

Molex 5045-02A PDF

深圳创唯电子有限公司

<http://www.molex-connect.com>

【1. 適用範囲 SCOPE】

本仕様書は、_____ 殿 に納入する

_____ 2.5mm ピッチ 電線対基板用コネクタ _____ について規定する。

This product specification covers the performance requirements for 2.5 mm PITCH WIRE TO BOARD CONNECTOR series for limited use by _____ .

【2. 製品名称及び型番 PRODUCT NAME AND PART NUMBER】

| 製品名称 Product Name | 製品型番 Part Number |
|--|---------------------|
| ターミナル Terminal | 2 7 5 9 |
| ターミナル Terminal | 5 1 5 9 |
| ハウジング Housing | 5 0 5 1-N |
| ウエハー アセンブリ (ST) Wafer Assembly (ST) | 5 0 4 5-NA |
| ウエハー アセンブリ(ST) Wafer Assembly (ST) | 5 0 4 5-NAG |
| ウエハー アセンブリ (RA) Wafer Assembly (RA) | 5 0 4 6-NA |
| ウエハー アセンブリ(RA) Wafer Assembly (RA) | 5 0 4 6-NAX |
| ウエハー アセンブリ (RA) Wafer Assembly (RA) | 5 0 4 6-NAG |

N : 図面参照 Refer to the draw

| | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------|--|--|--|--|--------|--|--|--|--|------------------------|---|-------------------------|---------------------|--|--|--|--|------------------|--|--|--|
| REV. | A | | | | | | | | | | | | | | | | | | | | |
| SHEET | 1-15 | | | | | | | | | | | | | | | | | | | | |
| REVISE ON PC ONLY | | | | | | | | | | TITLE: | | | | | | | | | | | |
| A | REVISED&REDRAWING 603664 2019/6/21 TE.NAGASE | | | | | | | | | | Mini-Latch 2.5 W/B SINGLE ROW CONNECTORS 製品仕様書 | | | | | | | | | | |
| | THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | | | | | | | | | | | | | | | | | | | |
| REV. | DESCRIPTION | | | | | | | | | | | | | | | | | | | | |
| DESIGN CONTROL J | | | | | STATUS | | | | | WRITTEN BY: TAKAIKE | CHECKED BY: KOMURAKAMI | APPROVED BY: TKANEKO | DATE: 2018/02/23 | | | | | | | | |
| DOCUMENT NUMBER 50510002-PS | | | | | | | | | | DOC. TYPE PS | DOC. PART 000 | CUSTOMER GENERAL | | | | | | SHEET 1 OF 15 | | | |
| EN-127(2015-12) | | | | | | | | | | | | | | | | | | | | | |

【3. 定格及び適用電線 RATINGS AND APPLICABLE WIRES】

| 項目 Item | 規格 Standard | |
|--|---|------|
| 最大許容電圧 Allowable Voltage (MAX.) | 250 V [AC (実効値 rms) / DC] | |
| 最大許容電流 及び 適用電線 Allowable Current (MAX.) And Applicable wires | AWG#28 | 2.0A |
| | AWG#26 | 2.5A |
| | AWG#24 | 3.0A |
| | AWG#22 | 3.0A |
| 被覆外径 : φ1.2~φ1.7mm Insulation O.D. | | |
| 使用温度範囲 ^{*1*2*3} Ambient Temperature Range | -40°C ~ +105°C 低温において氷結しないこと Not freeze in low temperature | |

- *1: 基板実装後の無通電状態は、使用温度範囲が適用されます。
Non-operating connectors after reflow must follow the operating temperature range condition.
- *2: 通電による温度上昇分を含む。
This includes the terminal temperature rise generated by conducting electricity.
- *3: 適合電線も本使用温度範囲を満足すること。
Applicable wires must also meet the specified temperature range.

| | | | | | |
|--------------------------------|-------------------|---|------------------|---------------------|------------------|
| A | REVISE ON PC ONLY | TITLE: Mini-Latch 2.5 W/B SINGLE ROW CONNECTORS 製品仕様書 | | | |
| | SEE SHEET 1 OF 15 | | | | |
| REV. | DESCRIPTION | THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | | |
| DOCUMENT NUMBER 50510002-PS | | DOC. TYPE PS | DOC. PART 000 | CUSTOMER GENERAL | SHEET 2 OF 15 |
| EN-127(2015-12) | | | | | |

【4. 性能 PERFORMANCE】

4-1. 電気的性能 Electrical performance

| 項目 Item | | 条件 Test Condition | 規格 Requirement |
|------------|--|--|--|
| 4-1-1 | 接触抵抗 Contact Resistance | コネクタを嵌合させ、開放電圧 20mV以下、短絡電流 10mA 以下にて測定する。(JIS C5402-2-1) Mate connectors and measured by dry circuit, 20mV MAX., 10mA.MAX. (JIS C5402-2-1) | 20 milliohms MAX. |
| 4-1-2 | 絶縁抵抗 Insulation Resistance | コネクタを嵌合させ、隣接するターミナル間及びターミナル、アース間に、DC 500Vを印加し測定する。(JIS C5402-3-1/MIL-STD-202 試験法 302) Mate connectors and apply 500V DC between adjacent terminal or ground. (JIS C5402-3-1/MIL-STD-202 Method 302) | 1000 Megohms MIN. |
| 4-1-3 | 耐電圧 Dielectric Strength | コネクタを嵌合させ、隣接するターミナル間及びターミナル、アース間に、AC 1000V (実効値) を1分間 印加する (JIS C5402-4-1/MIL-STD-202 試験法 301) Mate connectors and apply 1000V AC(rms) for 1 minute between adjacent terminal or ground. (JIS C5402-4-1/MIL-STD-202 Method 301) | 製品機能を損なう 異常なきこと No Damage on function |
| 4-1-4 | 圧着部接触抵抗 Contact Resistance on Crimped Portion | ターミナルに適合電線を圧着し、開放電圧20mV以下、短絡電流 10mA 以下にて測定する。 Crimp the applicable wire to the terminal, measured by dry circuit, 20mV MAX., 10mA.MAX. | 5 milliohms MAX. |

REVISE ON PC ONLY

A

SEE SHEET 1 OF 15

TITLE:

Mini-Latch 2.5 W/B
SINGLE ROW CONNECTORS

製品仕様書

THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

REV.

DESCRIPTION

DOCUMENT NUMBER
50510002-PS

DOC. TYPE
PS

DOC. PART
000

CUSTOMER
GENERAL

SHEET
3 OF 15

4-2. 機械的性能 Mechanical Performance

| 項目 Item | | 条件 Test Condition | | 規格 Requirement |
|------------|--|---|--------|-------------------------------|
| 4-2-1 | 挿入力及び抜去力 Insertion and Withdrawal Force | 毎分25±3mmの速さで挿入、抜去を行う。 Insert and withdraw connectors at the speed rate of 25±3mm/minute. | | 第6項参照 Refer to paragraph 6 |
| 4-2-2 | 圧着部引張強度 Crimping Pull out Force | 圧着されたターミナルを治具に 固定し、電線を軸方向に 毎分25±3mmの速さで引張る。 (JIS C5402-16-4) Fix the crimped terminal to the jig, apply axial pull out force on the wire at the speed rate of 25±3 mm/minute. (JIS C5402-16-4) | AWG#28 | 9.8N{1.0kgf}MIN. |
| | | | AWG#26 | 19.6N{2.0kgf}MIN. |
| | | | AWG#24 | 29.4N{3.0kgf}MIN. |
| | | | AWG#22 | 39.2N{4.0kgf}MIN. |
| 4-2-3 | 圧着端子挿入力 Crimp Terminal Insertion Force | 圧着されたターミナルをハウジングに挿入する。 Insert the crimped terminal into the housing. | | 14.7N {1.5kgf} MAX. |
| 4-2-4 | 圧着端子保持力 Crimp Terminal Retention Force | ハウジングに装着した圧着されたターミナルを 毎分 25±3mm の速さで軸方向に引張る。 Apply axial pull out force at the speed rate of 25±3 mm/minute on the crimped terminal assembled in the housing. | | 14.7N {1.5kgf} MIN. |
| 4-2-5 | ウエハー端子保持力 Wafer Terminal Retention Force | ハウジングに装着されたターミナルを 毎分 25±3mm の速さで軸方向に引張る。 Apply axial pull out force at the speed rate of 25±3mm/minute on the terminal assembled in the housing. | | 9.8N {1.0 kgf} MIN. |
| 4-2-6 | ウエハー端子強度 Wafer Terminal intensity | 全ての方向に 1分間、500gf の力を加える。 500gf power added to all directions for 1 minute. | | 割れ、 折れないこと。 No Damage |

| | | |
|-------------------|-------------------|---|
| REVISE ON PC ONLY | | TITLE: Mini-Latch 2.5 W/B SINGLE ROW CONNECTORS 製品仕様書 |
| A | SEE SHEET 1 OF 15 | |
| REV. | DESCRIPTION | |

THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

| | | | | |
|--------------------------------|-----------------|------------------|---------------------|------------------|
| DOCUMENT NUMBER 50510002-PS | DOC. TYPE PS | DOC. PART 000 | CUSTOMER GENERAL | SHEET 4 OF 15 |
|--------------------------------|-----------------|------------------|---------------------|------------------|

