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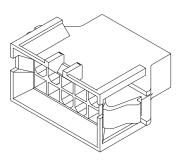
Jameco Part Number 1962172

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

### 42475

## **Dual Row**

### With Panel Mount Ears



#### **Features and Benefits**

- Blind mating panel mounted plug
- Positive housing locks to mate with Mini-Fit Jr.
- Fully isolated terminals to protect contacts from damage

#### **Reference Information**

Packaging: Bag UL File No.: E29179 CSA File No.: LR19980 TUV License No.: R75142

Mates With: 5557, 42474 or 44516 receptacles and 42385,

46010 or 46101 PCB receptacles

Use With: 5558, 46134, 46012 or 46098 terminals

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

Designed In: Millimeters

### Physical

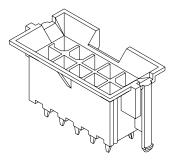
Housing: 6/6 nylon, UL 94V-2 or 94V-0 Operating Temperature: -40 to +105°C

Circuits	Orde	er No.
CITCUITS	94V-2	94V-0
4	<u>15-06-0045</u>	<u>15-06-0046</u>
6	<u>15-06-0065</u>	<u>15-06-0066</u>
8	<u>15-06-0085</u>	
10	<u>15-06-0105</u>	<u>15-06-0106</u>
14	<u>15-06-0145</u>	<u>15-06-0146</u>
18	<u>15-06-0185</u>	<u>15-06-0186</u>
24	15-06-0245	15-06-0246

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

### 42440

### Vertical, Dual Row



#### **Features and Benefits**

- Blindmating Capabilities
- Standard with drain holes to allow PCB washing after wave soldering (contact Molex for headers without drain holes)
- Fully isolated terminals to protect contacts from damage

#### **Reference Information**

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

Mates With: 44516, 42474 and 5557 dual row receptacles

or 42385 PCB receptacles PCB Thickness: 1.60mm (.062") Process: Wave Solder Designed In: Millimeters

#### Electrical

Voltage: 600V

Current: (Used with 16 AWG)

Series		Circ	vits	
	2-3	4-6	7-10	12-24
46083*	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: 5.0kg max.

#### 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

		Order No.						
Circuits	Tin		Select	Gold Gold	Lead-free			
	94V-2	94V-0	94V-2	94V-0				
4	<u>15-24-6046</u>	<u>15-24-6047</u>	<u>15-28-6046</u>	<u>15-28-6047</u>				
6	<u>15-24-6066</u>		<u>15-28-6066</u>					
10	<u>15-24-6106</u>	<u>15-24-6107</u>	<u>15-28-6106</u>	<u>15-28-6107</u>	Yes			
14	<u>15-24-6146</u>	<u>15-24-6147</u>	<u>15-28-6146</u>	<u>15-28-6147</u>	ies			
18	<u>15-24-6186</u>	<u>15-24-6187</u>	<u>15-28-6186</u>	<u>15-28-6187</u>				
24	15-24-6246	15-24-6247	15-28-6246	15-28-6247				





# **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 $25 \pm 6$ 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 $25 \pm 6$ 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 $25 \pm 6$ 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 $25 \pm 6$ 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 $25 \pm 6$ 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 $25 \pm 6$ 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 $25 \pm 6$ 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 $25 \pm 6$ 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 $25 \pm 6$ 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.
9	Crimp Terminal Insertion Force (into Housing)	Apply an axial insertion force on the terminal at a rate of $25 \pm 6$ mm $(1 \pm \frac{1}{4}$ inch).	15.0 N (3.37 lbf) MAXIMUM insertion force

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



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 $25 \pm 6$ 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 $25 \pm 6$ 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 $25 \pm 6$ 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

REVISION:	FC No: IICB2007-0312		I FOR	SHEET No.  11 of 15	
01	DATE: 2006 / 08 / 08	CON	NECTOR SYSTEM	1	
DOCUMEN <sup>*</sup>	T NUMBER:	CREATED / REVISED BY:	CHECKED BY:	APPRO\	/ED BY:
PS-5556-002		CSTEWART	GPOLGAR	JCOM	ERCI
TEMPLATE ELLENAME: PRODUCT SPECISIZE AVAIANDOS					



