITEM NUMBER *HEADING DENOTES TOOLING NOT AVAILABLE

A	I	SEE SHEET I	DIMENSIONS SHOWN (METRIC) INCH UNLESS OTHERWISE SPECIFIED TOLERANCES: ANGULAR ± 1/2° INCH METRIC 3 PLACE ± .005 2 PLACE ± .01 ± 0.13 1 PLACE ± 0.25 DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS DRWG. BY AAB CHK'D. BY AAB APP'D. BY WAZ SCALE : LTR. REVISIONS LTR. REVISIONS	70541 REVISIONS REVISIONS	= 0 = 0 REVISE ONLY ON CAD SYSTEM TITLE SALES ASSY, SL VERTICAL HEADER W/LATCH & SPLIT PEGS (2.54)/.100 CENTERS MOLEX INCORPORATED U.S.A. SHEET NO. 2 DATE 09/22/87 PART NO. SDA-70541-**** SEE CHART THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INC. AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION DA C
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	F I	SEE SHEET I			
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