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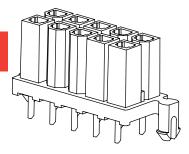
Jameco Part Number 1962199

4.20mm (.165") Pitch Mini-Fit BMI™ PCB Receptacle Header

42385

Vertical

Dual Row



Features and Benefits

- Board-mounted receptacle header for board-to-board applications
- Fully isolated terminals to protect contacts from damage
- The 42385 series is not inherently blindmating.
 Guidance to align the connectors during mating and float to provide stress-free positioning after mating must be provided

Reference Information

Packaging: Tray UL File No.: E29179 CSA File No.: LR19980 TUV License No.: Pending

Mates With: 42475 plug, 42404, 42440, 43810,

43879 and 44068 headers PCB Thickness: 1.60mm (.062") Process: Wave Solder Designed In: Millimeters

Electrical

Voltage: 600V

Current: (Used with 16 AWG)

Series		Circ	uits	
	2-3	4-6	7-10	12-24
46134*	9.0A	8.0A	7.0A	6.0A

*Brass

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

Mechanical

Insertion Force to PCB: 9.0kg max.

Physical

Housing: 6/6 nylon, UL 94V-2 or 94V-0

Contact: Brass

Plating: Post-plated Tin or Select Gold

Underplating: Nickel

Operating Temperature: -40 to +105°C

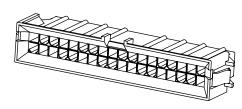
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Circuits	Т	in	Selec	Select Gold			
	94V-2	94V-0	94V-2	94V-0			
4	<u>15-24-7040</u>	15-24-7041	<u>15-24-7042</u>	15-24-7043			
6	<u>15-24-7060</u>	<u>15-24-7061</u>	<u>15-24-7062</u>	<u>15-24-7063</u>			
10	<u>15-24-7100</u>	<u>15-24-7101</u>	<u>15-24-7102</u>	<u>15-24-7103</u>			
14	<u>15-24-7140</u>	<u>15-24-7141</u>	<u>15-24-7142</u>	<u>15-24-7143</u>	Yes		
16	<u>15-24-7160</u>	15-24-7161	<u>15-24-7162</u>	<u>15-24-7163</u>			
18	<u>15-24-7180</u>	<u>15-24-7181</u>	<u>15-24-7182</u>	<u>15-24-7183</u>			
24	<u>15-24-7240</u>	<u>15-24-7241</u>	<u>15-24-7242</u>	<u>15-24-7243</u>			

Note: 42385 headers do not mate with Mini-Fit Jr.™ products

4.20mm (.165") Pitch Mini-Fit BMI™ Plug

43770

Dual Row With Panel Mount Ears



Circuits	Order No.
36	<u>43770-0001</u>

Features and Benefits

- Blind mating panel mounted plug
- Fully isolated terminals to protect contacts from damage
- Designed so terminals in top row of housing seat further into the body and engage first when mated to reduce overall insertion force

Reference Information

Packaging: Bag UL File No.: E29179 CSA File No.: LR19980 TUV License No.: R75142 Mates With: 44516 housing

Use With: 5558, 46134, 46012 or 46098 terminals

Panel Thickness: 1.60mm (.063") max.

Designed In: Millimeters

Physical

Housing: 6/6 nylon, UL 94V-2 Operating Temperature: -40 to +105°C





MINI-FIT BMI

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1.0 SCOPE

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

2.0 PRODUCT DESCRIPTION

2.1 NAMES AND SERIES NUMBER(S)

Table 1 – WIRE-TO-WIRE											
Description	Series Number	UL	CSA	TUV							
Female Crimp Terminal	5556	N/A	N/A	N/A							
Receptacle Housing, BMI	42474	Yes	Yes	Yes							
Male Crimp Terminal	5558	N/A	N/A	N/A							
Plug Housing, BMI	42475	Yes	Yes	Yes							
Plug Housing, BMI	43558	Yes	Yes	No							
Plug Housing, BMI	43770	Yes	Yes	Yes							