## **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 $60 \pm 2^{\circ}\text{C}$ 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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G1	EC No: UCP2007-0312		MINI-FIT BMI		<b>12</b> of <b>15</b>
Gi	DATE: 2006 / 08 / 08	CON	<b>NECTOR SYSTEM</b>	1	12 01 13
DOCUMEN <sup>-</sup>	T NUMBER:	CREATED / REVISED BY:	CHECKED BY:	APPRO\	/ED BY:
PS-5556-002		CSTEWART	GPOLGAR	JCOM	IERCI
TEMPLATE FILENAME: PRODUCT_SPECISIZE_AI(V.1).DOC					



## 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

REVISION:	ECR/ECN INFORMATION:	TITLE: PRODUC	T SPECIFICATION	I FOR	SHEET No.
G1	EC No: UCP2007-0312		MINI-FIT BMI		<b>13</b> of <b>15</b>
Gi	DATE: 2006 / 08 / 08	CON	NECTOR SYSTEM	1	13 01 13
DOCUMEN <sup>-</sup>	Γ NUMBER:	CREATED / REVISED BY:	CHECKED BY:	APPRO\	/ED BY:
PS-5556-002		CSTEWART	GPOLGAR	JCOM	IERCI
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 $25 \pm 6$ 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 $25 \pm 6$ 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 $25 \pm 6$ 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.	

G1	EC No: UCP2007-0312  DATE: 2006 / 08 / 08	MINI-FIT BMI CONNECTOR SYSTEM		14 of 15	
DOCUMENT NUMBER:		CREATED / REVISED BY:	CHECKED BY:	APPRO\	/ED BY:
PS-5556-002		CSTEWART	GPOLGAR JCOMER		ERCI
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 $60 \pm 2^{\circ}\text{C}$ 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

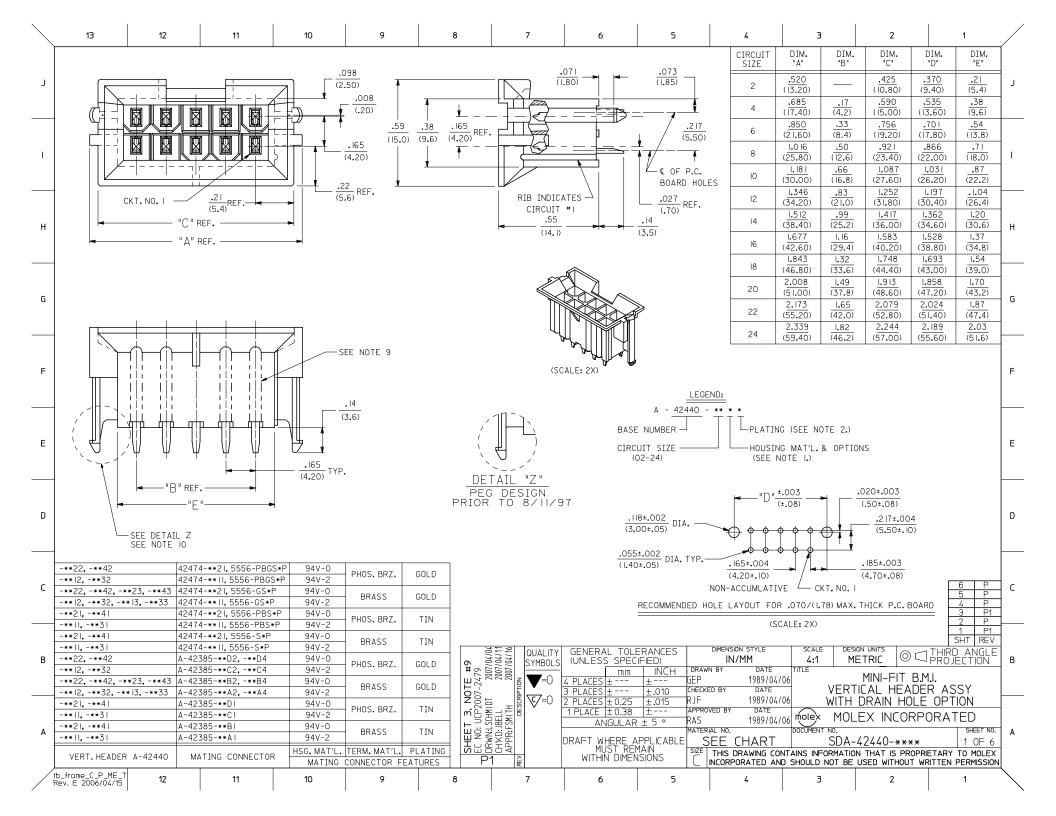
### **8.0 TEST SEQUENCES**

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.

