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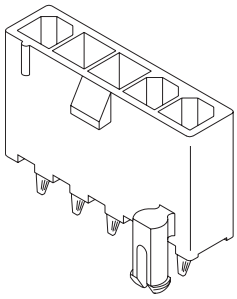
Jameco Part Number 1969374

4.20mm (.165") Pitch Mini-Fit Jr.™ Header

5566
Vertical, Single Row With Pegs



Features and Benefits
- Positive housing locks to mate with Mini-Fit Jr. single row receptacles 5557
- Fully isolated terminals to protect contacts from damage
- Peg-mounted vertical headers for increased board retention
- Drain holes are standard to allow washing of PCB after processing (contact Molex for headers without drain holes)

Reference Information
Packaging: Tube or bag
UL File No.: E29179
CSA File No.: LR19980
TUV License No.: R75142
Mates With: 5557 single row receptacle
PCB Thickness: 1.60mm (.062")
Process: Wave solder
Designed In: Millimeters

Electrical
Voltage: 600V
Current: (Used with 16 AWG)

Series	Circuits			
	2-3	4-6	7-10	12-24
46083	9.0A	8.0A	7.0A	6.0A

Contact Resistance: 10 milliohms max.
Dielectric Withstanding Voltage: 1500V AC
Insulation Resistance: 1000 Megohms min.

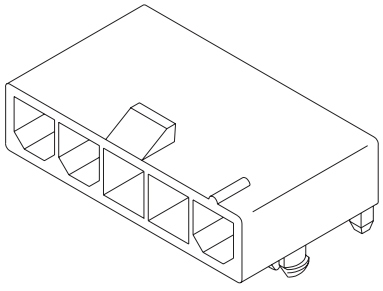
Mechanical
Insertion Force to PCB: 5.0kg max.
Durability: 30 cycles

Physical
Housing: 6/6 nylon, UL 94V-2 or 94V-0
Contact: Brass or Phosphor Bronze
Plating: Tin or Select Gold
Underplating: Nickel
Operating Temperature: -40 to +105°C

Circuits	Order No.				Lead-free
	Tin Plated		Select Gold Plated (30µ")		
	94V-2	94V-0	94V-2	94V-0	
3	39-30-5039	39-30-6030	39-30-2037	39-30-2038	Yes
4	39-30-5049	50-30-4466	39-30-2047	39-30-2048	
5		50-30-4467		39-30-2058	

4.20mm (.165") Pitch Mini-Fit Jr.™ Header

5569
Right Angle, Single Row With Pegs



Features and Benefits
- Pegs provide increased board retention
- Ideal for low profile power applications
- Positive housing locks to mate with Mini-Fit Jr. single row receptacles 5557
- Fully isolated terminals to protect contacts from damage

Reference Information
Packaging: Tray or bag
UL File No.: E29179
CSA File No.: LR19980
Mates With: 5557 single row receptacle
TUV License No.: R75142
PCB Thickness: 1.60mm (.062")
Process: Wave solder
Designed In: Millimeters

Electrical
Voltage: 600V
Current: (Used with 16 AWG)

Series	Circuits			
	2-3	4-6	7-10	12-24
46083	9.0A	8.0A	7.0A	6.0A
45750	12.0A	12.0A	12.0A	11.0A

Contact Resistance: 10 milliohms max.
Dielectric Withstanding Voltage: 1500V AC
Insulation Resistance: 1000 Megohms min.

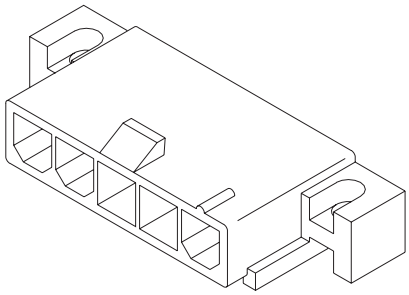
Mechanical
Insertion Force to PCB: 5.0kg max.
Durability: 30 cycles

Physical
Housing: 6/6 nylon, UL 94V-2 or 94V-0
Contact: Brass
Plating: Tin or Select Gold
Underplating: Nickel
Operating Temperature: -40 to +105°C

Circuits	Order No.				Lead-free
	Tin Plated		Select Gold Plated		
	94V-2	94V-0	94V-2	94V-0	
3	39-30-7031	39-30-7032	39-30-4031	39-30-4032	Yes
4	39-30-7041	39-30-7042	50-30-4438	50-30-4441	
5	39-30-7051	39-30-7052	50-30-4439	50-30-4442	

4.20mm (.165") Pitch Mini-Fit Jr.™ Header

5569
Right Angle, Single Row With Flanges



Features and Benefits
- Flanges allow for screw-in retention to board-mounted headers
- Low profile is ideal for power applications with space constraints

Reference Information
Packaging: Tray or bag
UL File No.: E29179
CSA File No.: LR19980
TUV License No.: R75142
Mates With: 5557 single row receptacle
PCB Thickness: 1.60mm (.062")
Process: Wave solder
Designed In: Millimeters

Electrical
Voltage: 600V
Current: (Used with 16 AWG)

Series	Circuits			
	2-3	4-6	7-10	12-24
46083	9.0A	8.0A	7.0A	6.0A
45750	12.0A	12.0A	12.0A	11.0A

Contact Resistance: 10 milliohms max.
Dielectric Withstanding Voltage: 1500V AC
Insulation Resistance: 1000 Megohms min.

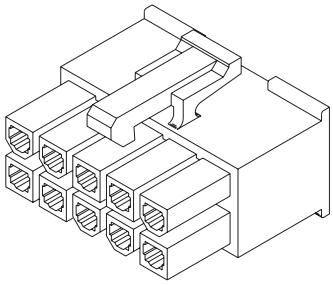
Mechanical
Insertion Force to PCB: 5.0kg max.
Durability: 30 cycles

Physical
Housing: 6/6 nylon, UL 94V-2 or 94V-0
Contact: Brass
Plating: Tin or Select Gold
Underplating: Nickel
Operating Temperature: -40 to +105˚C

Circuits	Order No.				Lead-free
	Tin Plated		Select Gold Plated		
	94V-2	94V-0	94V-2	94V-0	
3	39-30-6039	39-30-7030	39-30-4037	39-30-4038	Yes
4	39-30-6049		50-30-4443		

4.20mm (.165") Pitch Mini-Fit Jr.™ Receptacle

5557
Dual Row



Features and Benefits
- Positive housing lock for secure mating retention
- Fully isolated terminals to protect contacts from damage
- Thumblatch for easy unmating

Reference Information
Packaging: Bag
UL File No.: E29179
CSA File No.: LR19980
TUV License No.: R75142
Mates With: 5559, 5566, 5569, 42404, 42440, 42475, 43810, 43879 and 44068 dual row connectors
Use With: 5556, 46083 or 45750 terminals
Designed In: Millimeters

Electrical
Current: (Used with 16 AWG)

Series	Circuits			
	2-3	4-6	7-10	12-24
46083	9.0A	8.0A	7.0A	6.0A
45750	12.0A	12.0A	12.0A	11.0A

Mechanical
Contact Insertion Force: 1.5kg max.
Contact Retention to Housing: 3.0kg min.