Table 2 – WIRE-TO-BOARD											
Description	Series Number	UL	CSA	TUV							
Female Crimp Terminal	5556	N/A	N/A	N/A							
Receptacle Housing, BMI	42474	Yes	Yes	Yes							
Male Crimp Terminal	5558	N/A	N/A	N/A							
Plug Housing, BMI	42475	Yes	Yes	Yes							
Plug Housing, BMI	43558	Yes	Yes	No							
Receptacle Header, BMI	42385	Yes	Yes	No							
Receptacle Header, BMI	42416	Yes	Yes	No							
Vertical Header, BMI	42440	Yes	Yes	No							
Vertical Header, BMI	42786	Yes	Yes	Yes							
Vertical Header, BMI	43176	No	No	No							
Vertical Header, BMI	43459	Yes	Yes	No							
Vertical Header, BMI	43693	Yes	Yes	No							
Right Angle Header, BMI	42404	Yes	Yes	No							
Right Angle Header, BMI	42417	Yes	Yes	No							
Right Angle Header, BMI	43644	Yes	Yes	No							
Right Angle Header, BMI	44151	Yes	Yes	No							
Right Angle Header, BMI	44499	Yes	Yes	No							

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Table 3 – BOARD-TO-BOARD											
Description	Series Number	UL	CSA	TUV							
Vertical Receptacle Header, BMI	42385	Yes	Yes	No							
Vertical Receptacle Header, BMI	42416	Yes	Yes	No							
Vertical Header, BMI	42440	Yes	Yes	No							
Vertical Header, BMI	42786	Yes	Yes	Yes							
Vertical Header, BMI	43459	Yes	Yes	No							
Vertical Header, BMI	43693	Yes	Yes	No							
Right Angle Header, BMI	42404	Yes	Yes	No							
Right Angle Header, BMI	42417	Yes	Yes	No							
Right Angle Header, BMI	43644	Yes	Yes	No							
Right Angle Header, BMI	44151	Yes	Yes	No							
Right Angle Header, BMI	44499	Yes	Yes	No							

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

DEVICION, ECD/ECN INFORMATION, TITLE.

CSA Certificate: LR19980 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.

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4.0 RATINGS

4.1 VOLTAGE

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

4.2 APPLICABLE WIRES

Applicable Wire Gauges Maximum Insulation Diameter 16 AWG: 3.10 / .122 MAXIMUM

18-20 AWG: 3.10 / .122 MAXIMUM

22-28 AWG: 1.80 / .071 MAXIMUM

4.3 MAXIMUM CURRENT RATING (Amperes)

	Table 4 – WIRE-TO-WIRE											
	Brass				Phosphor Bronze							
Ckt. Size Wire	2-3	4 - 6	7 - 10	12 - 24	Ckt. Size Wire	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			

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4.3 MAXIMUM CURRENT RATING (Amperes) (continued)

	Table 5 – WIRE-TO-BOARD											
Brass				Ph	osph	or Bror	nze					
Ckt. Size Wire	2-3	4 - 6	7 - 10	12 - 24	Ckt. Size Wire	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.

Table 6 – BOARD-TO-BOARD									
Brass				Ph	osph	or Bror	nze		
Ckt. Size	2-3	4 - 6	7 - 10	12 - 24	Ckt. Size	2-3	4 - 6	7 - 10	12 - 24
	9	8	7	6		8	7	6	5

Note: PCB trace design may greatly affect temperature rise results.

4.4 TEMPERATURE

Operating: * - 40°C to + 105°C Nonoperating: - 40°C to + 105°C

*Including 30°C terminal temperature rise at rated current

4.5 WAVE SOLDER PROCESS TEMPERATURE

Headers with pegs: 240°C MAX. Headers without pegs: 260°C MAX.

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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 2200 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°C 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 ± 1/4 inch) per minute.	14.7 N (3.30 lbf) MAXIMUM insertion force & 1.0 N (0.02 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 $\pm \frac{1}{4}$ 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

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5.2 MECHANICAL REQUIREMENTS (continued)