REVISION:	ECR/ECN INFORMATION:	TITLE: PRODUC	T SPECIFICATION	I FOR	SHEET No.
G1	EC No: UCP2007-0312		MINI-FIT BMI		<b>15</b> of <b>15</b>
Gi	DATE: 2006 / 08 / 08	CON	NECTOR SYSTEM	1	130113
DOCUMEN <sup>-</sup>	T NUMBER:	CREATED / REVISED BY:	CHECKED BY:	APPRO\	/ED BY:
PS-5556-002		CSTEWART	GPOLGAR	JCOM	IERCI
TEMPLATE FILENAME: PRODUCT_SPECISIZE_AI(V_1) DOC					



	13   12   11   10   9   8   7   6   5   4   3   2   1	
J		J
ı		1
—	NOTES: 1) MATERIAL:	Н
	HOUSING MATERIAL AND OPTIONS:  1 = NYLON 6/6, UL 94V-2, COLOR: NATURAL, WITHOUT DRAIN HOLES  2 = NYLON 6/6, UL 94V-0, COLOR: NATURAL, WITHOUT DRAIN HOLES  3 = NYLON 6/6, UL 94V-2, COLOR: NATURAL, WITH DRAIN HOLES  4 = NYLON 6/6, UL 94V-0, COLOR: NATURAL, WITH DRAIN HOLES  TERMINALS: BRASS	
G 	2) TERMINAL PLATING: S = .000100/(0.00254) MIN. BRIGHT TIN OVER .000050/(0.00127) MIN. NICKEL  *GS = .000030/(0.00076) MIN. SELECT GOLD AND .000100/(0.00254) MIN.  SELECT MATTE TIN OVER .00005D/(.00127) MIN. NICKEL OVERALL  *GS3 = .000050/(0.00127) MIN. SELECT GOLD AND .000100/(0.00254) MIN.	G
F	SELECT MATTE TIN OVER .000050/(.00127) MIN. NICKEL OVERALL  *THE PRIMARY SHIPPING CARTON WILL BE LABELED "COMPLIANT TO  RoHS DIRECTIVE 2002/95/EC AND ELV ANNEX II OF DIRECTIVE 200/53/EC',  CARTONS WITHOUT THIS LABEL MAY CONTAIN PRODUCT WITH  TIN-LEAD PLATING.  3) PRODUCT SPECIFICATION AND PROCESSING PARAMETERS: PS-5556-002  4) PACKAGING: SEE CHARTS	F
E	5) 6-24 CIRCUIT PARTS MATE WITH MINI-FIT JR. RECEPTACLES #5557 AND HEADERS #42385 AND #42474, 2 AND 4 CIRCUIT PARTS MATE WITH 42385 AND 42474 HEADERS ONLY. 6) PART ALLOWS FOR UP TO .100/(2.54) MISALIGNMENT WITH MATING RECEPTACLE IN ANY DIRECTION. SEE MATING CONNECTOR DRAWINGS FOR SPECIFIC ALLOWANCES. 7) CONNECTOR IS NOT DESIGNED FOR CURRENT SHARING. 8) CONNECTOR ASSEMBLES ARE NOT BE MATED OR UNMATED WHILE	E
D	CONNECTOR ASSEMBLES ARE NOT BE MATED OR COMMATED WHILE CIRCUITS ARE LIVE.  9) OPTIONAL RIBS MAY BE FOUND ON PARTS MANUFACTURED AFTER 08/11/1997. RIB LOCATION IS DETERMINED BY MOLD DESIGN FOR MANUFACTURING EASE AND THE LOCATION DOES NOT AFFECT PART FUNCTION OR PERFORMANCE, LOCATION OF RIBS MAY VARY ON PARTS WITHIN MAUFACTURING LOT OR SHIPMENT. THIS DRAWING SHOWS TYPICAL RIB LOCATIONS.  10) PARTS MANUFACTURED AFTER 8/15/1997 MAY HAVE REVISED LOCK PEG.	D
С	11) PART CONFORMS TO CLASS "B' REQUIREMENTS OF COSMETIC SPECIFICATION PS-45499-002.	С
В	QUALITY GENERAL TOLERANCES DMENSION STYLE SCALE DESIGN UNITS OF THIRD ANGLE (UNLESS SPECIFIED) IN/MM METRIC OF PROJECTION  WE PROJECTION  A PLACES ± ± GEP 1989/04/06  3 PLACES ± ± CHECKED BY DATE  VERTICAL HEADER ASSY	В
Α	SEE CHART   SDA-42440-****   3 OF 6   SEE CHART   SDA-42440-*****   3 OF 6   SEE CHART   SDA-42440-******   3 OF 6   SEE CHART   SDA-42440-*******   3 OF 6   SEE CHART   SDA-42440-*******   3 OF 6   SEE CHART   SDA-42440-*********   3 OF 6   SEE CHART   SDA-42440-**********   3 OF 6   SEE CHART   SDA-42440-*********************************	Α
	MUST REMAIN WITHIN DIMENSIONS THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION Dev. E 2006/04/15 12 11 10 9 8 7 6 5 4 3 2 1	\