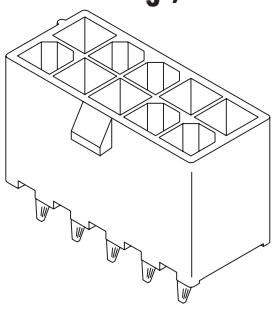
Physical
Housing: 6/6 nylon, UL 94V-2 or 94V-0
Operating Temperature: -40 to +105˚C

Circuits	Order No.	
	94V-2	94V-0
2	39-01-2020	39-01-2025
4	39-01-2040	39-01-2045
6	39-01-2060	39-01-2065
8	39-01-2080	39-01-2085
10	39-01-2100	39-01-2105
12	39-01-2120	39-01-2125

Circuits	Order No.	
	94V-2	94V-0
14	39-01-2140	39-01-2145
16	39-01-2160	39-01-2165
18	39-01-2180	39-01-2185
20	39-01-2200	39-01-2205
22	39-01-2220	39-01-2225
24	39-01-2240	39-01-2245

4.20mm (.165") Pitch Mini-Fit Jr.™ Header

5566
Vertical, Dual Row Without Pegs, without Drain Holes



Features and Benefits
- Positive housing locks to mate with Mini-Fit Jr. receptacle
- Fully isolated terminals to protect contacts from damage
- Drain hole option available, contact Molex

Reference Information
Packaging: Bag
UL File No.: E29179
CSA File No.: LR19980
TUV License No.: R75142
Mates With: 5557 dual row receptacles
PCB Thickness: 1.60mm (.062")
Process: Wave solder
Designed In: Millimeters

Electrical
Voltage: 600V
Current: (Used with 16 AWG)

Series	Circuits			
	2-3	4-6	7-10	12-24
46083	9.0A	8.0A	7.0A	6.0A

Contact Resistance: 10 milliohms max.
Dielectric Withstanding Voltage: 1500V AC
Insulation Resistance: 1000 Megohms min.

Mechanical
Insertion Force to PCB: 5.0kg max.
Durability: 30 cycles

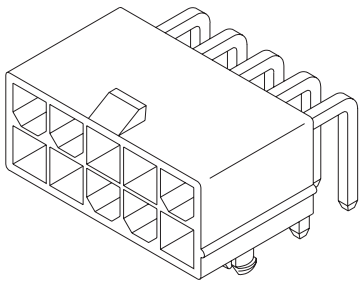
Physical
Housing: 6/6 nylon, UL 94V-2 or 94V-0
Contact: Brass or Phosphor Bronze
Plating: Tin
Underplating: Copper
Operating Temperature: -40 to +105˚C

Circuits	Order No.		Lead-free
	94V-2	94V-0	
2	39-28-1023	39-28-8020	Yes
4	39-28-1043	39-28-8040	
6	39-28-1063	39-28-8060	
8	39-28-1083	39-28-8080	
10	39-28-1103	39-28-8100	
12	39-28-1123	39-28-8120	

Circuits	Order No.		Lead-free
	94V-2	94V-0	
14	39-28-1143	39-28-8140	Yes
16	39-28-1163	39-28-8160	
18	39-28-1183	39-28-8180	
20	39-28-1203	39-28-8200	
22	39-28-1223	39-28-8220	
24	39-28-1243	39-28-8240	

4.20mm (.165") Pitch Mini-Fit Jr.™ Header

5569
Right Angle, Dual Row with Pegs



Features and Benefits
- Board mounting pegs provide polarization during placement on PCB and increased board retention during solder processing
- Low profile for space constraints
- Positive housing locks
- Fully isolated terminals to protect contacts from damage

Reference Information
Packaging: Tray
UL File No.: E29179
CSA File No.: LR19980
TUV License No.: R75142
Mates With: 5557 dual row receptacles
PCB Thickness: 1.60mm (.062")
Process: Wave Solder
Designed In: Millimeters

Electrical
Voltage: 600V
Current: (Used with 16 AWG)

Series	Circuits			
	2-3	4-6	7-10	12-24
46083	9.0A	8.0A	7.0A	6.0A
45750	12.0A	12.0A	12.0A	11.0A

Contact Resistance: 10 milliohms max.
Dielectric Withstanding Voltage: 1500V AC
Insulation Resistance: 1000 Megohms min.

Mechanical
Insertion Force to PCB: 5.0kg max.
Durability: 30 cycles

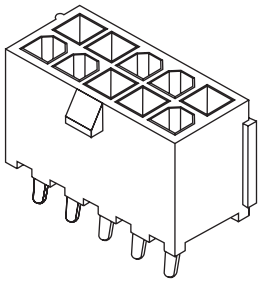
Physical
Housing: 6/6 nylon, UL 94V-2 or 94V-0
Contact: Brass
Plating: Tin or Select Gold
Underplating: Nickel
Operating Temperature: -40 to +105˚C

Circuits	Order No.				Lead-free
	Tin Plated		Select Gold Plated (30µ")		
	94V-2	94V-0	94V-2	94V-0	
2	39-30-7025	39-30-7026	39-30-0023	39-30-0024	Yes
4	39-30-7045	39-30-7046	39-30-0043	39-30-0044	
6	39-30-7065	39-30-7066	39-30-0063	39-30-0064	
8	39-30-7085	39-30-7086	39-30-0083	39-30-0084	
10	39-30-7105	39-30-7106	39-30-0103	39-30-0104	
12	39-30-7125	39-30-7126	39-30-0123	39-30-0124	
14	39-30-7145	39-30-7146	39-30-0143	39-30-0144	
16	39-30-7165	39-30-7166	39-30-0163	39-30-0164	
18	39-30-7185		39-30-0183		
20	39-30-7205	39-30-7206	39-30-0203	39-30-0204	
22	39-30-7225				
24	39-30-7245	39-30-7246	39-30-0243	39-30-0244	

4.20mm (.165") Pitch Mini-Fit Jr.™ Wire-to-Board Header

87427

Vertical without Flanges High Temperature Material



Features and Benefits

- Sizes 2 to 24 circuits
- Molded in high temperature, surface mount compatible material
- Fully isolated terminals to protect contacts from damage

Reference Information

Product Specification: PS-87427-0001
Packaging: Bag
UL File No.: E29179
CSA File No.: LR19980
Mates With: 5557 dual row receptacle
Designed in: Millimeters

Electrical

Voltage: 600V
Current: (Used with 16 AWG)

Circuits	2–3	4–6	7–10	12–24
Jr.	9.0A	8.0A	7.0A	6.0A
HCS	12.0A	11.0A	10.0A	9.0A

Contact Resistance: 10 milliohms max.
Dielectric Withstanding Voltage: 1500V
Insulation Resistance: 1000 Megohms min.

