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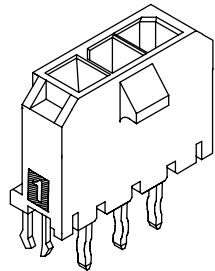
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Jameco Part Number 1443567

# 3.00mm (.118") Pitch Micro-Fit 3.0™ Wire-to-Board Header

**43650**  
Single Row, Vertical  
With Solderable Retention Clip



### Features and Benefits

- Offset terminal retention for optimum retention to PC board during wave soldering
- Fully polarized to mating receptacle
- Solderable retention clip provides optimum retention to PCB
- Surface Mount Compatible

### Reference Information

Product Specification: PS-43650  
Packaging: Tray  
UL File No.: E29179  
CSA File No.: LR19980A  
TUV License No.: R72040445  
Mates With: 43645  
Designed In: Millimeters

### Electrical

Voltage: 250V  
Current: 5.0A max.  
Contact Resistance: 10 milliohms max.  
Dielectric Withstanding Voltage: 1500V AC  
Insulation Resistance: 1000 Megohms min.

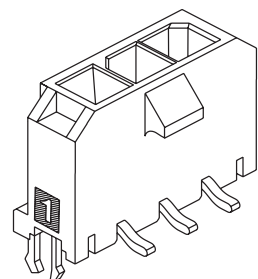
### Physical

Housing: LCP, UL 94V-0  
Contact: Brass  
Plating: Tin or Gold

Circuits	Order No.			Lead-free
	Tin	15µ" Gold	30µ" Gold	
2	<a href="#">43650-0218</a>	<a href="#">43650-0219</a>	<a href="#">43650-0220</a>	Yes
3	<a href="#">43650-0318</a>	<a href="#">43650-0319</a>	<a href="#">43650-0320</a>	
4	<a href="#">43650-0418</a>	<a href="#">43650-0419</a>	<a href="#">43650-0420</a>	
5	<a href="#">43650-0518</a>	<a href="#">43650-0519</a>	<a href="#">43650-0520</a>	
6	<a href="#">43650-0618</a>	<a href="#">43650-0619</a>	<a href="#">43650-0620</a>	
7	<a href="#">43650-0718</a>	<a href="#">43650-0719</a>	<a href="#">43650-0720</a>	
8	<a href="#">43650-0818</a>	<a href="#">43650-0819</a>	<a href="#">43650-0820</a>	
9	<a href="#">43650-0918</a>	<a href="#">43650-0919</a>	<a href="#">43650-0920</a>	
10	<a href="#">43650-1018</a>	<a href="#">43650-1019</a>	<a href="#">43650-1020</a>	
11	<a href="#">43650-1118</a>	<a href="#">43650-1119</a>	<a href="#">43650-1120</a>	
12	<a href="#">43650-1218</a>	<a href="#">43650-1219</a>	<a href="#">43650-1220</a>	

# 3.00mm (.118") Pitch Micro-Fit 3.0™ Wire-to-Board Header

**43650**  
Single Row, Vertical, SMT  
With Solderable Retention Clip



### Features and Benefits

- Solderable retention clip provides optimum retention to PCB
- Fully polarized to mating receptacle
- Tape and reel packaging eliminates handling and provides for higher insertion speeds compared to tray packing or hand assembly

### Reference Information

Product Specification: PS-43650  
Packaging: Tape and reel  
UL File No.: E29179  
CSA File No.: LR19980A  
TUV License No.: R72040445  
Mates With: 43645  
Designed In: Millimeters

### Electrical

Voltage: 250V  
Current: 5.0A max.  
Contact Resistance: 10 milliohms max.  
Dielectric Withstanding Voltage: 1500V AC  
Insulation Resistance: 1000 Megohms min.

### Physical

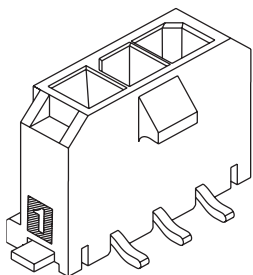
Housing: High temperature LCP, UL 94V-0  
Contact: Brass  
Plating: Tin or Gold

Circuits	Order No.			Lead-free
	Tin	15µ" Gold	30µ" Gold	
2	<a href="#">43650-0221</a>	<a href="#">43650-0222</a>	<a href="#">43650-0223</a>	Yes
3	<a href="#">43650-0321</a>	<a href="#">43650-0322</a>	<a href="#">43650-0323</a>	
4	<a href="#">43650-0421</a>	<a href="#">43650-0422</a>	<a href="#">43650-0423</a>	
5	<a href="#">43650-0521</a>	<a href="#">43650-0522</a>	<a href="#">43650-0523</a>	
6	<a href="#">43650-0621</a>	<a href="#">43650-0622</a>	<a href="#">43650-0623</a>	
7	<a href="#">43650-0721</a>	<a href="#">43650-0722</a>	<a href="#">43650-0723</a>	