_	13	12	11		10	9	8		7	6	5	4		3	2		1
D	DRAINS: N	TIN (SEE NOTE 2 OPTION WITHOUT DRAIN HOLES	<b>*</b> S*)		DRAINS: W	IN (SEE NOTE 2 OPTION VITHOUT DRAIN HOLES			DRAINS:	30 M.I. SELECT GOLD WITHOUT DRAIN HOLE		ION "GS")	PLATING: DRAINS:	WITHOUT DR		NOTE 2 OPTIO	ON 'GS')
М	MAT'L: 9	WITH PEGS 94V-2 [NATURAL]	004		MAT'L: 9	ITH PEGS 4V-0 [NATURAL]	2.004		PEGS: MAT'L:	WITH PEGS 94V-2 [NATURAL]	/0.004		PEGS: MAT'L:	WITH PEGS 94V-0 [NATI		204	
_	ACKAGING: I PART NO.	TRAY PER PK-42440 ENG NO.	-001	СКТЅ	PACKAGING: 1	RAY PER PK-42440 ENG NO.	J=001	CKTS	PACKAGING:	TRAY PER PK-424	40-001	СКТЅ	PACKAGING: PART NO.	TRAY PER	PK-4244U-C	JO1	CKTS
_	NO EDP	A-42440-0211	-	_	NO EDP	A-42440-0221	-	2	NO EDP	A-42440-0212			NO EDP	A-42440-0		-	2
_	15-24-6041 NO EDP	A-42440-0411 A-42440-0611	-	6	15-24-6042 NO EDP	A-42440-042 I A-42440-062 I	-	6	15-28-6041 NO EDP	A-42440-0412 A-42440-0612	-	6	15-28-604 NO EDP	2 A-42440-0 A-42440-0		-	4 6
-	NO EDP	A-42440-0811	-	8	NO EDP	A-42440-0821	-	8	NO EDP	A-42440-0812	-	8	NO EDP	A-42440-0		-	8
_	15-24-6101	A-42440-1011	-	10	15-24-6102	A-42440-1021	-	10	15-28-6101	A-42440-1012	-	10	15-28-6102			-	10
1	NO EDP	A-42440-1211	-	12	NO EDP	A-42440-1221	-	12	NO EDP	A-42440-1212	-	12	NO EDP	A-42440-1		-	12   14
_	15-24-6141 15-24-6161	A-42440-1411 A-42440-1611	<del>-</del>	14	15-24-6142 15-24-6162	A-42440-1421 A-42440-1621	-	14	15-28-6141 15-28-6161	A-42440-1412 A-42440-1612	-	14	NO EDP	A-42440-1 A-42440-1			16
-	15-24-6181	A-42440-1811	-	18	15-24-6182	A-42440-1821	-	18	15-28-6181	A-42440-1812	-	18	15-28-6182			-	18
-	NO EDP	A-42440-2011	-	20	NO EDP	A-42440-2021	-	20	NO EDP	A-42440-2012	-	20	NO EDP	A-42440-2		-	20
_	NO EDP 15-24-6241	A-42440-2211 A-42440-2411	-	22		A-42440-2221 A-42440-2421	-	22	NO EDP 15-28-6241	A-42440-22 I2 A-42440-24 I2	-	22	NO EDP 15-28-624	A-42440-2 2 A-42440-2		-	22
Ë	13 24 0241	-	-	24	13 24 6242	-	-	24	13 20 0241	-	-	24	13 20 024	A-42440-2		-	24
		-	-			-	-			-	-					-	
P	PLATING: -	TIN (SEE NOTE 2 OPTION	*21		PLATING: T	IN (SEE NOTE 2 OPTIO	\		PLATING:	30 M.I. SELECT GOLD	ISEE NATE 2 ADT	וטאו יפטי)	PLATING.	30 M.I. SELEC	OT BOLD (SEE	NOTE 2 OPTIO	ויפטי ואר
		WITH DRAIN HOLES	37			ITH DRAIN HOLES	<b>1</b> 37			WITH DRAIN HOLES	ISEL NOTE 2 OF I	ION 057	DRAINS:	WITH DRAIN		NOTE Z OF TR	N 057