Mechanical

Pin Retention Force: 9.81N (2.2 lb) min.
Mating Force: 14.23N (3.19 lb) max.
Unmating Force: 0.50N (0.11 lb) max.
Durability: 30 cycles

Physical

Housing: 4/6 Nylon, UL 94V-0
Contact: Brass (1.07 square)
Plating: Tin
Operating Temperature: -40 to +105°C

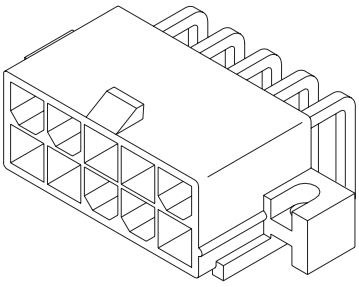
Circuits	Order No.		Lead-free
	Tin Over Nickel Plating	Tin Over Copper Plating	
2	87427-0242	87427-0243	Yes
4	87427-0442	87427-0443	
6	87427-0642	87427-0643	
8	87427-0842	87427-0843	
10	87427-1042	87427-1043	
12	87427-1242	87427-1243	

Circuits	Order No.		Lead-free
	Tin Over Nickel Plating	Tin Over Copper Plating	
14	87427-1442	87427-1443	Yes
16	87427-1642	87427-1643	
18	87427-1842	87427-1843	
20	87427-2042	87427-2043	
22	87427-2242	87427-2243	
24	87427-2442	87427-2443	

4.20mm (.165") Pitch Mini-Fit Jr.™ Header

5569

Right Angle, Dual Row With Flanges



Features and Benefits

- Flanges allow for screw-in retention to board-mounted header
- Low profile for space constraints
- Positive housing locks

Reference Information

Packaging: Bag
UL File No.: E29179
CSA File No.: LR19980
TUV License No.: R75142
Mates With: 5557 dual row receptacles
PCB Thickness: 1.60mm (.062")
Process: Wave solder
Designed In: Millimeters

Electrical

Voltage: 600V
Current: (Used with 16 AWG)

Series	Circuits			
	2-3	4-6	7-10	12-24
46083	9.0A	8.0A	7.0A	6.0A
45750	12.0A	12.0A	12.0A	11.0A

Contact Resistance: 10 milliohms max.
Dielectric Withstanding Voltage: 1500V AC
Insulation Resistance: 1000 Megohms min.

Mechanical

Insertion Force to PCB: 5.0kg max.
Durability: 30 cycles

Physical

Housing: 6/6 nylon, UL 94V-2 or 94V-0
Contact: Brass
Plating: Tin
Underplating: Copper
Operating Temperature: -40 to +105˚C

Circuits	Order No.		Lead-free
	94V-2	94V-0	
2	39-29-1028	39-29-1027	Yes
4	39-29-1048	39-29-1047	
6	39-29-1068	39-29-1067	
8	39-29-1088	39-29-1087	
10	39-29-1108	39-29-1107	
12	39-29-1128	39-29-1127	

Circuits	Order No.		Lead-free
	94V-2	94V-0	
14	39-29-1148	39-29-1147	Yes
16	39-29-1168	39-29-1167	
18	39-29-1188	39-29-1187	
20	39-29-1208	39-29-1207	
22	39-29-1228	39-29-1227	
24	39-29-1248	39-29-1247	

PRODUCT SPECIFICATION

MINI-FIT JR.

Table of Contents

1.0 SCOPE

This Product Specification covers performance requirements for the MINI-FIT JR. 4.20 mm (.165 inch) centerline (pitch) printed circuit board (PCB) connector series with Tin or Gold plating, and
The MINI-FIT JR. connector series terminated with 16 to 28 AWG wire using Crimp technology with Tin or Gold plating.

2.0 PRODUCT DESCRIPTION

2.1 PRODUCT NAME AND SERIES NUMBER (S)

Table 1 – WIRE-TO-WIRE

Description	Series Number	RoHS	UL	CSA	TUV
Female Crimp Terminal	5556	Yes	n/a	n/a	n/a
Receptacle Housing	5557	Yes	Yes	Yes	Yes
Male Crimp Terminal	5558	Yes	n/a	n/a	n/a
Plug Housing	5559	Yes	Yes	Yes	Yes

Table 2 – WIRE-TO-BOARD

Description	Series Number	RoHS	UL	CSA	TUV
Female Crimp Terminal	5556	Yes	n/a	n/a	n/a
Receptacle Housing	5557	Yes	Yes	Yes	Yes
Vertical Header	5566	Yes	Yes	Yes	Yes
Right Angle Header	5569	Yes	Yes	Yes	Yes

2.2 DIMENSIONS, MATERIALS, PLATINGS AND MARKINGS

See the appropriate sales drawings for the information on dimensions, materials, platings and markings.

2.3 SAFETY AGENCY APPROVALS

UL File: E29179
CSA Certificate: LR 19980
TUV Certificate: R75142-8

3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

See sales drawings and the other sections of this specification for the necessary referenced documents and specifications.

4.0 RATINGS

4.1 VOLTAGE

600 Volts AC (RMS) (or 600 Volts DC)

4.2 APPLICABLE WIRES

Maximum Insulation Diameter and Applicable Wire Gauges	16 AWG: 3.10 mm / .122 inches MAXIMUM
	18-24 AWG: 3.10 mm / .122 inches MAXIMUM
	22-28 AWG: 1.80 mm / .071 inches MAXIMUM

4.3 MAXIMUM CURRENT RATING (Amperes)

Table 3 - MAXIMUM CURRENT RATING (Amperes)

Brass					Phosphor Bronze				
Wire \ Ckt. Size	2 & 3	4 - 6	7 - 10	12 - 24	Wire \ Ckt. Size	2 & 3	4 - 6	7 - 10	12 - 24
AWG #16	9	8	7	6	AWG #16	8	7	6	5
AWG #18	9	8	7	6	AWG #18	8	7	6	5
AWG #20	7	6	5	5	AWG #20	6	5	4	4
AWG #22	5	4	4	4	AWG #22	4	3	3	3
AWG #24	4	3	3	3	AWG #24	3	2	2	2
AWG #26	3	2	2	2	AWG #26	2	1	1	1
AWG #28	2	1	1	1	AWG #28	1	1	1	1

Note: PCB trace design may greatly affect temperature rise results in Wire-to-Board Applications.