4-3. 環境性能、その他 Environmental Performance and Others

| 項目 Item | | 条件 Test Condition | 規格 Requirement | |
|------------|---|---|-------------------------------|---|
| 4-3-1 | 繰り返し挿抜 Repeated Insertion / Withdrawal | 1分間 10回 以下の速さで、挿入、抜去を30回 繰り返す。 Insert and withdraw connectors 30 cycles repeatedly by rate of less than 10 cycles per minute. | 接触抵抗 Contact Resistance | 40 milliohms MAX. |
| 4-3-2 | 温度上昇 Temperature Rise | コネクタを嵌合させ、全ての圧着端子を直列に接続し最大許容電流で熱平衡に達した時の温度上昇を測定する。(UL498) Mate connectors and all crimp terminals shall be connected in a direct series. The temperature rise shall be measured when the terminal reaches terminal equilibrium allowable current. (UL498) | 温度上昇 Temperature Rise | 30 °C MAX. |
| 4-3-3 | 耐振動性 Vibration | コネクタを嵌合させ、DC 1mA 通電状態にて、嵌合軸を含む互いに垂直な 3方向に 掃引割合 10~55~10 Hz/分、全振幅 1.5mm の振動を各2時間 加える。(ケーブルは固定すること) (JIS C 60068-2-6/MIL-STD-202 試験法 201) Mate connectors and subject to the following vibration conditions, for a period of 2 hours in each of 3 mutually perpendicular axes, passing DC 1mA during the test. (Fix the cable at test.) Amplitude : 1.5mm P-P Frequency : 10~55~10 Hz in 1 minute. Duration : 2 hours in each X.Y.Z.axes. (JIS C 60068-2-6/MIL-STD-202 Method 201) | 外観 Appearance | 製品機能を損なう異常なきこと No Damage on function |
| | | | 接触抵抗 Contact Resistance | 40 milliohms MAX. |
| | | | 瞬断 Discontinuity | 1.0 micro second MAX. |

REVISE ON PC ONLY

A

SEE SHEET 1 OF 15

TITLE:

Mini-Latch 2.5 W/B
SINGLE ROW CONNECTORS

製品仕様書

THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

REV.

DESCRIPTION

DOCUMENT NUMBER
50510002-PS

DOC. TYPE
PS

DOC. PART
000

CUSTOMER
GENERAL

SHEET
5 OF 15

| 項 目 Item | | 条 件 Test Condition | 規 格 Requirement | |
|-------------|-----------------------------|---|-------------------------------|---|
| 4-3-4 | 耐 衝 撃 性 Mechanical Shock | コネクタを嵌合させ、DC 1mA 通電状態にて、テストパルス半周期、嵌合軸を含む互いに垂直な 6方向 に 490m/s ² { 50G }、作用時間11msの衝撃を各3回、合計18回加える。 (JIS C60068-2-27/MIL-STD-202 試験法 213) Mate connectors and subject to the following shock conditions. 3 shocks shall be applied along 3 mutually perpendicular axes, passing DC 1 mA current during the test. (Total of 18 shocks) Test pulse : Half Sine Peak value : 490 m/s ² (50 G) Duration : 11 ms (JIS C60068-2-27/MIL-STD-202 Method 213) | 外 観 Appearance | 製品機能を損なう異常なきこと No Damage on function |
| | | | 接 触 抵 抗 Contact Resistance | 40 milliohms MAX. |
| | | | 瞬 断 Discontinuity | 1.0 micro second MAX. |

| | | | | | |
|-------------------|-------------------|--|-----------|----------|---------|
| REVISE ON PC ONLY | | TITLE: | | | |
| A | SEE SHEET 1 OF 15 | Mini-Latch 2.5 W/B SINGLE ROW CONNECTORS 製品仕様書 | | | |
| | | THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | | |
| REV. | DESCRIPTION | DOC. TYPE | DOC. PART | CUSTOMER | SHEET |
| | 50510002-PS | PS | 000 | GENERAL | 6 OF 15 |
| EN-127(2015-12) | | | | | |

| 項 目 Item | | 条 件 Test Condition | 規 格 Requirement | |
|-------------|------------------------|--|----------------------------------|---|
| 4-3-5 | 耐熱性 Heat Resistance | コネクタを嵌合させ、105±2°C の雰囲気中に96時間放置後取り出し、1~2時間室温に放置する。 (JIS C60068-2-2/MIL-STD-202 試験法 108) Mate connectors and expose to 105±2°C for 96 hours. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room conditions for 1 to 2 hours , after which the specified measurements shall be performed. (JIS C60068-2-2/MIL-STD-202 Method 108) | 外 観 Appearance | 製品機能を損なう異常なきこと No Damage on function |
| | | | 接 触 抵 抗 Contact Resistance | 40 milliohms MAX. |
| 4-3-6 | 耐寒性 Cold Resistance | コネクタを嵌合させ、-40±3°C の雰囲気中に96時間 放置後取り出し、1~2時間 室温に放置する。(JIS C60068-2-1) Mate connectors and expose to -40±3°C for 96 hours. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room conditions for 1 to 2 hours, after which the specified measurements shall be performed. (JIS C60068-2-1) | 外 観 Appearance | 製品機能を損なう異常なきこと No Damage on function |
| | | | 接 触 抵 抗 Contact Resistance | 40 milliohms MAX. |
| 4-3-7 | 耐湿性 Humidity | コネクタを嵌合させ、60±2°C、相対湿度90~95% の雰囲気中に 96時間 放置後取り出し、1~2時間 室温に放置する。 (JIS C60068-2-78/MIL-STD-202 試験法 103) Mate connectors and expose to 60±2°C, relative humidity 90 to 95% for 96 hours. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room conditions for 1 to 2 hours, after which the specified measurements shall be performed. (JIS C60068-2-78/MIL-STD-202 Method 103) | 外 観 Appearance | 製品機能を損なう異常なきこと No Damage on function |
| | | | 接 触 抵 抗 Contact Resistance | 40 milliohms MAX. |
| | | | 絶 縁 抵 抗 Insulation Resistance | 100 Megohms MIN. |
| | | | 耐 電 圧 Dielectric Strength | 4-1-3項満足のこと Must meet 4-1-3 |

REVISE ON PC ONLY

A

SEE SHEET 1 OF 15

TITLE:

Mini-Latch 2.5 W/B
SINGLE ROW CONNECTORS

製品仕様書

THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

REV.

DESCRIPTION

DOCUMENT NUMBER
50510002-PS

DOC. TYPE
PS

DOC. PART
000

CUSTOMER
GENERAL

SHEET
7 OF 15

| 項 目 Item | | 条 件 Test Condition | 規 格 Requirement | |
|-------------|----------------------------------|---|----------------------------------|---|
| 4-3-8 | 温度サイクル Temperature Cycling | コネクタを嵌合させ、 $-55\pm 3^{\circ}\text{C}$ に 30分、 $+105\pm 2^{\circ}\text{C}$ に 30分。これを1サイクルとし、5サイクル 繰返す。 但し、温度移行時間は 5分以内 とする。 試験後1~2時間 室温に放置する。 (JIS C60068-2-14) Mate connectors and subject to the following conditions for 5 cycles. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room conditions for 1 to 2 hours, after which the specified measurements shall be performed. 5 cycles of : a) $-55\pm 3^{\circ}\text{C}$ 30 minutes b) $+105\pm 2^{\circ}\text{C}$ 30 minutes Shift time : Within 5 minutes (JIS C60068-2-14) | 外 観 Appearance | 製品機能を損なう異常なきこと No Damage on function |
| | | | 接 触 抵 抗 Contact Resistance | 40 milliohms MAX. |
| 4-3-9 | 塩 水 噴 霧 Salt Spray | コネクタを嵌合させ、 $35\pm 2^{\circ}\text{C}$ にて $5\pm 1\%$ 重量比の塩水を 48 ± 4 時間噴霧し、試験後常温で水洗いした後、室温で乾燥させる。 (JIS C60068-2-11/MIL-STD-202 試験法101) Mate connectors and expose to the following salt mist conditions. Upon completion of the exposure period, salt deposits shall be removed by a gentle wash or dip in running water, after which the specified measurements shall be performed. NaCl solution Concentration : $5\pm 1\%$ Spray time : 48 ± 4 hours Ambient temperature : $35\pm 2^{\circ}\text{C}$ (JIS 60068-2-11/MIL-STD-202 Method 101) | 外 観 Appearance | 製品機能を損なう異常なきこと No Damage on function |
| | | | 接 触 抵 抗 Contact Resistance | 40 milliohms MAX. |

REVISE ON PC ONLY

A

SEE SHEET 1 OF 15

TITLE:

Mini-Latch 2.5 W/B
SINGLE ROW CONNECTORS

製品仕様書

THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

REV.

DESCRIPTION

DOCUMENT NUMBER
50510002-PS

DOC. TYPE
PS

DOC. PART
000

CUSTOMER
GENERAL

SHEET
8 OF 15

| 項目 Item | | 条件 Test Condition | 規格 Requirement | |
|------------|--|--|-------------------------------|---|
| 4-3-10 | 耐亜硫酸ガス SO ₂ Gas | コネクタを嵌合させ、40±2℃にて50±5ppmの亜硫酸ガス中に24時間放置する。 Mated connectors and expose to the conditions of 50±5ppm SO ₂ gas ambient temperature 40±2℃ for 24 hours. | 外 観 Appearance | 製品機能を損なう異常なきこと No Damage on function |
| | | | 接 触 抵 抗 Contact Resistance | 40 milliohms MAX. |
| 4-3-11 | はんだ付け性 Solderability | ターミナルまたはピンをフラックスに浸し、端子先端より1.2mm迄、230±5℃のはんだに3±0.5秒浸す。 Dip terminal or pin into flux, and immerse the area up to 1.2mm from the tip of terminal into solder molten at 230±5℃ for 3±0.5 sec. | 濡れ性 Solder Wetting | ピンホールや隙間なく浸漬面積の75%以上 75% of immersed area must show no voids, pin holes. |
| 4-3-12 | はんだ耐熱性 Resistance to Soldering Heat | <u>ディップの場合</u> <u>Soldering bath method</u> ターミナルまたはピンを本体取付け基準面より1.2mm迄、260±5℃のはんだに5±0.5秒浸す。 Dip terminal or pin into immerse the area up to 1.2mm from the bottom of the housing into solder molten at 260±5℃ for 5±0.5 sec. | 外 観 Appearance | 端子ガタ、割れ等異常なきこと No Damage |

() : 参考規格 Reference Standard
{ } : 参考単位 Reference Unit

【5. 外観形状、寸法及び材質 PRODUCT SHAPE, DIMENSIONS AND MATERIALS】

5-1. 製品寸法及び材質 Dimensions and materials of product.