		WITH PEGS				/ITH PEGS			PEGS:	WITH PEGS			PEGS:	WITH PEGS			
		94V-2 [NATURAL]				4V-0 [NATURAL]			MAT'L:	94V-2 [NATURAL]			MAT'L:	94V-0 [NATI		201	
_	PACKAGING:	TRAY PER PK-42440 ENG NO.	-001	TOKTS	PACKAGING: 1	RAY PER PK-42440 ENG NO.	J-001 I	ICK TS	PACKAGING: PART NO.	TRAY PER PK-424	40-001	lok ts	PACKAGING: PART NO.	TRAY PER	PK-42440-0	J01	CKTS
_	NO EDP	A-42440-0231	-	_	NO EDP	A-42440-0241	-	2	NO EDP	A-42440-0232	-	2	NO EDP	A-42440-0	0242	-	2
	15-24-6046	A-42440-0431	=-	4		A-42440-0441	-	4	15-28-6046		-	4	15-28-604			-	4
_	15-24-6066	A-42440-0631	-	6	NO EDP	A-42440-0641	-	6	15-28-6066	_	-	6	NO EDP	A-42440-0		-	6
	NO EDP	A-42440-0831	-	8	NO EDP	A-42440-0841	-	8	NO EDP	A-42440-0832	-	8	NO EDP	A-42440-0			8
	15-24-6106 NO EDP	A-42440-1031 A-42440-1231		10	15-24-6107 NO EDP	A-42440-1041 A-42440-1241	-	10	15-28-6106 NO EDP	A-42440-1032 A-42440-1232	-	10	NO EDP	A-42440-1 A-42440-1			10
-	15-24-6146	A-42440-1431	-	14	15-24-6147	A-42440-1441	-	14	15-28-6146		-	14	15-28-614			-	14
N	NO EDP	A-42440-1631	=-	16	NO EDP	A-42440-1641	-	16	NO EDP	A-42440-1632	-	16	NO EDP	A-42440-I		-	16
-	15-24-6186	A-42440-1831	-	18	15-24-6187	A-42440-1841	-	18	15-28-6186		-	18	15-28-6187			-	81
-	NO EDP	A-42440-2031 A-42440-2231	-	20	NO EDP	A-42440-2041 A-42440-2241	-	20	NO EDP	A-42440-2032 A-42440-2232	-	20	NO EDP	A-42440-2 A-42440-2		-	20
_	15-24-6246	A-42440-2431		24	-	A-42440-2441	-	24	15-28-6246		_	24	15-28-624			-	24
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							STANDARDIZE NOTES	EC NO: UCP2007_272  U DRWNLSCHIII 2007/03/19 CHYCAGER 2007/03/19 APPR-FSMTH 2007/03/19 EV CESCRIPTION	$\begin{array}{c} \text{SYMBOLS} \\ \hline \hline = 0 \\ \hline & \frac{4}{3} \\ \hline & \frac{1}{2} \\ \hline \end{array}$	PLACES ± ± PLACES ± ± PLACES ± ±	DRAWN IS  NCH DRAWN IS  GEP  CHECKED  CHECKED  R JF  APPROVEI  APPROVEI  MATERIAL  IC ABLE  SIZE T	199 BY D 199 D BY D 199 NO. E CHA	ATE 15/03/03 ATE 15/03/03 ATE 15/03/03 ATE 15/03/03 ATE 15/03/03 ATE 15/03/03	VERT WITH  DIEX MOL  UMENT NO.  SDA- 5 INFORMATION	DRAIN HI EX INCC 42440-** n that is pi	B.M.I. ADER AS OLE OPT DRPORAT	SY ION ED SHEET NO 4 OF 6
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	13	12	11		10	9	8		7	6	5	4		3	2		1