4.4 TEMPERATURE

Operating: * - 40℃ to + 105℃
Nonoperating: - 40℃ to + 105℃
**Including 30℃ terminal temperature at rated current*

4.5 WAVE SOLDER PROCESS TEMPERATURE

Headers with pegs: 240℃ Maximum
Headers without pegs: 260℃ Maximum

5.0 WIRE-TO-WIRE PERFORMANCE

5.1 ELECTRICAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
1	**Contact Resistance (Low Level)**	Mate connectors: apply a maximum voltage of 20 mV and a current of 100 mA. Wire resistance shall be removed from the measured value.	10 milliohms MAXIMUM [initial]
2	**Contact Resistance @ Rated Current**	Mate connectors: apply a maximum voltage of 20 mV at rated current.	10 milliohms MAXIMUM [initial]
3	**Contact Resistance of Wire Termination (Low Level)**	Terminate the applicable wire to the terminal and measure wire using a voltage of 20 mV and a current of 100 mA.	5 milliohms MAXIMUM [initial]
4	**Insulation Resistance**	Mate connectors: apply a voltage of 500 VDC between adjacent terminals and between terminals to ground.	1000 Megohms MINIMUM
5	**Dielectric Withstanding Voltage**	Mate connectors: apply a voltage of 1500 VAC for 1 minute between adjacent terminals and between terminals to ground.	No breakdown. Current leakage < 5 mA
6	**Temperature Rise (via Current Cycling)**	Mate connectors. Measure the temperature rise at the rated current after 96 hours, during current cycling (45 minutes ON and 15 minutes OFF per hour) for 240 hours, and after final 96-hour steady state.	Temperature rise: +30℃ MAXIMUM

5.2 MECHANICAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
1	**Terminal Mate and Unmate Forces Per Circuit**	Insert and withdraw terminal (male to female) at a rate of 25 ± 6 mm (1 ± ¼ inch) per minute.	14.7 N (3.30 lbf) MAXIMUM insertion force and 0.5 N (0.11 lbf) MINIMUM withdrawal force
2	**Crimp Terminal Retention Force (in Housing)**	Axial pullout force on the terminal in the housing at a rate of 25 ± 6 mm (1 ± ¼ inch) per minute.	30 N (6.74 lbf) MINIMUM retention force
3	**Durability**	Mate connectors up to 30 cycles at a maximum rate of 10 cycles per minute prior to Environmental Tests.	20 milliohms MAXIMUM

5.2 MECHANICAL REQUIREMENTS (continued)

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT	
4	**Vibration (Random)**	Mate connectors and vibrate per EIA 364-28, test condition VII.	10 milliohms MAXIMUM (change from initial) and Discontinuity < 1 microsecond	
5	**Shock (Mechanical)**	Mate connectors and shock at 50 g's with ½ sine wave (11 milliseconds) shocks in the ±X, ±Y, ±Z axes, (18 shocks total).	20 milliohms MAXIMUM and Discontinuity < 1 microsecond	
6	**Wire Pullout Force (Axial)**	Apply an axial pullout force on the wire at a rate of 25 ± 6 mm (1 ± ¼ inch).	16 Awg = 88.0 N (19.8 lbf) Min. 18 Awg = 88.0 N (19.8 lbf) Min. 20 Awg = 59.0 N (13.3 lbf) Min. 22 Awg = 39.0 N (8.78 lbf) Min. 24 Awg = 29.0 N (6.52 lbf) Min. 26 Awg = 19.0 N (4.27 lbf) Min. 28 Awg = 9.80 N (2.20 lbf) Min.	
7	**Crimp Terminal Insertion Force (into Housing)**	Apply an axial insertion force on the terminal at a rate of 25 ± 6 mm (1 ± ¼ inch).	15.0 N (3.37 lbf) MAXIMUM insertion force	
8	**Normal Force**	Apply a perpendicular force.	Sn	1.47 N (150 grams) MINIMUM
			Au	0.49 N (50 grams) MINIMUM
9	**Panel Insertion and Withdrawl Forces**	Insert and withdraw a connector at a rate of 25 ± 6 mm (1 ± ¼ inch) per minute. (Applies only to plugs with panel retention feature)	225 N (50.7 lbf) MAXIMUM insertion force and 157 N (35.3 lbf) MINIMUM withdrawl force	
10	**Thumblatch Operation Force**	Depress latch at a speed rate of 25 ± 6 mm (1 ± ¼ inch) per minute.	16.67 N (3.75 lbf) MAXIMUM	
11	**Thumblatch Yield Strength**	Mate loaded connectors fully. Pull apart via wires at a speed rate of 25 ± 6 mm (1 ± ¼ inch) per minute.	68 N (15.3 lbf) MINIMUM	

5.3 ENVIRONMENTAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
1	**Thermal Shock**	Mate connectors: expose for 5 cycles Between temperatures –55 and 105°C; Dwell 0.5 hours at each temperature.	20 milliohms MAXIMUM Visual: No Damage Dielectric Strength per 5.1.5 Insulation Resistance per 5.1.4
2	**Thermal Aging**	Mate connectors; expose to: 96 hours at 105 ± 2℃	20 milliohms MAXIMUM and Visual: No Damage
3	**Humidity (Steady State)**	Mate connectors: expose to a temperature of 60 ± 2℃ with a relative humidity of 90-95% for 96 hours.	20 milliohms MAXIMUM Visual: No Damage Dielectric Strength per 5.1.5 Insulation Resistance per 5.1.4
4	**Cold Resistance**	Mate connectors: Duration: 96 hours; Temperature: -40 ± 3℃	20 milliohms MAXIMUM and Visual: No Damage
5	**Corrosive Atmosphere: Sulfur Dioxide Gas (SO_2)**	Mate connectors: Duration: 24 hours exposure. Atmosphere: 50 parts per million (ppm) SO_2 Gas. Temperature: 40 ± 3℃	20 milliohms MAXIMUM and Visual: No Damage

6.0 WIRE-TO-BOARD PERFORMANCE

6.1 ELECTRICAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQURIEMENT
1	**Contact Resistance (Low Level)**	Mate connectors: apply a maximum voltage of 20 mV and a current of 100 mA. Wire resistance shall be removed from the measured value.	10 milliohms MAXIMUM [initial]
2	**Contact Resistance @ Rated Current**	Mate connectors: apply a maximum voltage of 20 mV at rated current.	10 milliohms MAXIMUM [initial]
3	**Contact Resistance of Wire Termination (Low Level)**	Terminate the applicable wire to the terminal and measure wire using a voltage of 20 mV and a current of 100 mA.	5 milliohms MAXIMUM [initial]
4	**Insulation Resistance**	Mate connectors: apply a voltage of 500 VDC between adjacent terminals and between terminals to ground.	1000 Megohms MINIMUM
5	**Dielectric Withstanding Voltage**	Mate connectors: apply a voltage of 1500 VAC for 1 minute between adjacent terminals and between terminals to ground.	No breakdown. Current leakage < 5 mA
6	**Temperature Rise (via Current Cycling)**	Mate connectors. Measure the temperature rise at the rated current after 96 hours, during current cycling (45 minutes ON and 15 minutes OFF per hour) for 240 hours, and after final 96-hour steady state.	Temperature rise: +30℃ MAXIMUM