Circuits	Order No.			Lead-free
	Tin	15µ" Gold	30µ" Gold	
8	<a href="#">43650-0821</a>	<a href="#">43650-0822</a>	<a href="#">43650-0823</a>	Yes
9	<a href="#">43650-0921</a>	<a href="#">43650-0922</a>	<a href="#">43650-0923</a>	
10	<a href="#">43650-1021</a>	<a href="#">43650-1022</a>	<a href="#">43650-1023</a>	
11	<a href="#">43650-1121</a>	<a href="#">43650-1122</a>	<a href="#">43650-1123</a>	
12	<a href="#">43650-1221</a>	<a href="#">43650-1222</a>	<a href="#">43650-1223</a>	

# 3.00mm (.118") Pitch Micro-Fit 3.0™ Wire-to-Board Header

**43650**  
Single Row, Vertical, SMT  
With Solderable Fitting Nail



### Features and Benefits

- Solder tabs provide retention to PCB
- Fully polarized to mating receptacle
- Tape and reel packaging eliminates handling and provides for higher insertion speeds compared to tray packing or hand assembly

### Reference Information

Product Specification: PS-43650  
Packaging: Tape and reel  
UL File No.: E29179  
CSA File No.: LR19980A  
TUV License No.: R72040445  
Mates With: 43645  
Designed In: Millimeters

### Electrical

Voltage: 250V  
Current: 5.0A max.  
Contact Resistance: 10 milliohms max.  
Dielectric Withstanding Voltage: 1500V AC  
Insulation Resistance: 1000 Megohms min.

### Physical

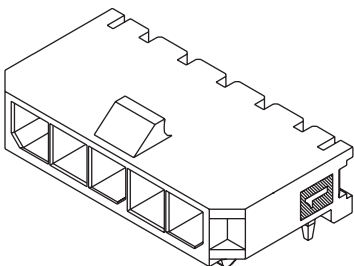
Housing: High temperature LCP, UL 94V-0  
Contact: Brass  
Plating: Tin or Gold

Circuits	Order No.			Lead-free
	Tin	15µm Gold	30µm Gold	
2	<a href="#">43650-0224</a>	<a href="#">43650-0225</a>	<a href="#">43650-0226</a>	Yes
3	<a href="#">43650-0324</a>	<a href="#">43650-0325</a>	<a href="#">43650-0326</a>	
4	<a href="#">43650-0424</a>	<a href="#">43650-0425</a>	<a href="#">43650-0426</a>	
5	<a href="#">43650-0524</a>	<a href="#">43650-0525</a>	<a href="#">43650-0526</a>	
6	<a href="#">43650-0624</a>	<a href="#">43650-0625</a>	<a href="#">43650-0626</a>	
7	<a href="#">43650-0724</a>	<a href="#">43650-0725</a>	<a href="#">43650-0726</a>	

Circuits	Order No.			Lead-free
	Tin	15µm Gold	30µm Gold	
8	<a href="#">43650-0824</a>	<a href="#">43650-0825</a>	<a href="#">43650-0826</a>	Yes
9	<a href="#">43650-0924</a>	<a href="#">43650-0925</a>	<a href="#">43650-0926</a>	
10	<a href="#">43650-1024</a>	<a href="#">43650-1025</a>	<a href="#">43650-1026</a>	
11	<a href="#">43650-1124</a>	<a href="#">43650-1125</a>	<a href="#">43650-1126</a>	
12	<a href="#">43650-1224</a>	<a href="#">43650-1225</a>	<a href="#">43650-1226</a>	

# 3.00mm (.118") Pitch Micro-Fit 3.0™ Wire-to-Board Header

**43650**  
Single Row  
Right Angle



### Features and Benefits

- Snap-in peg locks header to PCB for optimum retention
- Fully polarized to mating receptacle
- Surface Mount Compatible

### Reference Information

Product Specification: PS-43650  
Packaging: Tray  
UL File No.: E29179  
CSA File No.: LR19980  
TUV License No.: R72040445  
Mates With: 43645  
Designed In: Millimeters

### Electrical

Voltage: 250V  
Current: 5.0A max.  
Contact Resistance: 10 milliohms max.  
Dielectric Withstanding Voltage: 1500V AC  
Insulation Resistance: 1000 Megohms min.

### Physical

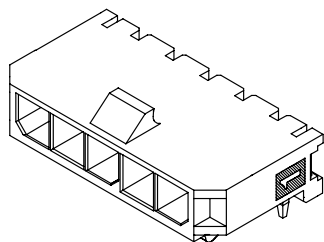
Housing: High temperature LCP, UL 94V-0  
Contact: Brass  
Plating: Tin or Gold

Circuits	Order No.			Lead-free
	Tin	15µm Gold	30µm Gold	
2	<a href="#">43650-0200</a>	<a href="#">43650-0201</a>	<a href="#">43650-0202</a>	Yes
3	<a href="#">43650-0300</a>	<a href="#">43650-0301</a>	<a href="#">43650-0302</a>	
4	<a href="#">43650-0400</a>	<a href="#">43650-0401</a>	<a href="#">43650-0402</a>	
5	<a href="#">43650-0500</a>	<a href="#">43650-0501</a>	<a href="#">43650-0502</a>	
6	<a href="#">43650-0600</a>	<a href="#">43650-0601</a>	<a href="#">43650-0602</a>	
7	<a href="#">43650-0700</a>	<a href="#">43650-0701</a>	<a href="#">43650-0702</a>	