	DRAINS:	50 M.I. SELECT GOLD (S WITHOUT DRAIN HOLES	EE NOTE 2 OPTION	*GS3*)	DRAINS:	50 M.I. SELECT GOLD ( WITHOUT DRAIN HOLE		N "GS3")	PLATING: DRAINS:	50 M.I. SELECT GOLD ( WITH DRAIN HOLES	(SEE NOTE 2 OP	FION "GS3")	PLATING: DRAINS:	50 M.I. SELE		E NOTE 2	OPTION "GS3")
ا ر		WITH PEGS 94V-2 [NATURAL]				WITH PEGS 94V-0 [NATURAL]			PEGS: MAT'L:	WITH PEGS 94V-2 [NATURAL]			PEGS: MAT'L:	WITH PEGS 94V-0 [NAT	LIDAL 1		
		TRAY PER PK-42440	0-001			TRAY PER PK-4244	40-001			TRAY PER PK-4244	40-001			: TRAY PER		-001	
	PART NO.	ENG NO.			PART NO.	ENG NO.		_	PART NO.	_			PART NO				CKTS
	NO EDP	A-42440-0213 A-42440-0413	-	2	NO EDP	A-42440-0223 A-42440-0423	-	2	NO EDP	A-42440-0233 A-42440-0433	-	2	NO EDP	A-42440-I		-	2 4
1	NO EDP	A-42440-0613	-	6	NO EDP	A-42440-0623	-	6	NO EDP	A-42440-0633	-	6	NO EDP	A-42440-I		-	6
	NO EDP	A-42440-08 I3	-	8	NO EDP	A-42440-0823	-	8	NO EDP	A-42440-0833	-	8 10	NO EDP	A-42440-I		-	8 IO
	NO EDP	A-42440-1013 A-42440-1213	-	12	NO EDP	A-42440-1023 A-42440-1223	-	12	NO EDP	A-42440-1033 A-42440-1233	-	12	NO EDP	A-42440- A-42440-		-	12
	NO EDP	A-42440-1413	-	14	NO EDP	A-42440-1423	-	14	NO EDP	A-42440-1433	-	14	NO EDP	A-42440-	1443	-	14
	NO EDP	A-42440-1613	-	16	NO EDP	A-42440-1623	-	16	NO EDP	A-42440-1633	-	16	NO EDP	A-42440-			16
Н	NO EDP	A-42440-1813 A-42440-2013	-	18	NO EDP	A-42440-1823 A-42440-2023	-	18	NO EDP	A-42440-1833 A-42440-2033	-	18 20	NO EDP	A-42440- A-42440-			18 20
	NO EDP	A-42440-2213	-	22	NO EDP	A-42440-2223	-	22	NO EDP	A-42440-2233	-	22	NO EDP	A-42440-		-	22
	NO EDP	A-42440-2413	-	24	NO EDP	A-42440-2423	-	24	NO EDP	A-42440-2433	-	24	NO EDP	A-42440-		-	24
		-	-			-	-			-	-			-	-	-	
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	I.	TEM NO.	-	CKTS 2		ITEM NO.	_	CKTS 2	5	ITEM NO.	_	CKTS 2		ITEM NO	).		CKTS
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		-	-	6		-	-	6		-	-	6		-		-	6
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3							STANDARDIZE NOTES STONDARDIZE NOTES THE TOTAL STANDARDIZES	71.01 2007/03/19 7 2007/03/19 1H 2007/03/19 ESCRIPTION	<del>V</del> =0 2	PLACES ± ± - PLACES ± ± - PLACES ± ± -	VCL3	200 BY D 200		VERT	ETRIC ( MINI-FI TICAL HE DRAIN H	T B.M.I. EADER HOLE O	PTION