図面参照 Refer to the drawing.

| | | | | | |
|---|-------------------|---|------------------|---------------------|------------------|
| REVISE ON PC ONLY | | TITLE: | | | |
| A | SEE SHEET 1 OF 15 | Mini-Latch 2.5 W/B SINGLE ROW CONNECTORS | | | |
| | REV. | DESCRIPTION | 製品仕様書 | | |
| <small>THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION</small> | | | | | |
| DOCUMENT NUMBER 50510002-PS | | DOC. TYPE PS | DOC. PART 000 | CUSTOMER GENERAL | SHEET 9 OF 15 |
| EN-127(2015-12) | | | | | |

【6. 挿入力及び抜去力 INSERTION / WITHDRAWAL FORCE】

| 極数 No. of CKT | 単位 UNIT | 挿入力 (最大値) Insertion (MAX.) | | | 抜去力 (最小値) Withdrawal (MIN.) | | |
|---------------------|------------|-------------------------------|--------------------|--------------------|--------------------------------|------------------|------------------|
| | | 初回 1st | 6回目 6th | 30回目 30th | 初回 1st | 6回目 6th | 30回目 30th |
| 2 | N {kgf} | 35.3 { 3.60 } | 33.3 { 3.40 } | 33.3 { 3.40 } | 6.4 { 0.65 } | 5.4 { 0.55 } | 5.4 { 0.55 } |
| 3 | N {kgf} | 43.1 { 4.40 } | 40.2 { 4.10 } | 40.2 { 4.10 } | 6.9 { 0.70 } | 5.9 { 0.60 } | 5.9 { 0.60 } |
| 4 | N {kgf} | 51.0 { 5.20 } | 47.0 { 4.80 } | 47.0 { 4.80 } | 7.4 { 0.75 } | 6.4 { 0.65 } | 6.4 { 0.65 } |
| 5 | N {kgf} | 58.8 { 6.00 } | 53.9 { 5.50 } | 53.9 { 5.50 } | 7.9 { 0.80 } | 6.9 { 0.70 } | 6.9 { 0.70 } |
| 6 | N {kgf} | 64.7 { 6.60 } | 58.8 { 6.00 } | 58.8 { 6.00 } | 8.8 { 0.90 } | 7.9 { 0.80 } | 7.9 { 0.80 } |
| 7 | N {kgf} | 70.6 { 7.20 } | 63.7 { 6.50 } | 63.7 { 6.50 } | 9.8 { 1.00 } | 8.8 { 0.90 } | 8.8 { 0.90 } |
| 8 | N {kgf} | 76.4 { 7.80 } | 68.6 { 7.00 } | 68.6 { 7.00 } | 11.3 { 1.15 } | 9.8 { 1.00 } | 9.8 { 1.00 } |
| 9 | N {kgf} | 82.3 { 8.40 } | 73.5 { 7.50 } | 73.5 { 7.50 } | 12.7 { 1.30 } | 11.3 { 1.15 } | 11.3 { 1.15 } |
| 10 | N {kgf} | 88.2 { 9.00 } | 78.4 { 8.00 } | 78.4 { 8.00 } | 14.2 { 1.45 } | 12.7 { 1.30 } | 12.7 { 1.30 } |
| 11 | N {kgf} | 94.1 { 9.60 } | 83.3 { 8.50 } | 83.3 { 8.50 } | 15.7 { 1.60 } | 14.2 { 1.45 } | 14.2 { 1.45 } |
| 12 | N {kgf} | 100.0 { 10.20 } | 88.2 { 9.00 } | 88.2 { 9.00 } | 18.1 { 1.85 } | 15.7 { 1.60 } | 15.7 { 1.60 } |
| 13 | N {kgf} | 105.8 { 10.80 } | 93.1 { 9.50 } | 93.1 { 9.50 } | 19.6 { 2.00 } | 17.2 { 1.75 } | 17.2 { 1.75 } |
| 14 | N {kgf} | 111.7 { 11.40 } | 98.0 { 10.00 } | 98.0 { 10.00 } | 21.1 { 2.15 } | 18.6 { 1.90 } | 18.6 { 1.90 } |
| 15 | N {kgf} | 117.6 { 12.00 } | 102.9 { 10.50 } | 102.9 { 10.50 } | 22.5 { 2.30 } | 20.1 { 2.05 } | 20.1 { 2.05 } |

{ } :参考単位 Reference Unit
製品の極数についてはSDを参照 Refer to the drawing about ckt of product.

| | | | | | |
|---------------------------------------|-------------------|---|-------------------------|----------------------------|-------------------|
| REVISE ON PC ONLY | | TITLE: | | | |
| A | SEE SHEET 1 OF 15 | Mini-Latch 2.5 W/B SINGLE ROW CONNECTORS | | | |
| | | 製品仕様書 | | | |
| REV. | DESCRIPTION | <small>THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION</small> | | | |
| DOCUMENT NUMBER 50510002-PS | | DOC. TYPE PS | DOC. PART 000 | CUSTOMER GENERAL | SHEET 10 OF 15 |
| EN-127(2015-12) | | | | | |

【7. 注記 NOTES.】

1. 本製品のプラスチック部に黒点、気泡等が確認される場合や色合いが異なる場合（経年変化によるハウジングの変色を含む）が御座いますが、製品性能に影響は御座いません。
There is no influence in the product performance though the black spot or bubble etc. might be confirmed to the plastic part of this product and the shade might be different (discoloration by secular distortion etc.).
2. 錫めっきを使用している製品は、外観に摺動痕がつく場合が御座いますが、製品性能に影響は御座いません。
The wound of friction might adhere to externals because the tin plating is used for the tail. But there is no influence in the product performance.
3. 本製品のハウジング及びめっき表面に多少の傷が確認される場合がありますが、製品性能に問題御座いません。
A few scratches may be confirmed to the surface of the housing and the plating of this product, however, There is no problem in the product performance.
4. 本製品のプラスチック部が紫外線により変色する場合がありますが、製品性能には問題御座いません。
Discoloration of the plastic part of this product can result from exposure to ultraviolet light. There is no problem in the product performance.
5. 本製品を結露・水濡れが発生する環境でのご使用の場合は、適切な防滴処置をお願い致します。
結露・水濡れにより、回路間で絶縁不良を起こす可能性が御座います。
When this product is used at a place where exposure to water could be expected, please handle with appropriate care to avoid damage from water. There is a possibility of causing insulated malfunction between the circuits.
6. コネクタの性能を損なう恐れがある為、コネクタの洗浄は、行わないでください。
Please do not conduct any washing process on the connectors because it may damage the product's function.
7. 本製品をご使用時に取り付けられた電線・プリント基板の共振や、機器の回転構造や可動部分の動作によりコネクタ嵌合部（接点部）が常に動いてしまう状態での御使用は避けてください。
接触部の摺動磨耗等による 接触不良の原因となります。従って、機器内で電線・プリント基板を固定し、共振を抑える等の処置をお願い致します。
Please do not use the connectors in a condition where the wire, PWB, or the contact area is experiencing a sympathetic vibration of wires and PWB, and constant movement of devices. This may cause a defect in the contact due to the contact area being worn down. Therefore, please fix wires and PWB on the chassis, and reduces sympathetic vibration.
8. コネクタ嵌合状態で基板の持ち運び等コネクタに負荷が掛かる作業は行わないようにしてください。
コネクタ破損等の原因となる場合が御座います。
Please do not do work that the load hangs in the connectors like the carrying of the substrate etc. with the connectors engages. There is a case where it causes the connectors damage etc.

| | | | | | |
|--------------------------------|-------------------|---|------------------|---------------------|-------------------|
| REVISE ON PC ONLY | | TITLE: | | | |
| A | SEE SHEET 1 OF 15 | Mini-Latch 2.5 W/B SINGLE ROW CONNECTORS | | | |
| | REV. | DESCRIPTION | 製品仕様書 | | |
| | | <small>THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION</small> | | | |
| DOCUMENT NUMBER 50510002-PS | | DOC. TYPE PS | DOC. PART 000 | CUSTOMER GENERAL | SHEET 11 OF 15 |
| EN-127(2015-12) | | | | | |