Circuits	Order No.			Lead-free
	Tin	15µm Gold	30µm Gold	
8	<a href="#">43650-0800</a>	<a href="#">43650-0801</a>	<a href="#">43650-0802</a>	Yes
9	<a href="#">43650-0900</a>	<a href="#">43650-0901</a>	<a href="#">43650-0902</a>	
10	<a href="#">43650-1000</a>	<a href="#">43650-1001</a>	<a href="#">43650-1002</a>	
11	<a href="#">43650-1100</a>	<a href="#">43650-1101</a>	<a href="#">43650-1102</a>	
12	<a href="#">43650-1200</a>	<a href="#">43650-1201</a>	<a href="#">43650-1202</a>	

# 3.00mm (.118") Pitch Micro-Fit 3.0™ Wire-to-Board Header

**43650**  
Single Row  
Right Angle



### Features and Benefits

- "Offset Terminal Retention" for optimum retention to PC board during wave soldering
- Fully polarized to mating receptacle
- Peg feature provides polarization to PCB
- Surface Mount Compatible

### Reference Information

Product Specification: PS-43650  
Packaging: Tray  
UL File No.: E29179  
CSA File No.: LR19980  
TUV License No.: R72040445  
Mates With: 43645  
Designed In: Millimeters

### Electrical

Voltage: 250V  
Current: 5.0A max.  
Contact Resistance: 10 milliohms max.  
Dielectric Withstanding Voltage: 1500V AC  
Insulation Resistance: 1000 Megohms min.

### Mechanical

Insertion Force to PCB: 7.5kgf max. (16.5 lb)

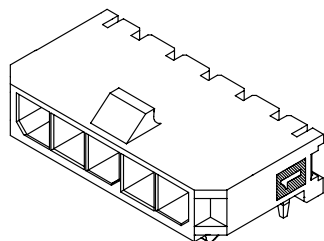
### Physical

Housing: High temperature LCP, UL 94V-0  
Contact: Brass  
Plating: Tin or Gold

Circuits	Order No.						Lead-free
	Standard "OTR" Version			Straight Tail Version			
	Tin	15µm Gold	30µm Gold	Tin	15µm Gold	30µm Gold	
2	<a href="#">43650-0215</a>	<a href="#">43650-0216</a>	<a href="#">43650-0217</a>	<a href="#">43650-0227</a>	<a href="#">43650-0228</a>	<a href="#">43650-0229</a>	Yes
3	<a href="#">43650-0315</a>	<a href="#">43650-0316</a>	<a href="#">43650-0317</a>	<a href="#">43650-0327</a>	<a href="#">43650-0328</a>	<a href="#">43650-0329</a>	
4	<a href="#">43650-0415</a>	<a href="#">43650-0416</a>	<a href="#">43650-0417</a>	<a href="#">43650-0427</a>	<a href="#">43650-0428</a>	<a href="#">43650-0429</a>	
5	<a href="#">43650-0515</a>	<a href="#">43650-0516</a>	<a href="#">43650-0517</a>	<a href="#">43650-0527</a>	<a href="#">43650-0528</a>	<a href="#">43650-0529</a>	
6	<a href="#">43650-0615</a>	<a href="#">43650-0616</a>	<a href="#">43650-0617</a>	<a href="#">43650-0627</a>	<a href="#">43650-0628</a>	<a href="#">43650-0629</a>	
7	<a href="#">43650-0715</a>	<a href="#">43650-0716</a>	<a href="#">43650-0717</a>	<a href="#">43650-0727</a>	<a href="#">43650-0728</a>	<a href="#">43650-0729</a>	
8	<a href="#">43650-0815</a>	<a href="#">43650-0816</a>	<a href="#">43650-0817</a>	<a href="#">43650-0827</a>	<a href="#">43650-0828</a>	<a href="#">43650-0829</a>	
9	<a href="#">43650-0915</a>	<a href="#">43650-0916</a>	<a href="#">43650-0917</a>	<a href="#">43650-0927</a>	<a href="#">43650-0928</a>	<a href="#">43650-0929</a>	
10	<a href="#">43650-1015</a>	<a href="#">43650-1016</a>	<a href="#">43650-1017</a>	<a href="#">43650-1027</a>	<a href="#">43650-1028</a>	<a href="#">43650-1029</a>	
11	<a href="#">43650-1115</a>	<a href="#">43650-1116</a>	<a href="#">43650-1117</a>	<a href="#">43650-1127</a>	<a href="#">43650-1128</a>	<a href="#">43650-1129</a>	
12	<a href="#">43650-1215</a>	<a href="#">43650-1216</a>	<a href="#">43650-1217</a>	<a href="#">43650-1227</a>	<a href="#">43650-1228</a>	<a href="#">43650-1229</a>	

# 3.00mm (.103") Pitch Micro-Fit 3.0™ Wire-to-Board Header

**43650**  
Single Row, Right Angle  
With Solderable Retention Clip



### Features and Benefits

- Solderable clip provides optimum retention to PCB
- Fully polarized to mating receptacle
- Surface Mount Compatible

### Reference Information

Product Specification: PS-43650  
Packaging: Tray  
UL File No.: E29179  
CSA File No.: LR04980A  
TUV License No.: R72040445  
Mates With: 43645  
Designed In: Millimeters

### Electrical

Voltage: 250V  
Current: 5.0A max.  
Contact Resistance: 10 milliohms max.  
Dielectric Withstanding Voltage: 1500V AC  
Insulation Resistance: 1000 Megohms min.