	13	12	11		10	9	8		7	6	5	4		3	2		1
DF	PLATING: DRAINS:	WITH DRAIN HOLES	ON "S")		PLATING: DRAINS:	TIN (SEE NOTE 2 OPTIO WITH DRAIN HOLES	N 'S')		PLATING: DRAINS:	30 M.I. SELECT GOLD ( WITH DRAIN HOLES	SEE NOTE 2 OPTIO	ON 'GS')	DRAINS:	30 M.I. SELE		E NOTE 2 OP	TION "GS")
PI	EGS:	WITH PEGS			PEGS:	WITH PEGS			PEGS:	WITH PEGS			PEGS:	WITH PEGS			
М	MAT'L:	94V-2 [NATURAL]			MAT'L:	94V-0 [NATURAL]			MAT'L:	94V-2 [NATURAL]			MAT'L:	94V-0 [NAT			
PΑ		TUBE PER PK-40873-	0 15 1			TUBE PER PK-40873-0	) 15 1			TUBE PER PK-40873-	0 15 1			TUBE PER F	PK-40873-0 I	51	
		ITEM NO.		CKTS		ITEM NO.		CKTS	5	ITEM NO.		CKTS		ITEM NC	).		CKTS
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_	4	2440-3049	-	4	4	2440-3061	-	4		2440-3073	-	4	4	2440-3085		-	4
_	4	2440-3050	-	6		-	-	6	4	2440-3074	-	6		-		-	6
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_	4	2440-3052	-	10	4	2440-3064	-	10	4	2440-3076	-	10	4	2440-3088			10
_		-	-	12		-	-	12		-	-	12		-		-	12
_	4	2440-3054	-	14	4	2440-3066	-	14	4	2440-3078	-	14	4	2440-3090		-	14
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ı ——		2440-3056	-	18	4	2440-3068	-	18	4	2440-3080	-	18	4	2440-3092		-	18
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_	4	2440-3059	-	24	4	2440-3071	-	24	4	2440-3083	-	24	4	2440-3095		-	24
_	OL ATING	F0 M1 CELEOT 001D	VCEE NOTE 3 OPTIO	N. rocon	DIATING	F0. M.L. CELEDT. 001 B. (4	CEE MOTE 2 ODT	TON TOCON	DI ATING	50 M.I. SELECT GOLD (	CEE NOTE 2 ODITIO	DN 10001	DIATING	FO MI CELE	OT 00 D (CE	E NOTE 2 OF	TION LACCON
_	RAINS:	50 M.L SELECT GOLD ( WITHOUT DRAIN HOLE		N 033 /	DRAINS:	50 M.I. SELECT GOLD (S WITHOUT DRAIN HOLES		ION USS I	DRAINS:	WITH DRAIN HOLES	SEE NOTE 2 OF IK	N 0337				E NOTE Z OF	11011 0337
	EGS:	WITH PEGS	.5		PEGS:	WITH PEGS	<u> </u>		PEGS:	WITH DRAIN HOLES			PEGS:	WITH DRAIN WITH PEGS	HOLES		
_	MAT'L:	94V-2 [NATURAL]			MAT'L:	94V-0 [NATURAL]			MAT'L:	94V-2 [NATURAL]			MAT'L:	94V-0 [NAT	TIDAL 1		
		TUBE PER PK-40873-	. N IS I			TUBE PER PK-40873-0	151			TUBE PER PK-40873-	0.15.1			TUBE PER F		51	
		ITEM NO.	0131	CKTS		ITEM NO.	7131	CKTS		ITEM NO.	0131	CKTS		ITEM NO		51	CKTS
		-	-	2		-	-	2		-	-	2		-		_	2
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							IZE NOTES 07-2152	T 2007/03/12 2007/03/19 2007/03/19 RIPTION	QUALITY SYMBOLS  V=0  ZZZ=0  3	PLACES ± ± - PLACES ± ± -	NCH DRAWN BY ERH	200 Y D	ATE TITL 0/02/23 ATE	M E VERT	MINI-FI <sup>T</sup> FICAL HE	♥ □ PRO T B.M.I. EADER A	SSY
							STANDARDIZE NOTES EC NO. UCP2007-2152	DRWN.LSCHMIDT 2007/03/12 CHYD.ADERR 2007/03/19 APPR.ESMITH 2007/03/19 REV GESCRPTION	SYMBOLS ▼=0 4 3 €/=0 2	(UNLESS SPECIFIED mm   I	NCH DRAWN BY NCH ERH ERH MB APPROVED 2° RE MATERIAL N CABLE SIZE TH	IN/MM  200  200  200  89  200  80  100  E CHA  IS DRAWIN	ATE 0/02/23 ATE 0/02/23 ATE 0/02/23 ATE 0/02/23 ATE 0/02/23 ATE 0/02/23	VERT WITH DIEX MOL	MINI-FI FICAL HE DRAIN H LEX INC -42440-*	T B.M.I. EADER A HOLE OP ORPORA  *** PROPRIETAR	SSY TION TED SHEET NO 6 OF 6 7 TO MOLEX