6.2 MECHANICAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
1	**Terminal Mate and Unmate Forces Per Circuit**	Insert and withdraw terminal (male to female) at a rate of 25 ± 6 mm (1 ± ¼ inch) per minute.	14.7 N (3.30 lbf) MAXIMUM insertion force and 0.5 N (0.11 lbf) MINIMUM withdrawal force
2	**Crimp Terminal Retention Force (in Housing)**	Axial pullout force on the terminal in the housing at a rate of 25 ± 6 mm (1 ± ¼ inch) per minute.	30 N (6.74 lbf) MINIMUM retention force
3	**Durability**	Mate connectors up to 30 cycles at a maximum rate of 10 cycles per minute prior to Environmental Tests.	20 milliohms MAXIMUM

6.2 MECHANICAL REQUIREMENTS (continued)

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT	
4	**Vibration (Random)**	Mate connectors and vibrate per EIA 364-28, test condition VII.	10 milliohms MAXIMUM (change from initial) and Discontinuity < 1 microsecond	
5	**Shock (Mechanical)**	Mate connectors and shock at 50 g's with ½ sine wave (11 milliseconds) shocks in the ±X, ±Y, ±Z axes, (18 shocks total).	20 milliohms MAXIMUM and Discontinuity < 1 microsecond	
6	**Wire Pullout Force (Axial)**	Apply an axial pullout force on the wire at a rate of 25 ± 6 mm (1 ± ¼ inch).	16 Awg = 88.0 N (19.8 lbf) Min. 18 Awg = 88.0 N (19.8 lbf) Min. 20 Awg = 59.0 N (13.3 lbf) Min. 22 Awg = 39.0 N (8.78 lbf) Min. 24 Awg = 29.0 N (6.52 lbf) Min. 26 Awg = 19.0 N (4.27 lbf) Min. 28 Awg = 9.80 N (2.20 lbf) Min.	
7	**Crimp Terminal Insertion Force (into Housing)**	Apply an axial insertion force on the terminal at a rate of 25 ± 6 mm (1 ± ¼ inch).	15.0 N (3.37 lbf) MAXIMUM insertion force	
8	**Normal Force**	Apply a perpendicular force.	Sn	1.47 N (150 grams) MINIMUM
			Au	0.49 N (50 grams) MINIMUM
9	**PCB Engagement and Separation Forces**	Engage and separate a connector at a rate of 25 ± 6 mm (1 ± ¼ inch) per minute. (Applies to parts with PCB retention features only)	49.0 N (11.0 lbf) MAXIMUM insertion force and 10.0 N (2.24 lbf) MINIMUM withdrawal force	
10	**Pin Retention Force**	Apply axial push force at the speed rate of 25 ± 3mm/minute.	9.81 N (2.20 lbf) MINIMUM RETENTION FORCE	
11	**Thumblatch Operation Force**	Depress latch at a speed rate of 25 ± 6 mm (1 ± ¼ inch) per minute.	16.67 N (3.75 lbf) MAXIMUM	
12	**Thumblatch Yield Strength**	Mate loaded connectors fully. Pull apart via wires at a speed rate of 25 ± 6 mm (1 ± ¼ inch) per minute.	68 N (15.3 lbf) MINIMUM	

6.3 ENVIRONMENTAL REQUIREMENTS

ITEM	DESCRIPTION	TEST CONDITION	REQUIREMENT
1	**Thermal Shock**	Mate connectors: expose for 5 cycles Between temperatures –55 and 105°C; Dwell 0.5 hours at each temperature.	20 milliohms MAXIMUM Visual: No Damage Dielectric Strength per 6.1.5 Insulation Resistance per 6.1.4
2	**Thermal Aging**	Mate connectors; expose to: 96 hours at 105 ± 2℃	20 milliohms MAXIMUM and Visual: No Damage
3	**Humidity (Steady State)**	Mate connectors: expose to a temperature of 60 ± 2℃ with a relative humidity of 90-95% for 96 hours.	20 milliohms MAXIMUM Visual: No Damage Dielectric Strength per 6.1.5 Insulation Resistance per 6.1.4
4	**Solderability**	Per SMES-152	Solder coverage: 95% MINIMUM (per SMES-152)
5	**Solder Resistance**	Dip connector terminals tail in solder: Solder Duration: 5 ± 0.5 seconds; Solder Temperature: 260 ± 5℃	Visual: No Damage to insulator material
6	**Cold Resistance**	Mate connectors: Duration; 96 hours; Temperature: -40 ± 3℃	20 milliohms MAXIMUM and Visual: No Damage
7	**Corrosive Atmosphere: Sulfur Dioxide Gas (SO_2)**	Mate connectors: Duration; 24 hours exposure. Atmosphere: 50 parts per million (ppm) SO_2 Gas. Temperature: 40 ± 3℃	20 milliohms MAXIMUM and Visual: No Damage

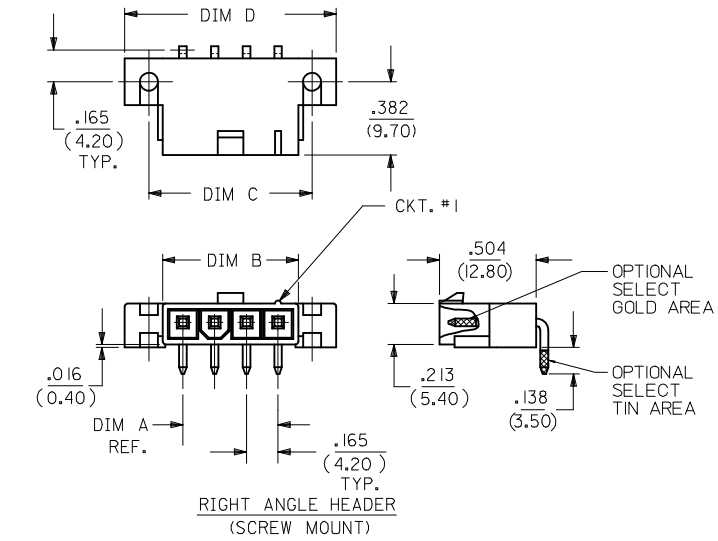
7.0 TEST SEQUENCES

Testing sequences to be performed in accordance with EIA-364-1000.01

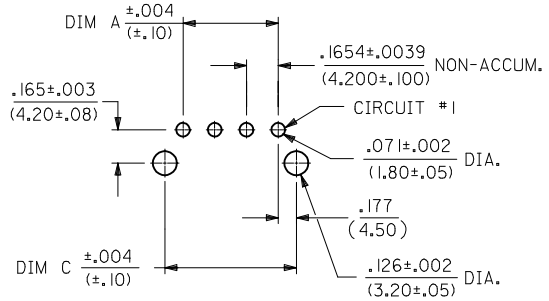
8.0 PACKAGING

Parts shall be packaged to protect against damage during handling, transit and storage.