5.2	MECHANICAL REQU	IREMENTS (continued)	
4	Vibration (Random)	Mate connectors and vibrate per EIA 364-28, test condition VII.	10 milliohms MAXIMUM (change from initial) & 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 & Discontinuity < 1 microsecond
6	Wire Pullout Force (Axial)	Apply an axial pullout force on the wire at a rate of 25 \pm 6 mm (1 \pm $\frac{1}{4}$ 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 $(1 \pm \frac{1}{4})$ inch).	15.0 N (3.37 lbf) MAXIMUM insertion force
8	Normal Force	Apply a perpendicular force.	0.49 N (50 grams) MINIMUM [Gold (noble) plating] OR 1.47 N (150 grams) MINIMUM [Tin (non-noble) plating]
			49.0 N (11.0 lbf) MAXIMUM insertion force & 10.0 N (2.24 lbf) MINIMUM withdrawal force
9	PCB Engagement And Separation Forces	Engage and separate a connector at a rate of 25 ± 6 mm ($1 \pm \frac{1}{4}$ inch) per minute. (Applies to parts with PCB retention features only)	T.B.D.
			Metal Clip . D. B.T.
10	Thumb Latch Operation Force	Depress latch at a rate of 25 \pm 6mm (1 \pm $\frac{1}{4}$ inch) per minute.	16.67 N (3.75 lbf) MAXIMUM
11	Thumb Latch Yield Strength	Mate loaded connectors fully. Pull connectors apart at a rate of 25 ± 6 mm $(1 \pm \frac{1}{4} \text{ inch})$ per minute.	68 N (15.29 lbf) MINIMUM
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5.2 MECHANICAL REQUIREMENTS (continued)

12	Panel Insertion and Withdrawal Forces (for 42474)	Insert and withdraw a connector at a rate of 25 ± 6 mm (1 ± 1/4 inch) per minute.	225 N (50.7 lbf) MAXIMUM insertion force & 157 N (35.3 lbf) MINIMUM withdrawal force
13	Panel Insertion and Withdrawal Forces (for 44516)	Insert and withdraw a connector at a rate of 25 ± 6 mm (1 $\pm \frac{1}{4}$ inch) per minute.	0.0 MAXIMUM insertion force & 157 N (35.3 lbf) MINIMUM withdrawal force
14	Panel Insertion and Withdrawal Forces (for 42475)	Insert and withdraw a connector at a rate of 25 ± 6 mm (1 ± 1/4 inch) per minute.	225 N (50.7 lbf) MAXIMUM insertion force & 157 N (35.3 lbf) MINIMUM withdrawal force

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°C	20 milliohms MAXIMUM & Visual: No Damage
3	Humidity (Steady State)	Mate connectors: expose to a temperature of 60 ± 2°C with a relative humidity of 90-95% for 96 hours.	20 milliohms MAXIMUM Dielectric Strength per 5.1.5 Insulation Resistance per 5.1.4 Visual: No Damage
4	Mixed Flowing Gas	EIA-364-65 with Class IIa Gas concentrations (Gold plated only)	20 milliohms MAXIMUM Visual: No Damage

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6.0 WIRE-TO-BOARD PERFORMANCE

6.1 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 2200 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°C MAXIMUM

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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 \pm 6 mm (1 \pm ¼ inch) per minute.	14.7 N (3.30 lbf) MAXIMUM insertion force & 1.0 N (0.02 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 $(1 \pm \frac{1}{4}$ inch) per minute.	30 N (6.74 lbf) MINIMUM retention force
3	Solid PC Tail Header Pin Retention Force (in Housing)	Axial pullout force on the terminal in the housing at a rate of 25 ± 6 mm $(1 \pm \frac{1}{4}$ inch) per minute.	4.45 N (1.00 lbf) MINIMUM retention force
4	Stamped PC Tail Terminal Retention Force (in Housing)	Axial pullout force on the terminal in the housing at a rate of 25 ± 6 mm (1 $\pm \frac{1}{4}$ inch) per minute.	30 N (6.74 lbf) MINIMUM retention force
5	Durability	Mate connectors up to 75 (Sn) or 100 (Au) cycles at a maximum rate of 10 cycles per minute prior to Environmental Tests.	20 milliohms MAXIMUM
6	Vibration (Random)	Mate connectors and vibrate per EIA 364-28, test condition VII.	10 milliohms MAXIMUM (change from initial) & Discontinuity < 1 microsecond
7	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 & Discontinuity < 1 microsecond
8	Wire Pullout Force (Axial)	Apply an axial pullout force on the wire at a rate of 25 ± 6 mm $(1 \pm \frac{1}{4})$ 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.
9	Crimp Terminal Insertion Force (into Housing)	Apply an axial insertion force on the terminal at a rate of 25 ± 6 mm $(1 \pm \frac{1}{4}$ inch).	15.0 N (3.37 lbf) MAXIMUM insertion force