9. 嵌合後、コネクタピッチ方向、スパン方向及び回転方向への負荷がかかるような動作またはセットはしないでください。コネクタ破壊やはんだクラックを引き起こします。
After mated the connectors, please do not allow the PWBs to apply pressure on the connectors in either the pitch direction, the span direction or rotational direction. It may cause damage to the connectors and may crack the soldering.
10. 本製品及び加工工程品（仕掛品）や加工品（ハーネス等）の梱包及び輸送・保管時にはコネクタに負荷が加わらないようご注意ください。変形、破損などの原因となり、コネクタの性能不良の原因となります。
Please try to prevent any external forces or shock from being applied to the connectors while the cable assembly is in process, when it is being packaged, or while it is in transportation. This may cause deformation and damage to the connectors and cause a defect in the product's performance.
11. 本製品をご使用時には、1PIN当りの定格以上の電流を複数の回路に分岐しての使用は避けてください。
When using this product, please ensure that the specification for rated current per circuit is followed. Do not allow the sum of the current used on several circuits to exceed the maximum allowable current.
12. 活電状態の電気回路で、挿入、抜去ができることを前提に作られておりません。
スパーク等による危険の発生、性能不良につながりますので、活電状態での挿入、抜去はしないでください。
This product is not designed for the mating and unmating of the connectors to be performed under the condition of an active electrical circuit. It may cause a spark and product defect if the connectors are mated and unmated in this way.
13. コネクタに適用できる電線は、原則として錫めっきつき付軟銅撚り線です。
その他の電線の使用については別途ご確認ください。
The applicable wire for this connectors, in principle, is tin-plated copper stranded wire. Please consult us and evaluate it in advance when using other wires.
14. コネクタに外力が加わらないようにクリアランスをあげた筐体構造にしてください。
Please keep enough clearance between connectors and chassis of your application in order not to apply pressure on the connectors.
15. 電線の結束はコネクタから35mm以上のところで、電線に加わる力が均一になるようにしてください。ハーネス品で電線一本（又は特定の数本）に力が加わらない様にしてください。
Please tie the cable at least 35mm away from the edge of the connectors and try to ensure that the force is applied evenly on all of the wires.
16. 治具等を使用して圧着端子を抜いた場合には、ランスが変形し強度が低下し端子を再装着後の端子保持力が極端に低下します。そのため、圧着端子のリペアの際には新しいハウジングを必ず使用してください。
When extracting a crimp terminal from the housing using a jig, it may deform the housing lance and therefore reduce the terminal retention force enormously after re-inserting of the terminal. Therefore, please ensure to use a new housing after repairing the crimp terminals.

| | | | | | |
|---|-------------------|---|------------------|---------------------|-------------------|
| REVISE ON PC ONLY | | TITLE: | | | |
| A | SEE SHEET 1 OF 15 | Mini-Latch 2.5 W/B SINGLE ROW CONNECTORS | | | |
| | REV. | DESCRIPTION | 製品仕様書 | | |
| <small>THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION</small> | | | | | |
| DOCUMENT NUMBER 50510002-PS | | DOC. TYPE PS | DOC. PART 000 | CUSTOMER GENERAL | SHEET 12 OF 15 |
| EN-127(2015-12) | | | | | |

17. ハーネス加工品及びコネクタ嵌合後の電線の引き回しの際、引張りによる力が加わりますと、接点部、結線部（圧着部）やロック部（端子ロック部）が損傷を受け、接触不良の原因となります。
電線の引回し配線をされる場合、コネクタに無理な外力が加わらないように、電線に緩みを持たせ、余裕を持たせる処置をしてください。
The cable assembly should not have a constant stress or pulling force applied on it when it is in the mated condition. This phenomenon may damage the contact area or wiring area (crimping).
Therefore, when designing the wire positioning, please ensure that there is enough length of wire to avoid stress on the connectors.
18. 電線はまとめて軽くつかみ、ゆっくり、軸方向にまっすぐに引き抜いてください。
また、斜めにこじりながら抜くことは避けてください。コネクタを破損させる恐れが御座います。
Please hold wires all together lightly. Please withdraw housing slowly, axially and straightly. Please avoid withdrawing them with an angle and roughly. That might cause damage to connector.
19. 圧着高さ、状態、適用電線等の詳細は、弊社圧着仕様書：CS-2759, CS-5159 を参照願います。
The details refer to CS-2759, CS-5159 such as crimping satisfied height, state & applicable wire.
20. 嵌合後、コネクタピッチ方向、スパン方向及び回転方向への負荷がかかるような動作またはセットはしないでください。コネクタ破壊やはんだクラックを引き起こします。
After mating, please do not take a connector pitch direction, a span direction and load to the rotator direction. It causes connector destruction and the solder crack.
- 21.ハウジングのロック部やランス部などの可動部、及び端子を故意に変形させないでください。
製品性能が満足出来ない原因となります。
Do not deform the movable part as lock part and lance part of housing and terminals on purpose. It would lead to product failure.
22. はんだ実装部の未はんだは、ターミナル脱落、ピン間ショート、ターミナル座屈、またコネクタ基板からの外れが懸念されます。従って全てのターミナルテール部にはんだ付けを行ってください。
If you leave any soldering area on this product open, there may be the possibility of a missing terminal short circuiting between pins, terminal buckling or the potential for the connectors to come off of the PWB. Therefore, please solder all of the terminals on the PWB.
23. 実装機によってコネクタに負荷が加わると変形、破損する場合がありますので事前にご確認ください。
If there is accidental contact with the connectors while it is going through the reflow machine, there may be deformation or damage caused to the connectors. Please check to prevent this.
24. 基板実装前後に端子に触らないでください。
Please do not touch the terminals before or after mounted the connectors onto the PWB.
25. 基板実装後に基板を直接積み重ねない様に注意してください。
Please do not stack the PWB directly after mounted the connectors on it.
26. コネクタのみで基板を支えることは避け、コネクタ以外での基板固定対策を行ってください。
Please do not use the connectors alone to provide mechanical support for the PWB.
Please ensure that there is a fixed structure on the phone chassis or other component support for the PWB.

| | | | | | |
|--------------------------------|-------------------|---|------------------|---------------------|-------------------|
| REVISE ON PC ONLY | | TITLE: | | | |
| A | SEE SHEET 1 OF 15 | Mini-Latch 2.5 W/B SINGLE ROW CONNECTORS | | | |
| | | 製品仕様書 | | | |
| REV. | DESCRIPTION | <small>THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION</small> | | | |
| DOCUMENT NUMBER 50510002-PS | | DOC. TYPE PS | DOC. PART 000 | CUSTOMER GENERAL | SHEET 13 OF 15 |
| EN-127(2015-12) | | | | | |

27. 弊社の推奨基板パターン寸法を変更して設計を行なう際は、致命的な不良の原因にもなりますのであらかじめご相談ください。
In the case of changing our recommended board pattern size and designing, please consult in advance because it may cause a fatal defect.
28. 本品の一般性能確認はガラスエポキシ基板にて実施していますので、フレキシブル基板等の特殊な基板へ実装してご使用の際は、別途ご相談願います。
It is necessary to consult separately when mount product on a special PWB or FPC.
29. コネクタを基板に対して垂直に真っ直ぐ挿入してください。斜めにしたりコジリを加えたりしないでください。
※コネクタを保持する際にはコンタクトに触れることの無い様に御注意ください。
※コネクタを基板に対して垂直に保持した状態で真っ直ぐに基板穴へソルダーテールを挿入してください。
※基板穴とソルダーテールがずれる方向や斜めに傾く様な力を加えないでください。
※無理に斜め挿入を行った場合、ピンの変形、抜けが生じ、コネクタが破損する恐れがあります
Load the connector into the PWB straight down. Do not tilt or squeeze the connector in wrong directions.
※When touching the connector, be sure not to touch the contacts.
※Load the solder tails straightly into the PWB.
※Do not apply force in such directions that would damage the solder tails.
※In case you push the solder tails in such directions, the pin deformations and pin fallout would occur and damage the connector.
30. 本製品のハウジング材料は耐熱性ナイロンを使用しており、ハウジングの吸水状態、或いは、はんだ付け条件によっては、リフローはんだ付け時にハウジング表面に「ふくれ」が発生する可能性があります。この「ふくれ」に関しましては、ナイロン材の物性変化を伴うものではなく、製品機能を損なうものではありません。
The housing material of this product is made from a high heat resistant Nylon. The soldering condition and the water absorption properties of the housing material may cause blistering on the housing surface. Because this blister is not caused by property change, it does not damage the product's features.

| | | | | | |
|--------------------------------|-------------------|---|------------------|---------------------|-------------------|
| REVISE ON PC ONLY | | TITLE: | | | |
| A | SEE SHEET 1 OF 15 | Mini-Latch 2.5 W/B SINGLE ROW CONNECTORS | | | |
| | REV. | DESCRIPTION | 製品仕様書 | | |
| | | <small>THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION</small> | | | |
| DOCUMENT NUMBER 50510002-PS | | DOC. TYPE PS | DOC. PART 000 | CUSTOMER GENERAL | SHEET 14 OF 15 |
| EN-127(2015-12) | | | | | |

molex SALES PACKAGING SPECIFICATION

LANGUAGE
JAPANESE
ENGLISH

1. 製品名称 / PRODUCT NAME : KK 2.5 WAFER ASS'Y WITH LOCK

製品番号 / PART NUMBER : 5 0 4 5 - * * A

5 0 4 5 - * * A - ☆ ☆

(* * は極数を示す。☆☆は色を示す。図面参照。)

(* * SHOWS CIRCUITS SIZE, ☆ ☆ SHOWS COLOR. REFER TO DRAWING.)

Use for Japan production only.