### Mechanical

Insertion Force to PCB: 7.5kgf max. (16.5 lb)

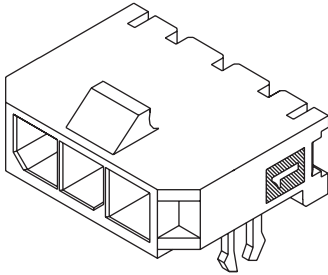
### Physical

Housing: High temperature LCP, UL 94V-0  
Contact: Brass  
Plating: Tin or Gold

Circuits	Order No.			Lead-free
	Tin	15µm Gold	30µm Gold	
2	<a href="#">43650-0203</a>	<a href="#">43650-0204</a>	<a href="#">43650-0205</a>	Yes
3	<a href="#">43650-0303</a>	<a href="#">43650-0304</a>	<a href="#">43650-0305</a>	
4	<a href="#">43650-0403</a>	<a href="#">43650-0404</a>	<a href="#">43650-0405</a>	
5	<a href="#">43650-0503</a>	<a href="#">43650-0504</a>	<a href="#">43650-0505</a>	
6	<a href="#">43650-0603</a>	<a href="#">43650-0604</a>	<a href="#">43650-0605</a>	
7	<a href="#">43650-0703</a>	<a href="#">43650-0704</a>	<a href="#">43650-0705</a>	
8	<a href="#">43650-0803</a>	<a href="#">43650-0804</a>	<a href="#">43650-0805</a>	
9	<a href="#">43650-0903</a>	<a href="#">43650-0904</a>	<a href="#">43650-0905</a>	
10	<a href="#">43650-1003</a>	<a href="#">43650-1004</a>	<a href="#">43650-1005</a>	
11	<a href="#">43650-1103</a>	<a href="#">43650-1104</a>	<a href="#">43650-1105</a>	
12	<a href="#">43650-1203</a>	<a href="#">43650-1204</a>	<a href="#">43650-1205</a>	

# 3.00mm (.118") Pitch Micro-Fit 3.0™ Wire-to-Board Header

## 43650 Single Row, Right Angle, SMT With Solderable Retention Clip



### Features and Benefits

- Solderable retention clip provides optimum retention to PCB
- Fully polarized to mating receptacle
- Tape and reel packaging eliminates handling and provides higher insertion speed compared to tray packing or hand assembly

### Reference Information

Product Specification: PS-43650  
Packaging: Tape and reel  
UL File No.: E29179  
CSA File No.: LR19980A  
TUV License No.: R72040445  
Mates With: 43645  
Designed In: Millimeters

### Electrical

Voltage: 250V  
Current: 5.0A max.  
Contact Resistance: 10 milliohms max.  
Dielectric Withstanding Voltage: 1500V AC  
Insulation Resistance: 1000 Megohms min.

### Mechanical

Insertion Force to PCB: 7.5kgf max. (16.5 lb)

### Physical

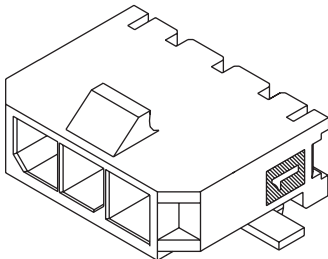
Housing: High temperature LCP, UL 94V-0  
Contact: Brass  
Plating: Tin or Gold

Circuits	Order No.			Lead-free
	Tin	15µm Gold	30µm Gold	
2	<a href="#">43650-0209</a>	<a href="#">43650-0210</a>	<a href="#">43650-0211</a>	Yes
3	<a href="#">43650-0309</a>	<a href="#">43650-0310</a>	<a href="#">43650-0311</a>	
4	<a href="#">43650-0409</a>	<a href="#">43650-0410</a>	<a href="#">43650-0411</a>	
5	<a href="#">43650-0509</a>	<a href="#">43650-0510</a>	<a href="#">43650-0511</a>	
6	<a href="#">43650-0609</a>	<a href="#">43650-0610</a>	<a href="#">43650-0611</a>	
7	<a href="#">43650-0709</a>	<a href="#">43650-0710</a>	<a href="#">43650-0711</a>	

Circuits	Order No.			Lead-free
	Tin	15µm Gold	30µm Gold	
8	<a href="#">43650-0809</a>	<a href="#">43650-0810</a>	<a href="#">43650-0811</a>	Yes
9	<a href="#">43650-0909</a>	<a href="#">43650-0910</a>	<a href="#">43650-0911</a>	
10	<a href="#">43650-1009</a>	<a href="#">43650-1010</a>	<a href="#">43650-1011</a>	
11	<a href="#">43650-1109</a>	<a href="#">43650-1110</a>	<a href="#">43650-1111</a>	
12	<a href="#">43650-1209</a>	<a href="#">43650-1210</a>	<a href="#">43650-1211</a>	

# 3.00mm (.118") Pitch Micro-Fit 3.0™ Wire-to-Board Header

## 43650 Single Row, Right Angle, SMT With Solderable Fitting Nail



### Features and Benefits

- Solder tabs provide retention to PCB
- Fully polarized to mating receptacle
- Tape and reel packaging eliminates handling and provides higher insertion speeds compared to tray packing or hand assembly

### Reference Information

Product Specification: PS-43650  
Packaging: Tape and reel for robotic placement  
UL File No.: E29179  
CSA File No.: LR19980A  
TUV License No.: R72040445  
Mates With: 43645  
Designed In: Millimeters

### Electrical

Voltage: 250V  
Current: 5.0A max.  
Contact Resistance: 10 milliohms max.  
Dielectric Withstanding Voltage: 1500V AC  
Insulation Resistance: 1000 Megohms min.