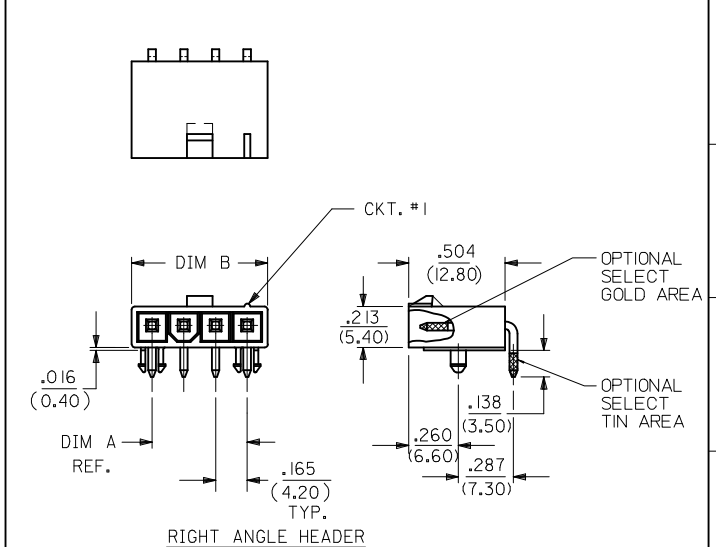
CKT SIZE	DIM A	DIM B	DIM C	DIM D
4	.496 (12.60)	.709 (18.00)	.850 (21.60)	1.102 (28.00)
5	.661 (16.80)	.874 (22.20)	1.016 (25.80)	1.268 (32.20)
6	.827 (21.00)	1.039 (26.40)	1.181 (30.00)	1.433 (36.40)
7	.992 (25.20)	1.205 (30.60)	1.346 (34.20)	1.598 (40.60)
8	1.157 (29.40)	1.370 (34.80)	1.512 (38.40)	1.764 (44.80)
9	1.323 (33.60)	1.535 (39.00)	1.677 (42.60)	1.929 (49.00)
10	1.488 (37.80)	1.701 (43.20)	1.843 (46.80)	2.094 (53.20)
11	1.654 (42.00)	1.866 (47.40)	2.008 (51.00)	2.260 (57.40)
12	1.819 (46.20)	2.031 (51.60)	2.173 (55.20)	2.425 (61.60)



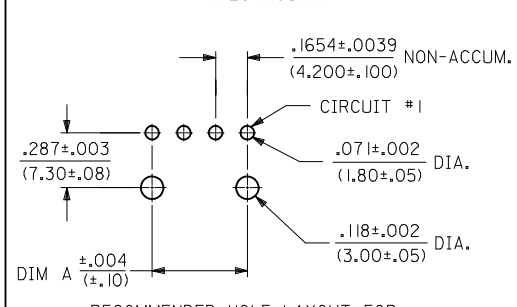
RIGHT ANGLE HEADER
(SCREW MOUNT)



RECOMMENDED HOLE LAYOUT FOR
.070/(1.78) MAX. THICK P.C. BOARD
VIEWED FROM COMPONENT SIDE



RIGHT ANGLE HEADER
(PEG MOUNT)



RECOMMENDED HOLE LAYOUT FOR
.070/(1.78) MAX. THICK P.C. BOARD
VIEWED FROM COMPONENT SIDE

NOTES:

1) HOUSING MATERIAL:
"BLANK" = NYLON 6/6, U.L. 94V-2, COLOR: NATURAL.
210 = NYLON 6/6, U.L. 94V-0, COLOR: NATURAL.
BL = NYLON 6/6, U.L. 94V-2, COLOR: BLACK.
210-BL = NYLON 6/6, U.L. 94V-0. COLOR: BLACK.

2) PART MATES WITH MOLEX RECEPTACLE #5557.

3) TERMINAL MATERIAL: BRASS, ALLOY 260.

4) TERMINAL PLATING:
"BLANK" - .000200/(.00508) MIN. TIN OVER .000100/(.00254) MIN. COPPER OVERALL.
G - .000030/(.00076) MIN. GOLD OVER .000050/(.00127) MIN. NICKEL OVERALL.
GS - .000030/(.00076) MIN. SELECT GOLD AND .000100/(.00127) MIN. SELECT MATTE TIN OVER .000050/(.00127) MIN NICKEL OVERALL.
G2 - .000015/(.00038) MIN. GOLD OVER .000030/(.00076) MIN. NICKEL OVERALL.
GS2 - .00015/(.00038) MIN. SELECT GOLD AND .000100/(.00254) MIN. SELECT MATTE TIN OVER .000050/(.00127) MIN. NICKEL OVERALL.
G3 - .000050/(.00127) MIN. GOLD OVER .000050/(.00127) MIN. NICKEL OVERALL.
S - .000100/(.00254) MIN. TIN OVER .000050/(.00127) MIN. NICKEL OVERALL.
GS - .000030/(.00076) MIN. SELECT GOLD, .000100/(.00254) MIN SELECT MATTE TIN OVER .000050/(.00127) MIN. NICKEL OVERALL.

5) PRODUCT SPECIFICATION: PS-5556-001

6) PART IS DESIGNED FOR USE WITH 4 - 40 OR M3 SCREWS.

7) DISCOLORATION IN THE BANDOLIER CARRIER AREA OF THE PIN IS INHERENT TO THE PLATING PROCESS AND IS DUE TO THE MASKING EFFECT OF THE CARRIER. THIS DISCOLORATION IS IN A NON-FUNCTIONAL AREA OF THE PIN AND WILL NOT AFFECT THE PERFORMANCE OF THE HEADER ASSEMBLY.

8) CONNECTORS ARE NOT TO BE MATED OR UNMATED WHILE CIRCUIT ARE LIVE.

9) PARTS NOT DESIGNED FOR CURRENT SHARING.

10) PART CONFORMS TO CLASS "B" REQUIREMENTS OF COSMETIC SPECIFICATION PS-45499-002.

LEGEND:

5569 - ** A * * - *

CKT. SIZE (04-12)

ASSEMBLY

MOUNTING & LOCK OPTION:
3 = SCREW MOUNT, POSITIVE LOCK
4 = PEG MOUNT, POSITIVE LOCK
5 = PEG MOUNT, PASSIVE LOCK

PLATING OPTION: (SEE NOTE 4)

MATERIAL OPTION: (SEE NOTE 1)

4	P1
3	P1
2	P
1	P2
SHEET	REV

ADDED NOTE 10
EC NO: UCP2006-3005 2006/07/26
DRWN: ADRATNOL 2006/08/07
CHKD: SFRY
APPR: JCOMERCI 2006/08/07
DESCRIPTION
P2
REV