2. 梱包仕様 / PACKAGING SPECIFICATION

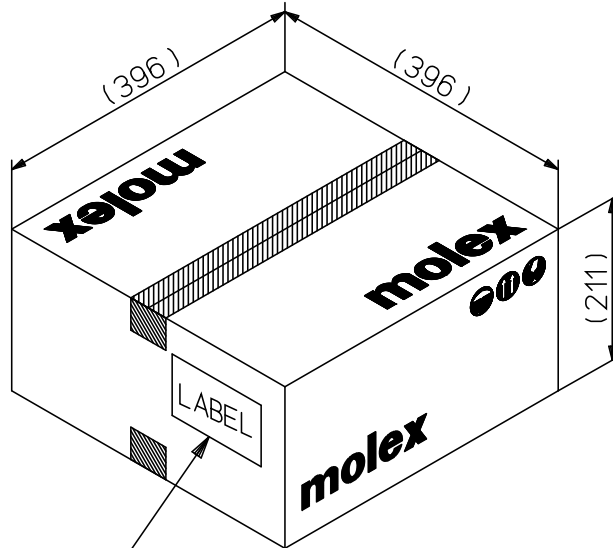
| 極 数 CKT. SIZE | ポリ袋 POLY BAG | 外装カートン SHIPPING CARTON | |
|---------------------|-----------------------------------|--------------------------------|-----------------|
| | 1袋中の製品数 QUANTITY IN ONE BAG | ポリ袋の数 NUMBER OF POLY BAG | 製品数 QUANTITY |
| 2 | 1,000 | 30 | 30,000 |
| 3 | 1,000 | 20 | 20,000 |
| 4 | 1,000 | 20 | 20,000 |
| 5 | 500 | 20 | 10,000 |
| 6 | 500 | 20 | 10,000 |
| 7 | 500 | 20 | 10,000 |
| 8 | 500 | 16 | 8,000 |
| 9 | 500 | 12 | 6,000 |
| 10 | 500 | 12 | 6,000 |
| 11 | 500 | 10 | 5,000 |
| 12 | 500 | 10 | 5,000 |
| 13 | 500 | 10 | 5,000 |
| 14 | 500 | 8 | 4,000 |
| 15 | 500 | 8 | 4,000 |

PENDING
APPROVAL

| | | | | | | | |
|---------------------------------|--|--------|---|---------------------------|----------------------------|-----------------|--|
| REV. | D | | | | | | |
| SHEET | 1~3 | | | | | | |
| REVISE ON PC ONLY | | TITLE: | | | | | |
| D | REVISED 178184 2018/06/19 B. GaneshRao | | 5 0 4 5 梱包仕様書 SALES PACKAGING SPEC. FOR 5045 | | | | |
| | THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | | | | | |
| REV. | DESCRIPTION | | DATE: 2011/04/26 | | | | |
| DESIGN CONTROL J | | STATUS | WRITTEN BY: T.NAKAGAWA | CHECKED BY: T.HARUYAMA | APPROVED BY: H.HIRATA | | |
| DOCUMENT NUMBER SPK-5045-001 | | | DOC. TYPE PS | DOC. PART 001 | CUSTOMER GENERAL MARKET | SHEET 1 OF 3 | |

3. カートン外形参考寸法 / CARTON OUTER DIMENSIONS (REFERENCE PURPOSE ONLY)

単位 / UNIT: mm



カートンラベル
CARTON LABEL

(製品型番, 数量, ロットNO. 表示)
INDICATION OF PART No., QUANTITY, LOT No.

標準カートン
STANDARD CARTON

PENDING
APPROVAL

| | | | | | |
|---------------------------------|------------------|--|------------------|----------------------------|-----------------|
| REVISE ON PC ONLY | | TITLE: 5045 梱包仕様書 SALES PACKAGING SPEC. FOR 5045 | | | |
| D | SEE SHEET 1 OF 3 | | | | |
| REV. | DESCRIPTION | THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | | |
| DOCUMENT NUMBER SPK-5045-001 | | DOC. TYPE PS | DOC. PART 001 | CUSTOMER GENERAL MARKET | SHEET 2 OF 3 |

1. 제품 명칭(PRODUCT NAME): **KK2.5 WAFER ASS'Y WITH LOCK**
 제품 번호(PART NUMBER): **5045-NA (N SHOWS CIRCUITS SIZE)**

Use for Korean production only.

2. 표준 포장 수량(PACKING QUANTITY):

| CKT. SIZE | POLY BAG | SHIPPING CARTON | |
|-----------|---------------------|--------------------|----------|
| | QUANTITY IN ONE BAG | NUMBER OF POLY BAG | QUANTITY |
| 2 | 1000 | 35 | 35,000 |
| 3 | 1000 | 25 | 25,000 |
| 4 | 1,000 | 20 | 20,000 |
| 5 | 500 | 24 | 12,000 |
| 6 | 500 | 20 | 10,000 |
| 7 | 500 | 20 | 10,000 |
| 8 | 500 | 16 | 8,000 |
| 9 | 500 | 14 | 7,000 |
| 10 | 500 | 12 | 6,000 |
| 11 | 500 | 10 | 5,000 |
| 12 | 500 | 10 | 5,000 |
| 14 | 500 | 8 | 4,000 |
| 15 | 500 | 8 | 4,000 |

3. NOTE

- 포장 평가는 ES40000-7001에 따르고, LEVEL II 기준 1을 적용한다
 (Estimate : applied to ES-40000-7001 and level II, criterion 1)

PENDING APPROVAL

| | | | | | |
|---------------------------------|------------------|---|--|----------------------------|-----------------|
| REVISE ON PC ONLY | | TITLE: | | | |
| D | SEE SHEET 1 OF 3 | 5 0 4 5 梱包仕様書 SALES PACKAGING SPEC. FOR 5045 | | | |
| | REV. | DESCRIPTION | THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | |
| DOCUMENT NUMBER SPK-5045-001 | | DOC. TYPE PS | DOC. PART 001 | CUSTOMER GENERAL MARKET | SHEET 3 OF 3 |

【3. 定格及び適用電線 RATINGS AND APPLICABLE WIRES】

| 項目 Item | 規格 Standard | |
|--|---|------|
| 最大許容電圧 Allowable Voltage (MAX.) | 250V [AC (実効値 rms) / DC] | |
| 最大許容電流 及び 適用電線 Allowable Current (MAX.) And Applicable wires | AWG#28 | 2.0A |
| | AWG#26 | 2.5A |
| | AWG#24 | 3.0A |
| | AWG#22 | 3.0A |
| 使用温度範囲 ^{*1*2*3} Ambient Temperature Range | -40°C ~ +105°C 低温において氷結しないこと Not freeze in low temperature | |

- *1: 基板実装後の無通電状態は、使用温度範囲が適用されます。
Non-operating connectors after reflow must follow the operating temperature range condition.
- *2: 通電による温度上昇分を含む。
This includes the terminal temperature rise generated by conducting electricity.
- *3: 適合電線も本使用温度範囲を満足すること。
Applicable wires must also meet the specified temperature range.

| | | | | | | |
|--|-------------------|-------------------|---|--|----------------------------|------------------|
| A | REVISE ON PC ONLY | SEE SHEET 1 OF 16 | TITLE: Mini-Latch 2.5 W/B SINGLE ROW CONNECTORS 製品仕様書 | | | |
| | REV. | | DESCRIPTION | THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | |
| DOCUMENT NUMBER 511910000-PS | | | DOC. TYPE PS | DOC. PART 000 | CUSTOMER GENERAL | SHEET 2 OF 16 |
| EN-127(2015-12) | | | | | | |

【4. 性能 PERFORMANCE】

4-1. 電気的性能 Electrical performance

| 項目 Item | | 条件 Test Condition | 規格 Requirement |
|------------|--|--|--|
| 4-1-1 | 接触抵抗 Contact Resistance | コネクタを嵌合させ、開放電圧 20mV以下、短絡電流 10mA 以下にて測定する。(JIS C5402-2-1) Mate connectors and measured by dry circuit, 20mV MAX., 10mA.MAX. (JIS C5402-2-1) | 20 milliohms MAX. |
| 4-1-2 | 絶縁抵抗 Insulation Resistance | コネクタを嵌合させ、隣接するターミナル間及びターミナル、アース間に、DC 500Vを印加し測定する。(JIS C5402-3-1/MIL-STD-202 試験法 302) Mate connectors and apply 500V DC between adjacent terminal or ground. (JIS C5402-3-1/MIL-STD-202 Method 302) | 1000 Megohms MIN. |
| 4-1-3 | 耐電圧 Dielectric Strength | コネクタを嵌合させ、隣接するターミナル間及びターミナル、アース間に、AC 1000V (実効値) を1分間 印加する (JIS C5402-4-1/MIL-STD-202 試験法 301) Mate connectors and apply 1000V AC(rms) for 1 minute between adjacent terminal or ground. (JIS C5402-4-1/MIL-STD-202 Method 301) | 製品機能を損なう 異常なきこと No Damage on function |
| 4-1-4 | 圧着部接触抵抗 Contact Resistance on Crimped Portion | ターミナルに適合電線を圧着し、開放電圧20mV以下、短絡電流 10mA 以下にて測定する。 Crimp the applicable wire to the terminal, measured by dry circuit, 20mV MAX., 10mA.MAX. | 5 milliohms MAX. |

| | | |
|-------------------|-------------------|--|
| REVISE ON PC ONLY | | TITLE: Mini-Latch 2.5 W/B SINGLE ROW CONNECTORS 製品仕様書 |
| A | SEE SHEET 1 OF 16 | |
| REV. | DESCRIPTION | THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |

| | | | | |
|--|------------------------|-------------------------|----------------------------|------------------|
| DOCUMENT NUMBER 511910000-PS | DOC. TYPE PS | DOC. PART 000 | CUSTOMER GENERAL | SHEET 3 OF 16 |
|--|------------------------|-------------------------|----------------------------|------------------|

4-2. 機械的性能 Mechanical Performance

| 項目 Item | | 条件 Test Condition | | 規格 Requirement |
|------------|--|---|--------|-------------------------------|
| 4-2-1 | 挿入力及び抜去力 Insertion and Withdrawal Force | 毎分25±3mmの速さで挿入、抜去を行う。 Insert and withdraw connectors at the speed rate of 25±3mm/minute. | | 第6項参照 Refer to paragraph 6 |
| 4-2-2 | 圧着部引張強度 Crimping Pull out Force | 圧着されたターミナルを治具に 固定し、電線を軸方向に 毎分25±3mmの速さで引張る。 (JIS C5402-16-4) Fix the crimped terminal to the jig, apply axial pull out force on the wire at the speed rate of 25±3 mm/minute. (JIS C5402-16-4) | AWG#28 | 9.8N{1.0kgf}MIN. |
| | | | AWG#26 | 19.6N{2.0kgf}MIN. |
| | | | AWG#24 | 29.4N{3.0kgf}MIN. |
| | | | AWG#22 | 39.2N{4.0kgf}MIN. |
| 4-2-3 | 圧着端子挿入力 Crimp Terminal Insertion Force | 圧着されたターミナルをハウジングに挿入する。 Insert the crimped terminal into the housing. | | 14.7N { 1.5kgf} MAX. |
| 4-2-4 | 圧着端子保持力 Crimp Terminal Retention Force | ハウジングに装着した圧着されたターミナルを 毎分 25±3mm の速さで軸方向に引張る。 Apply axial pull out force at the speed rate of 25±3 mm/minute on the crimped terminal assembled in the housing. | | 14.7N{1.5kgf}MIN. |
| 4-2-5 | ウエハー端子保持力 Wafer Terminal Retention Force | ハウジングに装着されたターミナルを 毎分 25±3mm の速さで軸方向に引張る。 Apply axial pull out force at the speed rate of 25±3mm/minute on the terminal assembled in the housing. | | 9.8N {1.0 kgf} MIN. |

REVISE ON PC ONLY

A

SEE SHEET 1 OF 16

TITLE:

Mini-Latch 2.5 W/B
SINGLE ROW CONNECTORS

製品仕様書

THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC
TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

REV.