### Physical

Housing: High temperature LCP, UL 94V-0  
Contact: Brass  
Plating: Tin or Gold

Circuits	Order No.			Lead-free
	Tin	15µm Gold	30µm Gold	
2	<a href="#">43650-0212</a>	<a href="#">43650-0213</a>	<a href="#">43650-0214</a>	Yes
3	<a href="#">43650-0312</a>	<a href="#">43650-0313</a>	<a href="#">43650-0314</a>	
4	<a href="#">43650-0412</a>	<a href="#">43650-0413</a>	<a href="#">43650-0414</a>	
5	<a href="#">43650-0512</a>	<a href="#">43650-0513</a>	<a href="#">43650-0514</a>	
6	<a href="#">43650-0612</a>	<a href="#">43650-0613</a>	<a href="#">43650-0614</a>	
7	<a href="#">43650-0712</a>	<a href="#">43650-0713</a>	<a href="#">43650-0714</a>	

Circuits	Order No.			Lead-free
	Tin	15µm Gold	30µm Gold	
8	<a href="#">43650-0812</a>	<a href="#">43650-0813</a>	<a href="#">43650-0814</a>	Yes
9	<a href="#">43650-0912</a>	<a href="#">43650-0913</a>	<a href="#">43650-0914</a>	
10	<a href="#">43650-1012</a>	<a href="#">43650-1013</a>	<a href="#">43650-1014</a>	
11	<a href="#">43650-1112</a>	<a href="#">43650-1113</a>	<a href="#">43650-1114</a>	
12	<a href="#">43650-1212</a>	<a href="#">43650-1213</a>	<a href="#">43650-1214</a>	



# PRODUCT SPECIFICATION

## MICRO-FIT SINGLE ROW CONNECTOR SYSTEM

### 1.0 SCOPE

This Product Specification covers the 3.00 mm (.118 inch) centerline (pitch) square pin headers when mated with either printed circuit board (PCB) connector or connectors terminated with 20 to 30 AWG wire using crimp technology.

### 2.0 PRODUCT DESCRIPTION

#### 2.1 PRODUCT NAME AND SERIES NUMBERS

Receptacle: 43645      Female Crimp Terminal: 43030  
Plug: 43640            Male Crimp Terminal: 43031  
Headers: 43650

Test Plug: 44242 (recommended for continuity testing only)

Other products conforming to this specification are noted on the individual drawings.

#### 2.2 DIMENSIONS, MATERIALS, PLATINGS AND MARKINGS

Housings: Receptacle and Plug - Polyester; Headers - LCP

Crimp Terminals: Phosphor Bronze

Pins: Brass

#### 2.3 SAFETY AGENCY APPROVALS

UL File Number: E29179      CSA: LR19980      TUV: 72040445

### 3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

Test Summary: TS-43045-001

### 4.0 RATINGS

#### 4.1 VOLTAGE

UL: 43650 and 43645 series: 600 Volts AC RMS or DC

43640 series: 250 Volts AC RMS or DC

TUV: 250 Volts

**4.2 CURRENT AND APPLICABLE WIRES** (Current is dependent on connector size, contact material, plating, ambient temperature, printed circuit board characteristics and related factors. Actual current rating is application dependent and should be evaluated for each application.)

AWG	Amps	Max. Outside Insulation Diameter
20	5	1.85 mm (.073 inch)
22	5	1.85 mm (.073 inch)
24	4	1.85 mm (.073 inch)
26	3	1.27 mm (.050 inch)
28	2	1.27 mm (.050 inch)
30	1	1.27 mm (.050 inch)

#### 4.2.1 CURRENT FOR TEST PLUG 44242

2.5 Amps Maximum (Pogo pin current capacity)

(Test plugs are for testing purposes only and not intended for continuous use.)

#### 4.3 TEMPERATURE

Operating: - 40°C to + 105°C (Including Terminal Temperature Rise)

Nonoperating: - 40°C to + 105°C

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<b>DOCUMENT NUMBER:</b> <b>PS-43650</b>	<b>CREATED / REVISED BY:</b> <b>M.KIPPER</b>	<b>CHECKED BY:</b> <b>S.SOUSEK</b>	<b>APPROVED BY:</b> <b>F.SMITH</b>