QUALITY SYMBOLS
▼=0
▽=0

GENERAL TOLERANCES (UNLESS SPECIFIED)

	mm	INCH
4 PLACES	± ---	± ---
3 PLACES	± ---	± .015
2 PLACES	± .38	± ---
1 PLACE	± ---	± ---
ANGULAR ± 3 °		

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE: IN/MM
SCALE: 2:1
DESIGN UNITS: METRIC
THIRD ANGLE PROJECTION

DRAWN BY	KSS	DATE 2/14/89
CHECKED BY	RJF	DATE 2/14/89
APPROVED BY	RAS	DATE 2/14/89

TITLE: RIGHT ANGLE HEADER ASSY (SINGLE ROW) (MINI-FIT JR. SERIES)

molex MOLEX INCORPORATED

MATERIAL NO.: SEE CHARTS
DOCUMENT NO.: SDA-5569-NL*
SHEET NO.: 1 OF 4

SIZE C

THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

E.D.P. NO.	ENG. NO.	CKT. SIZE	MOUNTING OPTION	LOCK OPTION	PLATING (SEE NOTE 4)	MAT'L. (SEE NOTE 1)
39-30-3041	5569-04A3	4	SCREWS	POSITIVE	TIN/COPPER	94V-2
39-30-3051	5569-05A3	5	SCREWS	POSITIVE	TIN/COPPER	94V-2
39-30-3061	5569-06A3	6	SCREWS	POSITIVE	TIN/COPPER	94V-2
39-30-3071	5569-07A3	7	SCREWS	POSITIVE	TIN/COPPER	94V-2
39-30-3081	5569-08A3	8	SCREWS	POSITIVE	TIN/COPPER	94V-2
39-30-3091	5569-09A3	9	SCREWS	POSITIVE	TIN/COPPER	94V-2
39-30-3101	5569-10A3	10	SCREWS	POSITIVE	TIN/COPPER	94V-2
39-30-3111	5569-11A3	11	SCREWS	POSITIVE	TIN/COPPER	94V-2
39-30-3121	5569-12A3	12	SCREWS	POSITIVE	TIN/COPPER	94V-2
39-30-3042	5569-04A3-210	4	SCREWS	POSITIVE	TIN/COPPER	94V-0
39-30-3052	5569-05A3-210	5	SCREWS	POSITIVE	TIN/COPPER	94V-0
39-30-3062	5569-06A3-210	6	SCREWS	POSITIVE	TIN/COPPER	94V-0
39-30-3072	5569-07A3-210	7	SCREWS	POSITIVE	TIN/COPPER	94V-0
39-30-3082	5569-08A3-210	8	SCREWS	POSITIVE	TIN/COPPER	94V-0
39-30-3092	5569-09A3-210	9	SCREWS	POSITIVE	TIN/COPPER	94V-0
39-30-3102	5569-10A3-210	10	SCREWS	POSITIVE	TIN/COPPER	94V-0
39-30-3112	5569-11A3-210	11	SCREWS	POSITIVE	TIN/COPPER	94V-0
39-30-3122	5569-12A3-210	12	SCREWS	POSITIVE	TIN/COPPER	94V-0
39-30-3045	5569-04A4	4	PEGS	POSITIVE	TIN/COPPER	94V-2
39-30-3055	5569-05A4	5	PEGS	POSITIVE	TIN/COPPER	94V-2
39-30-3065	5569-06A4	6	PEGS	POSITIVE	TIN/COPPER	94V-2
39-30-3075	5569-07A4	7	PEGS	POSITIVE	TIN/COPPER	94V-2
39-30-3085	5569-08A4	8	PEGS	POSITIVE	TIN/COPPER	94V-2
39-30-3095	5569-09A4	9	PEGS	POSITIVE	TIN/COPPER	94V-2
39-30-3105	5569-10A4	10	PEGS	POSITIVE	TIN/COPPER	94V-2
39-30-3115	5569-11A4	11	PEGS	POSITIVE	TIN/COPPER	94V-2
39-30-3125	5569-12A4	12	PEGS	POSITIVE	TIN/COPPER	94V-2
39-30-3046	5569-04A4-210	4	PEGS	POSITIVE	TIN/COPPER	94V-0
39-30-3056	5569-05A4-210	5	PEGS	POSITIVE	TIN/COPPER	94V-0
39-30-3066	5569-06A4-210	6	PEGS	POSITIVE	TIN/COPPER	94V-0
39-30-3076	5569-07A4-210	7	PEGS	POSITIVE	TIN/COPPER	94V-0
39-30-3086	5569-08A4-210	8	PEGS	POSITIVE	TIN/COPPER	94V-0
39-30-3096	5569-09A4-210	9	PEGS	POSITIVE	TIN/COPPER	94V-0
39-30-3106	5569-10A4-210	10	PEGS	POSITIVE	TIN/COPPER	94V-0
39-30-3116	5569-11A4-210	11	PEGS	POSITIVE	TIN/COPPER	94V-0
39-30-3126	5569-12A4-210	12	PEGS	POSITIVE	TIN/COPPER	94V-0
39-30-3047	5569-04A4G	4	PEGS	POSITIVE	30 GOLD	94V-2
39-30-3057	5569-05A4G	5	PEGS	POSITIVE	30 GOLD	94V-2
39-30-3067	5569-06A4G	6	PEGS	POSITIVE	30 GOLD	94V-2
39-30-3077	5569-07A4G	7	PEGS	POSITIVE	30 GOLD	94V-2
39-30-3087	5569-08A4G	8	PEGS	POSITIVE	30 GOLD	94V-2
39-30-3097	5569-09A4G	9	PEGS	POSITIVE	30 GOLD	94V-2
39-30-3107	5569-10A4G	10	PEGS	POSITIVE	30 GOLD	94V-2
39-30-3117	5569-11A4G	11	PEGS	POSITIVE	30 GOLD	94V-2
39-30-3127	5569-12A4G	12	PEGS	POSITIVE	30 GOLD	94V-2
39-30-3048	5569-04A4G-210	4	PEGS	POSITIVE	30 GOLD	94V-0
39-30-3058	5569-05A4G-210	5	PEGS	POSITIVE	30 GOLD	94V-0
39-30-3068	5569-06A4G-210	6	PEGS	POSITIVE	30 GOLD	94V-0
39-30-3078	5569-07A4G-210	7	PEGS	POSITIVE	30 GOLD	94V-0
39-30-3088	5569-08A4G-210	8	PEGS	POSITIVE	30 GOLD	94V-0
39-30-3098	5569-09A4G-210	9	PEGS	POSITIVE	30 GOLD	94V-0
39-30-3108	5569-10A4G-210	10	PEGS	POSITIVE	30 GOLD	94V-0
39-30-3118	5569-11A4G-210	11	PEGS	POSITIVE	30 GOLD	94V-0
39-30-3128	5569-12A4G-210	12	PEGS	POSITIVE	30 GOLD	94V-0