DESCRIPTION

DOCUMENT NUMBER
511910000-PS

DOC. TYPE
PS

DOC. PART
000

CUSTOMER
GENERAL

SHEET
4 OF 16

4-3. 環境性能、その他 Environmental Performance and Others

| 項目 Item | | 条件 Test Condition | 規格 Requirement | |
|------------|---|--|----------------------------------|--|
| 4-3-1 | 繰り返し挿抜 Repeated Insertion / Withdrawal | 1分間 10回 以下 の速さで、挿入、抜去を 30回 繰り返す。 Insert and withdraw connectors 30 cycles repeatedly by rate of less than 10 cycles per minute. | 接 触 抵 抗 Contact Resistance | 40 milliohms MAX. |
| 4-3-2 | 温 度 上 昇 Temperature Rise | コネクタを嵌合させ、全ての圧着端子を直列 に接続し最大許容電流で熱平衡に達した時の 温度上昇を測定する。(UL498) Mate connectors and all crimp terminals shall be connected in a direct series. The temperature rise shall be measured when the terminal reaches terminal equilibrium allowable current. (UL498) | 温 度 上 昇 Temperature Rise | 30 °C MAX. |
| 4-3-3 | 耐 振 動 性 Vibration | コネクタを嵌合させ、DC 1mA 通電状態に て、嵌合軸を含む互いに垂直な 3方向に 掃 引割合 10~55~10 Hz/分、全振幅 1.5mm の振動を各2時間 加える。(ケーブルは固定 すること) (JIS C 60068-2-6/MIL-STD-202 試験法 201) Mate connectors and subject to the following vibration conditions, for a period of 2 hours in each of 3 mutually perpendicular axes, passing DC 1mA during the test. (Fix the cable at test.) Amplitude : 1.5mm P-P Frequency : 10~55~10 Hz in 1 minute. Duration : 2 hours in each X.Y.Z.axes. (JIS C 60068-2-6/MIL-STD-202 Method 201) | 外 観 Appearance | 製品機能を損なう 異常なきこと No Damage on function |
| | | | 接 触 抵 抗 Contact Resistance | 40 milliohms MAX. |
| | | | 瞬 断 Discontinuity | 1.0 micro second MAX. |

REVISE ON PC ONLY

A

SEE SHEET 1 OF 16

TITLE:

Mini-Latch 2.5 W/B
SINGLE ROW CONNECTORS

製品仕様書

THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC
TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

REV.

DESCRIPTION

DOCUMENT NUMBER
511910000-PS

DOC. TYPE
PS

DOC. PART
000

CUSTOMER
GENERAL

SHEET
5 OF 16

| 項 目 Item | | 条 件 Test Condition | 規 格 Requirement | |
|-------------|-----------------------------|---|-------------------------------|---|
| 4-3-4 | 耐 衝 撃 性 Mechanical Shock | コネクタを嵌合させ、DC 1mA 通電状態にて、テストパルス半周期、嵌合軸を含む互いに垂直な 6方向 に 490m/s ² { 50G }、作用時間11msの衝撃を各3回、合計18回加える。 (JIS C60068-2-27/MIL-STD-202 試験法 213) Mate connectors and subject to the following shock conditions. 3 shocks shall be applied along 3 mutually perpendicular axes, passing DC 1 mA current during the test. (Total of 18 shocks) Test pulse : Half Sine Peak value : 490 m/s ² (50 G) Duration : 11 ms (JIS C60068-2-27/MIL-STD-202 Method 213) | 外 観 Appearance | 製品機能を損なう異常なきこと No Damage on function |
| | | | 接 触 抵 抗 Contact Resistance | 40 milliohms MAX. |
| | | | 瞬 断 Discontinuity | 1.0 micro second MAX. |

| | | | | | |
|-------------------|-------------------|--|-----------|----------|---------|
| REVISE ON PC ONLY | | TITLE: | | | |
| A | SEE SHEET 1 OF 16 | Mini-Latch 2.5 W/B SINGLE ROW CONNECTORS 製品仕様書 | | | |
| | | THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | | |
| REV. | DESCRIPTION | DOC. TYPE | DOC. PART | CUSTOMER | SHEET |
| | | PS | 000 | GENERAL | 6 OF 16 |

| 項 目 Item | | 条 件 Test Condition | 規 格 Requirement | |
|-------------|------------------------|--|----------------------------------|---|
| 4-3-5 | 耐熱性 Heat Resistance | コネクタを嵌合させ、105±2°C の雰囲気中に96時間放置後取り出し、1~2時間室温に放置する。 (JIS C60068-2-2/MIL-STD-202 試験法 108) Mate connectors and expose to 105±2°C for 96 hours. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room conditions for 1 to 2 hours , after which the specified measurements shall be performed. (JIS C60068-2-2/MIL-STD-202 Method 108) | 外 観 Appearance | 製品機能を損なう異常なきこと No Damage on function |
| | | | 接 触 抵 抗 Contact Resistance | 40 milliohms MAX. |
| 4-3-6 | 耐寒性 Cold Resistance | コネクタを嵌合させ、-40±3°C の雰囲気中に96時間 放置後取り出し、1~2時間 室温に放置する。(JIS C60068-2-1) Mate connectors and expose to -40±3°C for 96 hours. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room conditions for 1 to 2 hours, after which the specified measurements shall be performed. (JIS C60068-2-1) | 外 観 Appearance | 製品機能を損なう異常なきこと No Damage on function |
| | | | 接 触 抵 抗 Contact Resistance | 40 milliohms MAX. |
| 4-3-7 | 耐湿性 Humidity | コネクタを嵌合させ、60±2°C、相対湿度90~95% の雰囲気中に 96時間 放置後取り出し、1~2時間 室温に放置する。 (JIS C60068-2-78/MIL-STD-202 試験法 103) Mate connectors and expose to 60±2°C, relative humidity 90 to 95% for 96 hours. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room conditions for 1 to 2 hours, after which the specified measurements shall be performed. (JIS C60068-2-78/MIL-STD-202 Method 103) | 外 観 Appearance | 製品機能を損なう異常なきこと No Damage on function |
| | | | 接 触 抵 抗 Contact Resistance | 40 milliohms MAX. |
| | | | 絶 縁 抵 抗 Insulation Resistance | 100 Megohms MIN. |
| | | | 耐 電 圧 Dielectric Strength | 4-1-3項満足のこと Must meet 4-1-3 |

REVISE ON PC ONLY

A

SEE SHEET 1 OF 16

TITLE:

Mini-Latch 2.5 W/B
SINGLE ROW CONNECTORS

製品仕様書

THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

REV.

DESCRIPTION

DOCUMENT NUMBER
511910000-PS

DOC. TYPE
PS

DOC. PART
000

CUSTOMER
GENERAL

SHEET
7 OF 16

| 項 目 Item | | 条 件 Test Condition | 規 格 Requirement | |
|-------------|----------------------------------|---|-------------------------------|---|
| 4-3-8 | 温度サイクル Temperature Cycling | コネクタを嵌合させ、 $-55\pm 3^{\circ}\text{C}$ に 30分、 $+105\pm 2^{\circ}\text{C}$ に 30分。これを1サイクルとし、5サイクル 繰返す。 但し、温度移行時間は 5分以内 とする。 試験後1~2時間 室温に放置する。 (JIS C60068-2-14) Mate connectors and subject to the following conditions for 5 cycles. Upon completion of the exposure period, the test specimens shall be conditioned at ambient room conditions for 1 to 2 hours, after which the specified measurements shall be performed. 5 cycles of : a) $-55\pm 3^{\circ}\text{C}$ 30 minutes b) $+105\pm 2^{\circ}\text{C}$ 30 minutes Shift time : Within 5 minutes (JIS C60068-2-14) | 外 観 Appearance | 製品機能を損なう異常なきこと No Damage on function |
| | | | 接 触 抵 抗 Contact Resistance | 40 milliohms MAX. |
| 4-3-9 | 塩 水 噴 霧 Salt Spray | コネクタを嵌合させ、 $35\pm 2^{\circ}\text{C}$ にて $5\pm 1\%$ 重量比の塩水を 48 ± 4 時間噴霧し、試験後常温で水洗いした後、室温で乾燥させる。 (JIS C60068-2-11/MIL-STD-202 試験法101) Mate connectors and expose to the following salt mist conditions. Upon completion of the exposure period, salt deposits shall be removed by a gentle wash or dip in running water, after which the specified measurements shall be performed. NaCl solution Concentration : $5\pm 1\%$ Spray time : 48 ± 4 hours Ambient temperature : $35\pm 2^{\circ}\text{C}$ (JIS 60068-2-11/MIL-STD-202 Method 101) | 外 観 Appearance | 製品機能を損なう異常なきこと No Damage on function |
| | | | 接 触 抵 抗 Contact Resistance | 40 milliohms MAX. |

REVISE ON PC ONLY

A

SEE SHEET 1 OF 16

TITLE:

Mini-Latch 2.5 W/B
SINGLE ROW CONNECTORS

製品仕様書

THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

REV.