# PRODUCT SPECIFICATION

## 5.0 PERFORMANCE

### 5.1 ELECTRICAL REQUIREMENTS

DESCRIPTION	TEST CONDITION	REQUIREMENT
<b>Contact Resistance (Low Level)</b>	Mate connectors: apply a maximum voltage of 20 mV and a current of 100 mA. (Does not include wire resistance)	10 milliohms MAXIMUM [initial]
<b>Contact Resistance @ Rated Current</b>	Mate connectors: apply a maximum voltage of 20 mV at rated current.	30 milliohms MAXIMUM [initial]
<b>Contact Resistance of Wire Termination (Low Level)</b>	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]
<b>Insulation Resistance</b>	Unmate & unmount connectors: apply a voltage of 500 VDC between adjacent terminals and between terminals to ground.	1000 Megohms MINIMUM
<b>Dielectric Withstanding Voltage</b>	Unmate connectors: apply a voltage of {two times the rated voltage plus 1000 volts} VAC for 1 minute between adjacent terminals and between terminals to ground.	No breakdown; current leakage < 5 mA
<b>Capacitance</b>	Measure between adjacent terminals at 1 MHz.	2 picofarads MAXIMUM
<b>Temperature Rise (via Current Cycling)</b>	Mate connectors: measure the temperature rise at the rated current after: 1) 96 hours (steady state) 2) 240 hours (45 minutes ON and 15 minutes OFF per hour) 3) 96 hours (steady state)	Temperature rise: +30°C MAXIMUM

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		<b>APPROVED BY:</b>  <b>F.SMITH</b>	



# PRODUCT SPECIFICATION

## 5.2 MECHANICAL REQUIREMENTS

DESCRIPTION	TEST CONDITION	REQUIREMENT
<b>Connector Mate and Unmate Forces</b>	Mate and unmate connector (male to female) at a rate of $25 \pm 6$ mm ( $1 \pm \frac{1}{4}$ inch) per minute. (per circuit)	8.0 N (1.8 lbf) MAXIMUM insertion force & 3.7 N (0.8 lbf) MINIMUM withdrawal force
<b>Terminal Retention Force (in Housing)</b>	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.	24.5 N (5.5 lbf) MINIMUM retention force
<b>Terminal Insertion Force (into Housing)</b>	Apply an axial insertion force on the terminal at a rate of $25 \pm 6$ mm ( $1 \pm \frac{1}{4}$ inch) per minute.	14.7 N (3.3 lbf) MAXIMUM insertion force
<b>Durability</b>	Mate connectors up to 30 cycles at a maximum rate of 10 cycles per minute prior to Environmental Tests.	20 milliohms MAXIMUM (change from initial)
<b>Vibration (Random)</b>	Mate connectors and vibrate per EIA 364-28, test condition VII.	20 milliohms MAXIMUM (change from initial) & Discontinuity < 1 microsecond
<b>Shock (Mechanical)</b>	Mate connectors and shock at 50 g's with $\frac{1}{2}$ sine wave (11 milliseconds) shocks in the $\pm X, \pm Y, \pm Z$ axes (18 shocks total).	20 milliohms MAXIMUM (change from initial) & Discontinuity < 1 microsecond
<b>Wire Pullout Force (Axial)</b>	Apply an axial pullout force on the wire at a rate of $25 \pm 6$ mm ( $1 \pm \frac{1}{4}$ inch) per minute.	MINIMUM pullout force 20 awg: 57.8 N (13.0 lbf) 22 awg: 35.6 N (8.0 lbf) 24 awg: 22.2 N (5.0 lbf) 26 awg: 13.3 N (3.0 lbf) 28 awg: 8.9 N (2.0 lbf) 30 awg: 6.6 N (1.5 lbf)
<b>Normal Force</b>	Apply a perpendicular force.	2.7 N (0.6 lbf) MINIMUM
<b>Pin to Header Retention</b>	Apply axial push force to pin at a rate of $25 \pm 6$ mm ( $1 \pm \frac{1}{4}$ inch) per minute.	13.7 N (3.1 lbf) MINIMUM pushout force
<b>Thumb Latch to Ramp Yield Strength</b>	Full mate and then Unmate the connectors at a rate of $25 \pm 6$ mm ( $1 \pm \frac{1}{4}$ inch) per minute.	68.4 N (15.4 lbf) MINIMUM Yield Strength

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## 5.3 ENVIRONMENTAL REQUIREMENTS

DESCRIPTION	TEST CONDITION	REQUIREMENT
<b>Thermal Aging</b>	Mate connectors; expose to: 240 hours at 105 ± 2°C OR 500 hours at 85 ± 2°C	20 milliohms MAXIMUM (change from initial)
<b>Humidity (Steady State)</b>	Mate connectors: expose to a temperature of 40 ± 2°C with a relative humidity of 90-95% for 96 hours.  Note: Remove surface moisture and air dry for 1 hour prior to measurements.	20 milliohms MAXIMUM (change from initial) & Dielectric Withstanding Voltage: No Breakdown at 500 VAC & Insulation Resistance: 1000 Megohms MINIMUM
<b>Solderability</b>	Per SMES-152	Solder coverage: 95% MINIMUM (per SMES-152)
<b>Solder Resistance</b>	<b>A) Wave Solder Process</b> Dip connector terminal tails in solder; Solder Duration: 10 seconds MAX Solder Temperature: 260°C MAX Per ES-40000-5013  <b>B) Convection Reflow Solder Process</b> 235°C MAX Per ES-40000-5013  Parts identified with a blue dot on the primary shipping carton label and all parts with a manufacturing date after 9/1/2007: 260°C MAX Per ES-40000-5013	Visual: No Damage to insulator material
<b>Cold Resistance</b>	Mate connectors: Duration: 96 hours; Temperature: -40 ± 3°C	20 milliohms MAXIMUM (change from initial)