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6.2 MECHANICAL REQUIREMENTS (continued)

		incline (continued)		
10	Normal Force	Apply a perpendicular force.		0.49 N (50 grams) MINIMUM [Gold (noble) plating] OR 0.47 N (150 grams) MINIMUM [Tin (non-noble) plating]
	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 & 10.0 N (2.24 lbf) MINIMUM withdrawal force
11				T.B.D.
			Metal Clip	T.B.D.
12	Thumb Latch Operation Force	Depress latch at a rate of 25 \pm 6mm (1 \pm $\frac{1}{4}$ inch) per minute.	1	6.67 N (3.75 lbf) MAXIMUM
13	Thumb Latch Yield Strength	Mate loaded connectors fully. Pull connectors apart at a rate of 25 ± 6mm (1 ± ¼ inch) per minute.		68 N (15.29 lbf) MINIMUM
14	Panel Insertion and Withdrawal Forces (for 42474)	Insert and withdraw a connector at a rate of 25 ± 6 mm (1 $\pm \frac{1}{4}$ inch) per minute.		225 N (50.7 lbf) MAXIMUM insertion force & 157 N (35.3 lbf) MINIMUM withdrawal force
15	Panel Insertion and Withdrawal Forces (for 44516)	Insert and withdraw a connector at a rate of 25 ± 6 mm (1 $\pm \frac{1}{4}$ inch) per minute.		0.0 MAXIMUM insertion force & 157 N (35.3 lbf) MINIMUM withdrawal force
16	Panel Insertion and Withdrawal Forces (for 42475)	Insert and withdraw a connector at a rate of 25 ± 6 mm (1 $\pm \frac{1}{4}$ inch) per minute.		225 N (50.7 lbf) MAXIMUM insertion force & 157 N (35.3 lbf) MINIMUM withdrawal force

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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 5.1.5 Insulation Resistance per 5.1.4
2	Thermal Aging	Mate connectors; expose to: 96 hours at 105 ± 2°C	20 milliohms MAXIMUM & Visual: No Damage
3	Humidity (Steady State)	Mate connectors: expose to a temperature of $60 \pm 2^{\circ}$ C with a relative humidity of 90-95% for 96 hours.	20 milliohms MAXIMUM Dielectric Strength per 5.1.5 Insulation Resistance per 5.1.4 Visual: No Damage
4	Solderability	Per SMES-152	Solder coverage: 95% MINIMUM (per SMES-152)
5	Solder Temperature Heat Transfer Resistance	Dip connector terminals tail in solder: Solder Duration: 5 ± 0.5 seconds; Solder Temperature: 260 ± 5°C	Visual: No Damage to the insulator where the terminal or pin locks to the connector housing
6	Mixed Flowing Gas	EIA-364-65 with Class IIa Gas concentrations (Gold plated only)	20 milliohms MAXIMUM Visual: No Damage

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7.0 BOARD-TO-BOARD PERFORMANCE

7.1 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 2200 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°C MAXIMUM

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Gi	DATE: 2006 / 08 / 08	CON	NECTOR SYSTEM	1	13 01 13
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TEMPLATE FILENAME: PRODUCT_SPEC[SIZE_A](V.1).DOC					



7.2 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 ± 1/4 inch) per minute.		14.7 N (3.30 lbf) MAXIMUM insertion force & 1.0 N (0.02 lbf) INIMUM withdrawal force	
2	Stamped PC Tail Terminal Retention Force (in Housing)	Axial pullout force on the terminal in the housing at a rate of 25 ± 6 mm (1 $\pm \frac{1}{4}$ inch) per minute.	30 N (6.74 lbf) MINIMUM retention force 4.45 N (1.00 lbf) MINIMUM retention force 20 milliohms MAXIMUM		
3	Solid PC Tail Header Pin Retention Force (in Housing)	Axial pullout force on the terminal in the housing at a rate of 25 ± 6 mm (1 $\pm \frac{1}{4}$ inch) per minute.			
4	Durability	Mate connectors up to 75 (Sn) or 100 (Au) cycles at a maximum rate of 10 cycles per minute prior to Environmental Tests.			
5	Vibration (Random)	Mate connectors and vibrate per EIA 364-28, test condition VII.		10 milliohms MAXIMUM (change from initial) & Discontinuity < 1 microsecond	
6	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 & Discontinuity < 1 microsecond		
7	Normal Force	Apply a perpendicular force.	1.9	6 N (200 grams) MINIMUN	
		_	Standard	98.0 N (22.0 lbf) MAXIMUM insertion force & 10.0 N (2.24 lbf) MINIMUM withdrawal force	
8	PCB Peg Engagement and Separation Forces	Engage and separate a connector at a rate of 25 ± 6 mm ($1 \pm \frac{1}{4}$ inch) per minute. (Applies to parts with PCB retention features only)	Press-Fit	T.B.D.	
			Metal Clip	T.B.D.	