DESCRIPTION

DOCUMENT NUMBER
511910000-PS

DOC. TYPE
PS

DOC. PART
000

CUSTOMER
GENERAL

SHEET
8 OF 16

| 項 目 Item | | 条 件 Test Condition | 規 格 Requirement | |
|-------------|-------------------------------|---|----------------------------------|--|
| 4-3-10 | 耐亜硫酸ガス SO ₂ Gas | コネクタを嵌合させ、40±2℃にて 50±5ppmの亜硫酸ガス中に24時間放置す る。 Mated connectors and expose to the conditions of 50±5ppm SO ₂ gas ambient temperature 40±2℃ for 24 hours. | 外 観 Appearance | 製品機能を損なう 異常なきこと No Damage on function |
| | | | 接 触 抵 抗 Contact Resistance | 40 milliohms MAX. |

| | | | | | |
|-------------------|-------------------|---|-----------|----------|---------|
| REVISE ON PC ONLY | | TITLE: | | | |
| A | SEE SHEET 1 OF 16 | Mini-Latch 2.5 W/B SINGLE ROW CONNECTORS 製品仕様書 | | | |
| | | THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | | |
| REV. | DESCRIPTION | DOC. TYPE | DOC. PART | CUSTOMER | SHEET |
| | | PS | 000 | GENERAL | 9 OF 16 |

| 項目 Item | | 条件 Test Condition | 規格 Requirement | |
|------------|--|---|--------------------------|---|
| 4-3-11 | はんだ付け性 Solderability | ターミナルまたはピンをフラックスに浸し、端子先端より1.2mm迄、 230±5°Cのはんだに3±0.5秒浸す。 Dip terminal or pin into flux, and immerse the area up to 1.2mm from the tip of terminal into solder molten at 230±5°C for 3±0.5 sec. | 濡れ性 Solder Wetting | ピンホールや隙間なく浸漬面積の75%以上 75% of immersed area must show no voids, pin holes. |
| 4-3-12 | はんだ耐熱性 Resistance to Soldering Heat | ターミナルまたはピンを本体取付け基準面より1.2mm迄、260±5°Cのはんだに5±0.5秒浸す。 Dip terminal or pin into immerse the area up to 1.2mm from the bottom of the housing into solder molten at 260±5°C for 5±0.5 sec. | 外観 Appearance | 端子ガタ、割れ等異常なきこと No Damage |

(): 参考規格 Reference Standard
{ }: 参考単位 Reference Unit

【5. 外観形状、寸法及び材質 PRODUCT SHAPE, DIMENSIONS AND MATERIALS】

5-1. 製品寸法及び材質 Dimensions and materials of product.

図面参照 Refer to the drawing.

| | | | | | | |
|-------------------|-------------|-------------------|--|-----------|----------|----------|
| REVISE ON PC ONLY | A | SEE SHEET 1 OF 16 | TITLE: Mini-Latch 2.5 W/B SINGLE ROW CONNECTORS 製品仕様書 | | | |
| | | | THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | | |
| REV. | DESCRIPTION | | DOC. TYPE | DOC. PART | CUSTOMER | SHEET |
| | | | PS | 000 | GENERAL | 10 OF 16 |

【6. 挿入力及び抜去力 INSERTION / WITHDRAWAL FORCE】

| 極数 No. of CKT | 単位 UNIT | 挿入力 (最大値) Insertion (MAX.) | | | 抜去力 (最小値) Withdrawal (MIN.) | | |
|---------------------|------------|-------------------------------|-------------------|-------------------|--------------------------------|------------------|------------------|
| | | 初回 1st | 6回目 6th | 30回目 30th | 初回 1st | 6回目 6th | 30回目 30th |
| 2 | N {kgf} | 35.2 { 3.6 } | 33.3 { 3.4 } | 33.3 { 3.4 } | 6.4 { 0.65 } | 5.5 { 0.56 } | 5.5 { 0.56 } |
| 3 | N {kgf} | 43.1 { 4.4 } | 40.1 { 4.1 } | 40.1 { 4.1 } | 6.9 { 0.70 } | 5.9 { 0.60 } | 5.9 { 0.60 } |
| 4 | N {kgf} | 50.9 { 5.2 } | 47.0 { 4.8 } | 47.0 { 4.8 } | 7.4 { 0.75 } | 6.4 { 0.65 } | 6.4 { 0.65 } |
| 5 | N {kgf} | 58.8 { 6.0 } | 53.9 { 5.5 } | 53.9 { 5.5 } | 7.9 { 0.80 } | 6.9 { 0.70 } | 6.9 { 0.70 } |
| 6 | N {kgf} | 64.6 { 6.6 } | 58.8 { 6.0 } | 58.8 { 6.0 } | 8.9 { 0.90 } | 7.9 { 0.80 } | 7.9 { 0.80 } |
| 7 | N {kgf} | 70.5 { 7.2 } | 63.7 { 6.5 } | 63.7 { 6.5 } | 9.8 { 1.00 } | 8.9 { 0.90 } | 8.9 { 0.90 } |
| 8 | N {kgf} | 76.4 { 7.8 } | 68.6 { 7.0 } | 68.6 { 7.0 } | 11.3 { 1.15 } | 9.8 { 1.00 } | 9.8 { 1.00 } |
| 9 | N {kgf} | 82.3 { 8.4 } | 73.5 { 7.5 } | 73.5 { 7.5 } | 12.8 { 1.30 } | 11.3 { 1.15 } | 11.3 { 1.15 } |
| 10 | N {kgf} | 88.2 { 9.0 } | 78.4 { 8.0 } | 78.4 { 8.0 } | 14.3 { 1.45 } | 12.8 { 1.30 } | 12.8 { 1.30 } |
| 11 | N {kgf} | 94.0 { 9.6 } | 83.3 { 8.5 } | 83.3 { 8.5 } | 15.7 { 1.60 } | 14.3 { 1.45 } | 14.3 { 1.45 } |
| 12 | N {kgf} | 99.9 { 10.2 } | 88.2 { 9.0 } | 88.2 { 9.0 } | 18.2 { 1.85 } | 15.7 { 1.60 } | 15.7 { 1.60 } |
| 13 | N {kgf} | 105.8 { 10.8 } | 93.1 { 9.5 } | 93.1 { 9.5 } | 19.6 { 2.00 } | 17.2 { 1.75 } | 17.2 { 1.75 } |
| 14 | N {kgf} | 111.7 { 11.4 } | 98.0 { 10.0 } | 98.0 { 10.0 } | 21.1 { 2.15 } | 18.7 { 1.90 } | 18.7 { 1.90 } |
| 15 | N {kgf} | 117.6 { 12.0 } | 102.9 { 10.5 } | 102.9 { 10.5 } | 22.6 { 2.30 } | 20.1 { 2.05 } | 20.1 { 2.05 } |

{ } :参考単位 Reference Unit

| | | | | | |
|--|-------------------|---|-------------------------|----------------------------|-------------------|
| REVISE ON PC ONLY | | TITLE: | | | |
| A | SEE SHEET 1 OF 16 | Mini-Latch 2.5 W/B SINGLE ROW CONNECTORS | | | |
| | | 製品仕様書 | | | |
| REV. | DESCRIPTION | <small>THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION</small> | | | |
| DOCUMENT NUMBER 511910000-PS | | DOC. TYPE PS | DOC. PART 000 | CUSTOMER GENERAL | SHEET 11 OF 16 |
| EN-127(2015-12) | | | | | |

【7. 注記 NOTES.】

1. 本製品のプラスチック部に黒点、気泡等が確認される場合や色合いが異なる場合（経年変化によるハウジングの変色を含む）が御座いますが、製品性能に影響は御座いません。
There is no influence in the product performance though the black spot or bubble etc. might be confirmed to the plastic part of this product and the shade might be different (discoloration by secular distortion etc.).
2. 本製品は錫めっきを使用している為、外観に摺動痕がつく場合が御座いますが、製品性能に影響は御座いません。
The wound of friction might adhere to externals because the tin plating is used for the tail. But there is no influence in the product performance.
3. 本製品のハウジング及びめっき表面に多少の傷が確認される場合がありますが、製品性能に問題御座いません。
A few scratches may be confirmed to the surface of the housing and the plating of this product, however, There is no problem in the product performance.
4. 本製品のプラスチック部が紫外線により変色する場合がありますが、製品性能には問題御座いません。
Discoloration of the plastic part of this product can result from exposure to ultraviolet light. There is no problem in the product performance.
5. 本製品を結露・水濡れが発生する環境でのご使用の場合は、適切な防滴処置をお願い致します。
結露・水濡れにより、回路間で絶縁不良を起こす可能性が御座います。
When this product is used at a place where exposure to water could be expected, please handle with appropriate care to avoid damage from water.
There is a possibility of causing insulated malfunction between the circuits.
6. コネクタの性能を損なう恐れがある為、コネクタの洗浄は、行わないでください。
Please do not conduct any washing process on the connectors because it may damage the product's function.
7. 本製品をご使用時に取り付けられた電線・プリント基板の共振や、機器の回転構造や可動部分の動作によりコネクタ嵌合部（接点部）が常に動いてしまう状態での御使用は避けてください。
接触部の摺動磨耗等による 接触不良の原因となります。従って、機器内で電線・プリント基板を固定し、共振を抑える等の処置をお願い致します。
Please do not use the connectors in a condition where the wire, PWB, or the contact area is experiencing a sympathetic vibration of wires and PWB, and constant movement of devices.
This may cause a defect in the contact due to the contact area being worn down. Therefore, please fix wires and PWB on the chassis, and reduces sympathetic vibration.
8. コネクタ嵌合状態で基板の持ち運び等コネクタに負荷が掛かる作業は行わないようにしてください。
コネクタ破損等の原因となる場合が御座います。
Please do not do work that the load hangs in the connectors like the carrying of the substrate etc. with the connectors engages. There is a case where it causes the connectors damage etc.