## 6.0 PACKAGING

Parts shall be packaged to protect against damage during handling, transit and storage per the packaging specifications listed below:

Receptacle and Plug: Bulk Packaged

Headers: PK-70873-0321, PK-70873-0811, PK-70873-07\*\*

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# PRODUCT SPECIFICATION

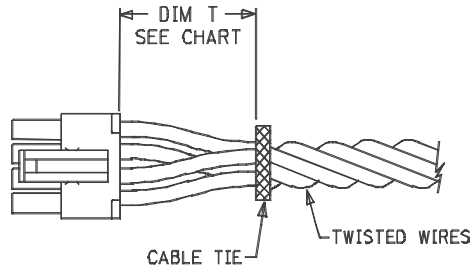
## 7.0 GAGES AND FIXTURES

It is recommended that test plugs (Series 44242) be used for continuity testing of receptacles. Standard mating parts should not be used for harness testing.

## 8.0 OTHER INFORMATION

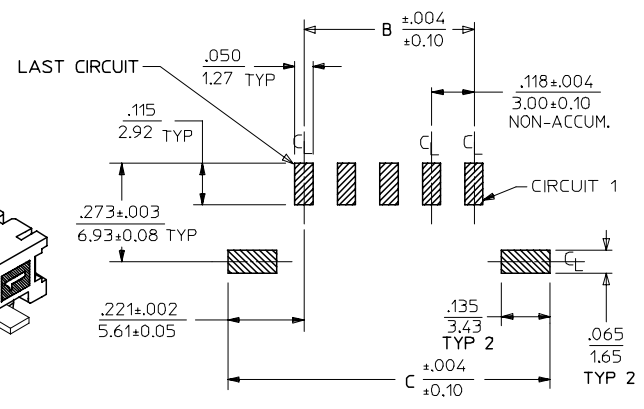
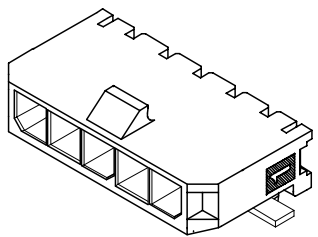
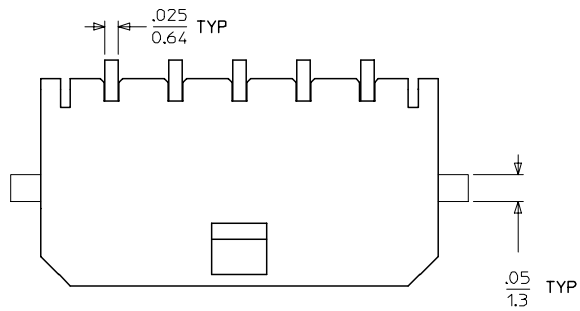
### 8.1 CABLE TIE AND OR WIRE TWIST LOCATION

CKT Sizes	Dim T	Min.
2-4	.500	(12.70)
5-8	.750	(19.10)
9-12	1.000	(25.40)



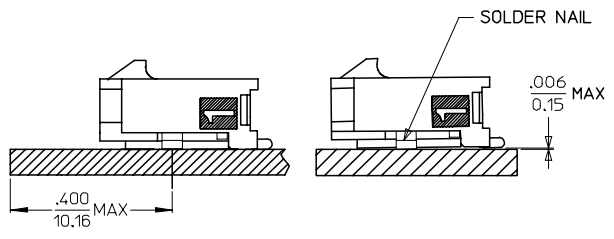
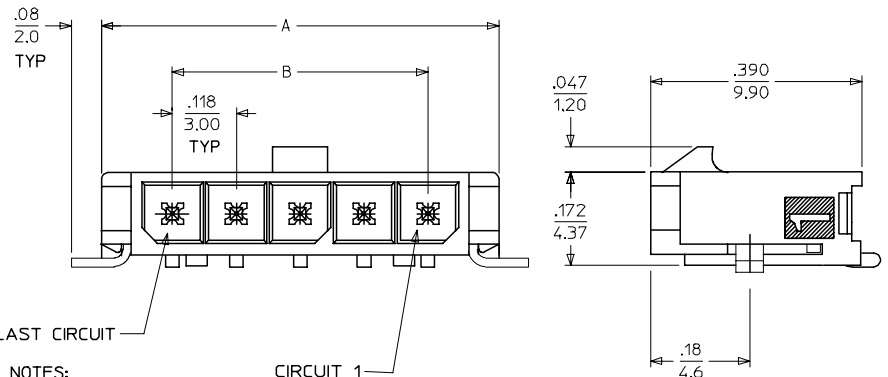
REVISION: <b>L</b>	EGR/ECN INFORMATION: EC No: <b>UCP2007-2450</b> DATE: <b>2007/09/06</b>	TITLE: <b>PRODUCT SPECIFICATION MICRO-FIT SINGLE ROW CONNECTORS</b>	SHEET No. <b>5 of 5</b>
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13 12 11 10 9 8 7 6 5 4 3 2 1