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TEMPLATE FILENAME: PRODUCT_SPEC[SIZE_A](V.1).DOC					



7.3 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°C	20 milliohms MAXIMUM & Visual: No Damage
3	Humidity (Steady State)	Mate connectors: expose to a temperature of $60 \pm 2^{\circ}$ C with a relative humidity of 90-95% for 96 hours.	20 milliohms MAXIMUM Dielectric Strength per 5.1.5 Insulation Resistance per 5.1.4 Visual: No Damage
4	Solderability	Per SMES-152	Solder coverage: 95% MINIMUM (per SMES-152)
5	Solder Temperature Hest Transfer	Dip connector terminals tail in solder: Solder Duration: 5 ± 0.5 seconds; Solder Temperature: 260 ± 5°C	Visual: No Damage to the insulator insulator where the terminal or pin locks to the connector housing
6	Mixed Flowing Gas	EIA-364-65 with Class IIa Gas concentrations (Gold plated only)	20 milliohms MAXIMUM Visual: No Damage

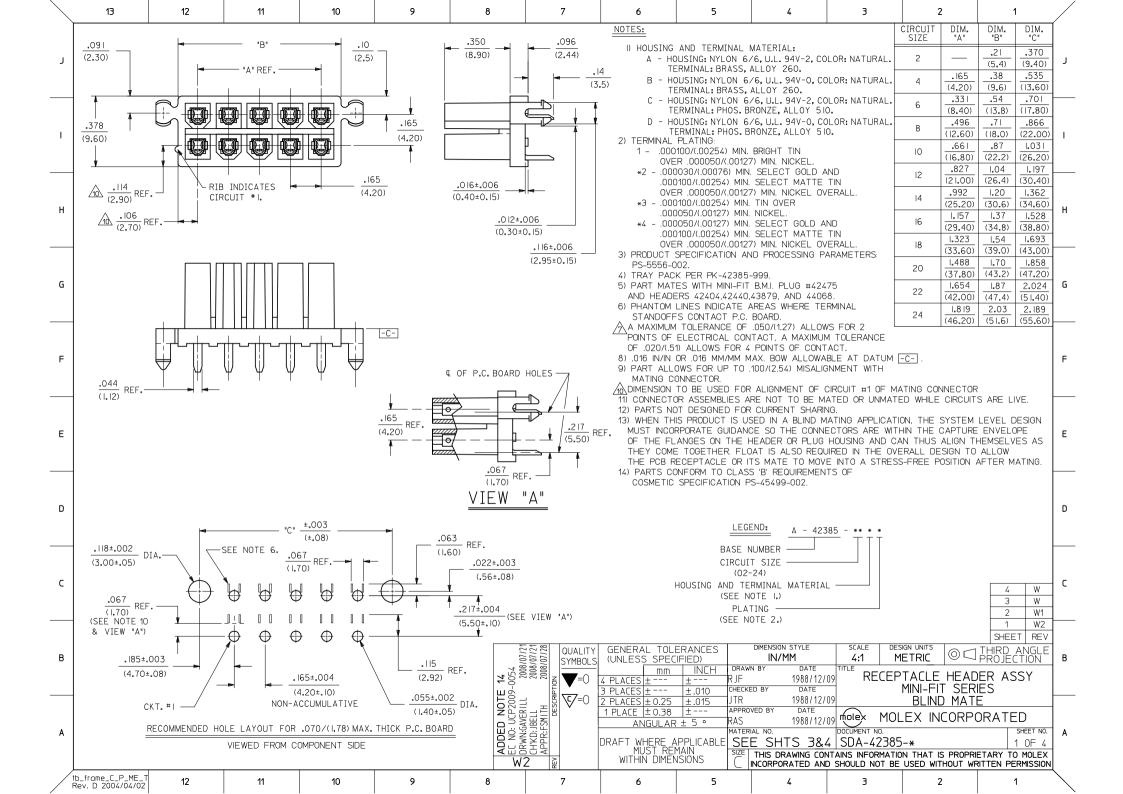
8.0 TEST SEQUENCES

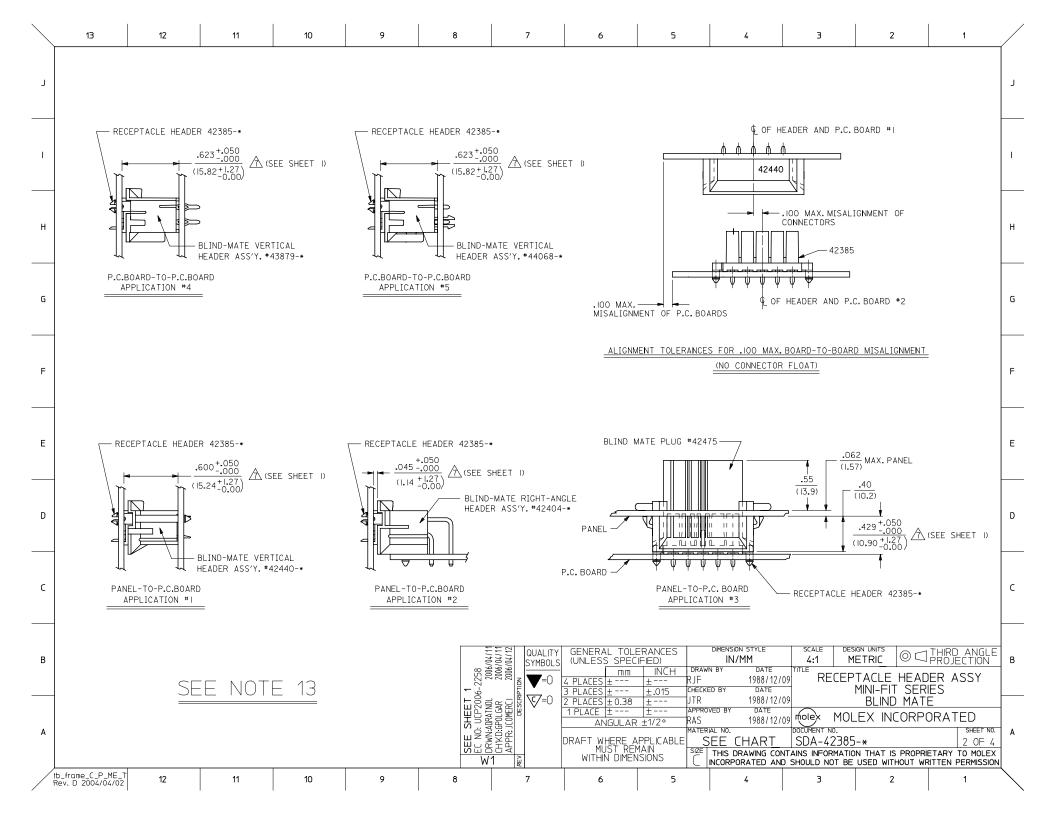
Testing sequences to be performed in accordance with EIA-364-1000.01