E.D.P. NO.	ENG. NO.	CKT. SIZE	MOUNTING OPTION	LOCK OPTION	PLATING (SEE NOTE 4)	MAT'L. (SEE NOTE 1)
39-30-3049	5569-04A4G2	4	PEGS	POSITIVE	15 GOLD	94V-2
39-30-3059	5569-05A4G2	5	PEGS	POSITIVE	15 GOLD	94V-2
39-30-3069	5569-06A4G2	6	PEGS	POSITIVE	15 GOLD	94V-2
39-30-3079	5569-07A4G2	7	PEGS	POSITIVE	15 GOLD	94V-2
39-30-3089	5569-08A4G2	8	PEGS	POSITIVE	15 GOLD	94V-2
39-30-3099	5569-09A4G2	9	PEGS	POSITIVE	15 GOLD	94V-2
39-30-3109	5569-10A4G2	10	PEGS	POSITIVE	15 GOLD	94V-2
39-30-3119	5569-11A4G2	11	PEGS	POSITIVE	15 GOLD	94V-2
39-30-3129	5569-12A4G2	12	PEGS	POSITIVE	15 GOLD	94V-2
39-30-4040	5569-04A4G2-210	4	PEGS	POSITIVE	15 GOLD	94V-0
39-30-4050	5569-05A4G2-210	5	PEGS	POSITIVE	15 GOLD	94V-0
39-30-4060	5569-06A4G2-210	6	PEGS	POSITIVE	15 GOLD	94V-0
39-30-4070	5569-07A4G2-210	7	PEGS	POSITIVE	15 GOLD	94V-0
39-30-4080	5569-08A4G2-210	8	PEGS	POSITIVE	15 GOLD	94V-0
39-30-4090	5569-09A4G2-210	9	PEGS	POSITIVE	15 GOLD	94V-0
39-30-4100	5569-10A4G2-210	10	PEGS	POSITIVE	15 GOLD	94V-0
39-30-4110	5569-11A4G2-210	11	PEGS	POSITIVE	15 GOLD	94V-0
39-30-4120	5569-12A4G2-210	12	PEGS	POSITIVE	15 GOLD	94V-0
39-30-3043	5569-04A3G	4	SCREWS	POSITIVE	30 GOLD	94V-2
39-30-3053	5569-05A3G	5	SCREWS	POSITIVE	30 GOLD	94V-2
39-30-3063	5569-06A3G	6	SCREWS	POSITIVE	30 GOLD	94V-2
39-30-3073	5569-07A3G	7	SCREWS	POSITIVE	30 GOLD	94V-2
39-30-3083	5569-08A3G	8	SCREWS	POSITIVE	30 GOLD	94V-2
39-30-3093	5569-09A3G	9	SCREWS	POSITIVE	30 GOLD	94V-2
39-30-3103	5569-10A3G	10	SCREWS	POSITIVE	30 GOLD	94V-2
39-30-3113	5569-11A3G	11	SCREWS	POSITIVE	30 GOLD	94V-2
39-30-3123	5569-12A3G	12	SCREWS	POSITIVE	30 GOLD	94V-2
NO E.D.P.	5569-04A3G-210	4	SCREWS	POSITIVE	30 GOLD	94V-0
NO E.D.P.	5569-05A3G-210	5	SCREWS	POSITIVE	30 GOLD	94V-0
NO E.D.P.	5569-06A3G-210	6	SCREWS	POSITIVE	30 GOLD	94V-0
NO E.D.P.	5569-07A3G-210	7	SCREWS	POSITIVE	30 GOLD	94V-0
NO E.D.P.	5569-08A3G-210	8	SCREWS	POSITIVE	30 GOLD	94V-0
NO E.D.P.	5569-09A3G-210	9	SCREWS	POSITIVE	30 GOLD	94V-0
NO E.D.P.	5569-10A3G-210	10	SCREWS	POSITIVE	30 GOLD	94V-0
NO E.D.P.	5569-11A3G-210	11	SCREWS	POSITIVE	30 GOLD	94V-0
NO E.D.P.	5569-12A3G-210	12	SCREWS	POSITIVE	30 GOLD	94V-0
39-30-7041	5569-04A4S	4	PEGS	POSITIVE	TIN/NICKEL	94V-2
39-30-7051	5569-05A4S	5	PEGS	POSITIVE	TIN/NICKEL	94V-2
39-30-7061	5569-06A4S	6	PEGS	POSITIVE	TIN/NICKEL	94V-2
39-30-7071	5569-07A4S	7	PEGS	POSITIVE	TIN/NICKEL	94V-2
39-30-7081	5569-08A4S	8	PEGS	POSITIVE	TIN/NICKEL	94V-2
39-30-7091	5569-09A4S	9	PEGS	POSITIVE	TIN/NICKEL	94V-2
39-30-7101	5569-10A4S	10	PEGS	POSITIVE	TIN/NICKEL	94V-2
39-30-7111	5569-11A4S	11	PEGS	POSITIVE	TIN/NICKEL	94V-2
39-30-7121	5569-12A4S	12	PEGS	POSITIVE	TIN/NICKEL	94V-2
39-30-7042	5569-04A4S-210	4	PEGS	POSITIVE	TIN/NICKEL	94V-0
39-30-7052	5569-05A4S-210	5	PEGS	POSITIVE	TIN/NICKEL	94V-0
39-30-7062	5569-06A4S-210	6	PEGS	POSITIVE	TIN/NICKEL	94V-0
39-30-7072	5569-07A4S-210	7	PEGS	POSITIVE	TIN/NICKEL	94V-0
39-30-7082	5569-08A4S-210	8	PEGS	POSITIVE	TIN/NICKEL	94V-0
39-30-7092	5569-09A4S-210	9	PEGS	POSITIVE	TIN/NICKEL	94V-0
39-30-7102	5569-10A4S-210	10	PEGS	POSITIVE	TIN/NICKEL	94V-0
39-30-7112	5569-11A4S-210	11	PEGS	POSITIVE	TIN/NICKEL	94V-0
39-30-7122	5569-12A4S-210	12	PEGS	POSITIVE	TIN/NICKEL	94V-0

SEE SHEET 1
EC NO: UCP2006-1064 2005/11/09
DRWN:ADRATNOL 2005/11/09
CHKD:GPOLGAR 2005/11/09
APPR: JCOMERCI 2005/11/09
DESCRIPTION
P
REV

QUALITY SYMBOLS
▼=0
Ⓒ=0

GENERAL TOLERANCES (UNLESS SPECIFIED)

	mm	INCH
4 PLACES	± ---	± ---
3 PLACES	± ---	± ---
2 PLACES	± ---	± ---
1 PLACE	± ---	± ---
ANGULAR ±1/2°		

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE: IN/MM
SCALE: ---
DESIGN UNITS: METRIC
THIRD ANGLE PROJECTION

DRAWN BY: RJF DATE: 10/21/89
CHECKED BY: BAP DATE: 10/21/89
APPROVED BY: RAS DATE: 10/21/89

TITLE: RIGHT ANGLE HEADER ASSY (SINGLE ROW) (MINI-FIT JR. SERIES)

molex MOLEX INCORPORATED

MATERIAL NO.: SEE CHART
DOCUMENT NO.: SDA-5569-NL*
SHEET NO.: 2

SIZE: C

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