CKTS	A	B	C
2	.380 9.65	.118 3.00	.559 14.20
3	.498 12.65	.236 6.00	.677 17.20
4	.616 15.65	.354 9.00	.795 20.20
5	.734 18.64	.472 12.00	.913 23.20
6	.852 21.64	.591 15.00	1.031 26.20
7	.970 24.64	.709 18.00	1.150 29.20
8	1.088 27.64	.827 21.00	1.268 32.20
9	1.206 30.63	.945 24.00	1.386 35.20
10	1.325 33.66	1.063 27.00	1.504 38.20
11	1.443 36.65	1.181 30.00	1.622 41.20
12	1.561 39.65	1.299 33.00	1.740 44.20

PCB LAYOUT: COMPONENT SIDE



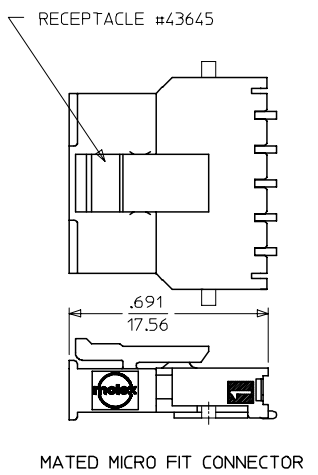
LOCATION DETAIL SEE NOTE #7  
COPLANARITY DETAIL SEE NOTE #6

- NOTES:**
- HOUSING MATERIAL: LIQUID CRYSTAL POLYMER, GLASS FILLED, UL94V-0, COLOR: BLACK  
TERMINAL MATERIAL: BRASS ALLOY
  - FINISH: A = .000100/(0.00254) MIN. BRIGHT TIN OVER .000050/(0.00127) MIN. NICKEL  
B = .000015/(0.00038) MIN. SELECT GOLD IN CONTACT AREA .000100/(0.00254) MIN. SELECT MATTE TIN ON SOLDER TAILS BOTH OVER .000050/(0.00127) NICKEL OVERALL  
C = .000030/(0.00076) MIN. SELECT GOLD IN CONTACT AREA .000100/(0.00254) MIN. SELECT MATTE TIN ON SOLDER TAILS BOTH OVER .000050/(0.00127) NICKEL OVERALL

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

- PRODUCT SPECIFICATION: PS-43650
- TAPE AND REEL PACKAGED : SEE MOLEX DRAWING PK-70873-07\*\*
- MATES WITH MICRO FIT (3.0) RECEPTACLE SERIES 43645
- THE COPLANARITY DIMENSION IS ESTABLISHED BY PLACING THE ASSEMBLY ON A FLAT SURFACE. THE DISTANCE FROM THAT SURFACE TO THE BOTTOM OF ANY TERMINAL OR NAIL MUST NOT EXCEED .006/0.15
- TO AVOID INTERFERENCE BETWEEN RECEPTACLE AND PCB, HEADER MUST BE PLACED WITHIN .400/(10.16) MAX. FROM EDGE OF PCB, AS SHOWN IN LOCATION DETAIL.
- A HIGHER TEMPERATURE GRADE MATERIAL (260C MAX. REFLOW TEMPERATURE) IS BEING PHASED-IN BEGINNING AUGUST 2007. PARTS WILL BE TEMPORARILY IDENTIFIED WITH A BLUE DOT ON THE PRIMARY SHIPPING CARTON LABEL UNTIL ALL CIRCUIT SIZES ARE CONVERTED. AT WHICH TIME A FULL-CONVERSION DATE WILL BE IDENTIFIED IN PS-43650.

CKTS	FINISH A	FINISH B	FINISH C
	MATERIAL NO:	MATERIAL NO:	MATERIAL NO:
02	43650-0212	43650-0213	43650-0214
03	43650-0312	43650-0313	43650-0314
04	43650-0412	43650-0413	43650-0414
05	43650-0512	43650-0513	43650-0514
06	43650-0612	43650-0613	43650-0614
07	43650-0712	43650-0713	43650-0714
08	43650-0812	43650-0813	43650-0814
09	43650-0912	43650-0913	43650-0914
10	43650-1012	43650-1013	43650-1014
11	43650-1112	43650-1113	43650-1114
12	43650-1212	43650-1213	43650-1214



MATED MICRO FIT CONNECTOR

<b>ADD NOTES 7 AND 8</b> EC NO: UCP2008-0037 DRAWN: HK/PPER 2007/09/06 CHKD: SSOUSEK 2007/09/11 APPR: FSM/TH 2007/09/12	QUALITY SYMBOLS ▽=0 ▽=0	GENERAL TOLERANCES (UNLESS SPECIFIED) mm INCH		DIMENSION STYLE IN/MM		SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION	
		4 PLACES ± --- ± ---	3 PLACES ± --- ± .010	DRAWN BY	DATE	TITLE	MICRO FIT (3.0) SINGLE ROW / RIGHT ANGLE SMT / NAILS / REELS MOLEX INCORPORATED SD-43650-005	METRIC	SHEET NO. 1 OF 1
		2 PLACES ± 0.25 ± .014	1 PLACE ± 0.36 ± ---	CHECKED BY	DATE				
		ANGULAR ±1/2°		APPROVED BY	DATE				
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		MATERIAL NO.	DATE						
SEE CHART THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		MATERIAL NO. SD-43650-005		DOCUMENT NO.					

12 11 10 9 8 7 6 5 4 3 2 1