9.0 PACKAGING

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

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Δ	3	c	_ F		E	F	G	H				\
	PART NUMBER	ENG. NUMBER	SIZE	MATERIAL	PLATING		PART NUMBER	ENG. NUMBER	SIZE	MATERIAL		11.
	NO E.D.P.	A-42385-02AI		94V-2/BRASS ▲	OVER NICKEL		NO E.D.P.	A-42385-02BI	2 .	94V-0,BRASS	OVER NICKEL	13
	15-24-7040	-04AI	4 (15-24-7041	-04BI	4 (
	IS-24-7060	-06A	ωα				15-24-7061 NO FDP	-0681	α و			_
	15-24-7100	- IØAI	9 9				15-24-7101	- IØBI	9 9			<u> </u>
	NO E.D.P.	- IZAI	21				NO E.D.P.	- 1281	12			12
	15-24-7140	- 14A1	4				15-24-7141	- 14B1	4			
	15-24-7160	- 16A I	91				15-24-7161	- 1681	91			
	15-24-7180	- I8A I	82				15-24-7181	- 1881	8			
	NO E.D.P.	-20AI	20				NO E.D.P.	-20BI	20			
	NO E.D.P.	-22AI		-	-		NO E.D.P.	-22BI	22	-	•	
	15-24-7240	A-42385-24AI	24	94V-2/BRASS	BRIGHT TIN OVER NICKEL		15-24-7241	A-42385-24BI	24	94V-0,BRASS	BRIGHT TIN OVER NICKEL	
	NO E.D.P.	A-42385-02A2	2	94V-2/BRASS	30 M.I. SEL. GOLD		NO E.D.P.	A-42385-02B2	2	94V-0,BRASS	30 M.I.	10
	15-24-7042	-04A2	4	4			15-24-7043	-04B2	4	-	•	1
	15-24-7062	-06A2					15-24-7063	-06B2	و			
	NO E.D.P.	-08A2	∞				NO E.D.P.	-0882	8			
	15-24-7102	- 10A2	9				15-24-7103	- 1082	<u>@</u>			9
	NO E.D.P.	-12A2	12				NO E.D.P.	- 1282	2			
	15-24-7142	- 14A2	4 7				15-24-7143	- 1482	4 7			
	24-7-62	16AZ	<u>o</u> !				15-24-7163	7891-	و و			8
	15-24-7182	- 18A2	∞ ;				15-24-7183	- 1882	<u> </u>			3
	NO E.U.P.	-20A2 -22A2	20				NO E.U.P.	-20B2 -20B2	22			
	15-24-7242	A-42385-24A2	24	↑ 94V-2/BRASS	30 M.I.		15-24-7243	A-42385-24B2	24	94V-0.BRASS	30 M.I.	
					SEL. GOLD							7
6 4		A-42385-02CI	2	94V-2/P.B.	OVER NICKEL		NO E.D.P.	A-42385-02DI	2	94V-0/P.B.	OVER NICKEL	<u>, </u>
SEE SEE SEE SEE SEE SEE	15-24-7044	-04CI	4 9				NO E.D.P.	-04DI -06DI	4 9			_
SHT SHT SHT SHT		-08CI	ω				NO E.D.P.	-08DI	80			1
. l. . l. . l.		- IOCI	01				NO E.D.P.	1001-	01			6 T
G FI EI DI	NO E.D.P.	-12C1	12				NO E.D.P.	- 1201	12			
	15-24-7144	- 14C I	4				NO E.D.P.	- 14D I	7			
SEE SEE SEE SEE SEE	NO E.D.P.	- IBCI	9				NO E.D.P.	- IED I	91			
SHT. I SHT. I SHT. I SHT. I SHT. I	15-24-7184 NO F.D.P.	-18C1	81 02				NO E.D.P.	- I8D I	18			4238
•	9	-22C1	22		-			-22D1	22	-	•	15
UNLESS TOLERAN 3 PLACE ± 2 PLACE ± 1 PLACE	15-24-7244	A-42385-24CI	24	94V-2/P.B.	BRIGHT TIN OVER NICKEL		NO E.D.P.	A-42385-24DI	24	94V-0/P.B.	BRIGHT TIN OVER NICKEL	4
ERE APPLICAE		A-42385-02C2	2	94V-2/P.B.	30 M.I. SEL. GOLD		NO E.D.P.	A-42385-02D2	2	94V-0/P.B.	30 M.I. SEL. GOLD	
ECIFIED * I/2° METRIC 	2	-04C2	4				NO E.D.P.	-04D2	4			
11.		-06C2	9				15-24-7067	-06D2	9			
Olex M LIS IRT NO. SEE NAM SA4238 DGN	9	-08C2	ω				NO E.D.P.	-08D2	ω			3
RE MINI OLEX SLEJILL	2	- I0C2	0				NO E.D.P.	- 1002	0			
FI INC	2	-1202	12				NO E.D.P.	- I2D2	12			
ASS IT E	9	- I4C2	4				NO E.D.P.	- 14D2	4			
CLE SEME 3.M.] ORAT	9 9	- 1602	9 9				NO E.D.P.	- 1602	9			2
HE BLIE SE ED SH		7781-	Σ ξ				1917-47-61	- 1802	<u> </u>			
ADE S RIE et no. 3	2 2	2002-	9 2				NO F.D.T.	-2202	9 2			
R S)	2 2	A-42385-24C2		↑ 94V-2/P _. B.	30 M.I.		15-24-7247	A-42385-24D2	24	♦ 94V-0/P.B.	30 M.I.	- 1
/ 9 /	2	7	F 7		SEL. GOLD	_		2017-0007-4	7		SEL. GOLD	
					42							
		([42385	42	F	(ŀ				/