| | | | | | |
|---|-------------------|---|------------------|---------------------|-------------------|
| REVISE ON PC ONLY | | TITLE: | | | |
| A | SEE SHEET 1 OF 16 | Mini-Latch 2.5 W/B SINGLE ROW CONNECTORS | | | |
| | REV. | DESCRIPTION | 製品仕様書 | | |
| <small>THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION</small> | | | | | |
| DOCUMENT NUMBER 511910000-PS | | DOC. TYPE PS | DOC. PART 000 | CUSTOMER GENERAL | SHEET 12 OF 16 |
| EN-127(2015-12) | | | | | |

9. 嵌合後、コネクタピッチ方向、スパン方向及び回転方向への負荷がかかるような動作またはセットはしないでください。コネクタ破壊やはんだクラックを引き起こします。
After mated the connectors, please do not allow the PWBs to apply pressure on the connectors in either the pitch direction, the span direction or rotational direction. It may cause damage to the connectors and may crack the soldering.
10. 本製品及び加工工程品（仕掛品）や加工品（ハーネス等）の梱包及び輸送・保管時にはコネクタに負荷が加わらないようご注意ください。変形、破損などの原因となり、コネクタの性能不良の原因となります。
Please try to prevent any external forces or shock from being applied to the connectors while the cable assembly is in process, when it is being packaged, or while it is in transportation. This may cause deformation and damage to the connectors and cause a defect in the product's performance.
11. 本製品をご使用時には、1PIN当りの定格以上の電流を複数の回路に分岐しての使用は避けてください。
When using this product, please ensure that the specification for rated current per circuit is followed. Do not allow the sum of the current used on several circuits to exceed the maximum allowable current.
12. 活電状態の電気回路で、挿入、抜去ができることを前提に作られておりません。
スパーク等による危険の発生、性能不良につながりますので、活電状態での挿入、抜去はしないでください。
This product is not designed for the mating and unmating of the connectors to be performed under the condition of an active electrical circuit. It may cause a spark and product defect if the connectors are mated and unmated in this way.
13. コネクタに適用できる電線は、原則として錫めっきつき付軟銅撚り線です。
その他の電線の使用については別途ご確認ください。
The applicable wire for this connectors, in principle, is tin-plated copper stranded wire. Please consult us and evaluate it in advance when using other wires.
14. コネクタに外力が加わらないようにクリアランスをあげた筐体構造にしてください。
Please keep enough clearance between connectors and chassis of your application in order not to apply pressure on the connectors.
15. 電線の結束はコネクタから35mm以上のところで、電線に加わる力が均一になるようにしてください。ハーネス品で電線一本（又は特定の数本）に力が加わらない様にしてください。
Please tie the cable at least 35mm away from the edge of the connectors and try to ensure that the force is applied evenly on all of the wires.
16. 治具等を使用して圧着端子を抜いた場合には、ランスが変形し強度が低下し端子を再装着後の端子保持力が極端に低下します。そのため、圧着端子のリペアの際には新しいハウジングを必ず使用してください。
When extracting a crimp terminal from the housing using a jig, it may deform the housing lance and therefore reduce the terminal retention force enormously after re-inserting of the terminal. Therefore, please ensure to use a new housing after repairing the crimp terminals.

| | | | | | |
|--|-------------------|---|-------------------------|----------------------------|-------------------|
| REVISE ON PC ONLY | | TITLE: | | | |
| A | SEE SHEET 1 OF 16 | Mini-Latch 2.5 W/B SINGLE ROW CONNECTORS | | | |
| | | 製品仕様書 | | | |
| | | <small>THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION</small> | | | |
| REV. | DESCRIPTION | | | | |
| DOCUMENT NUMBER 511910000-PS | | DOC. TYPE PS | DOC. PART 000 | CUSTOMER GENERAL | SHEET 13 OF 16 |
| EN-127(2015-12) | | | | | |

17. ハーネス加工品及びコネクタ嵌合後の電線の引き回しの際、引張りによる力が加わりますと、接点部、結線部（圧着部）やロック部（端子ロック部）が損傷を受け、接触不良の原因となります。
電線の引回し配線をされる場合、コネクタに無理な外力が加わらないように、電線に緩みを持たせ、余裕を持たせる処置をしてください。
The cable assembly should not have a constant stress or pulling force applied on it when it is in the mated condition. This phenomenon may damage the contact area or wiring area (crimping).
Therefore, when designing the wire positioning, please ensure that there is enough length of wire to avoid stress on the connectors.
18. 電線はまとめて軽くつかみ、ゆっくり、軸方向にまっすぐに引き抜いてください。
また、斜めにこじりながら抜くことは避けてください。コネクタを破損させる恐れが御座います。
Please hold wires all together lightly. Please withdraw housing slowly, axially and straightly. Please avoid withdrawing them with an angle and roughly. That might cause damage to connector.
19. 圧着高さ、状態、適用電線等の詳細は、弊社圧着仕様書：CS-50802 を参照願います。
The details refer to CS-50802 such as crimping satisfied height, state & applicable wire.
20. 嵌合後、コネクタピッチ方向、スパン方向及び回転方向への負荷がかかるような動作またはセットはしないでください。コネクタ破壊やはんだクラックを引き起こします。
After mating, please do not take a connector pitch direction, a span direction and load to the rotator direction. It causes connector destruction and the solder crack.
- 21.ハウジングのロック部やランス部などの可動部、及び端子を故意に変形させないでください。
製品性能が満足出来ない原因となります。
Do not deform the movable part as lock part and lance part of Housing and terminals on purpose. It would lead to product failure.
22. はんだ実装部の未はんだは、ターミナル脱落、ピン間ショート、ターミナル座屈、またコネクタ基板からの外れが懸念されます。従って全てのターミナルテール部にはんだ付けを行ってください。
If you leave any soldering area on this product open, there may be the possibility of a missing terminal short circuiting between pins, terminal buckling or the potential for the connectors to come off of the PWB. Therefore, please solder all of the terminals on the PWB.
23. 実装機によってコネクタに負荷が加わると変形、破損する場合がありますので事前にご確認ください。
If there is accidental contact with the connectors while it is going through the reflow machine, there may be deformation or damage caused to the connectors. Please check to prevent this.
24. 基板実装前後に端子に触らないでください。
Please do not touch the terminals before or after mounted the connectors onto the PWB.
25. 基板実装後に基板を直接積み重ねない様に注意してください。
Please do not stack the PWB directly after mounted the connectors on it.

| | | | | | |
|---|-------------------|---|------------------|---------------------|-------------------|
| REVISE ON PC ONLY | | TITLE: | | | |
| A | SEE SHEET 1 OF 16 | Mini-Latch 2.5 W/B SINGLE ROW CONNECTORS | | | |
| | REV. | DESCRIPTION | 製品仕様書 | | |
| <small>THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION</small> | | | | | |
| DOCUMENT NUMBER 511910000-PS | | DOC. TYPE PS | DOC. PART 000 | CUSTOMER GENERAL | SHEET 14 OF 16 |
| EN-127(2015-12) | | | | | |

26. コネクタのみで基板を支えることは避け、コネクタ以外での基板固定対策を行ってください。
Please do not use the connectors alone to provide mechanical support for the PWB.
Please ensure that there is a fixed structure on the phone chassis or other component support for the PWB.
27. 弊社の推奨基板パターン寸法を変更して設計を行なう際は、致命的な不良の原因にもなりますので
あらかじめご相談ください。
In the case of changing our recommended board pattern size and designing, please consult in advance
because it may cause a fatal defect.
28. 本品の一般性能確認はガラスエポキシ基板にて実施していますので、フレキシブル基板等の特殊な基板へ
実装してご使用の際は、別途ご相談願います。
It is necessary to consult separately when mount product on a special PWB or FPC.
29. コネクタを基板に対して垂直に真っ直ぐ挿入してください。斜めにしたりコジリを加えたりしないで
ください。
※コネクタを保持する際にはコンタクトに触れることの無い様に御注意ください。
※コネクタを基板に対して垂直に保持した状態で真っ直ぐに基板穴へソルダーテールを挿入してください。
※基板穴とソルダーテールがずれる方向や斜めに傾く様な力を加えないでください。
※無理に斜め挿入を行った場合、ピンの変形、抜けが生じ、コネクタが破損する恐れがあります
Load the connector into the PWB straight down. Do not tilt or squeeze the connector in wrong directions.
※When touching the connector, be sure not to touch the contacts.
※Load the solder tails straightly into the PWB.
※Do not apply force in such directions that would damage the solder tails.
※In case you push the solder tails in such directions, the pin deformations and pin fallout
would occur and damage the connector.
30. 本製品のハウジング材料は耐熱性ナイロンを使用しており、ハウジングの吸水状態、或いは、はんだ付け条件
によっては、リフローはんだ付け時にハウジング表面に「ふくれ」が発生する可能性があります。この「ふく
れ」に関しましては、ナイロン材の物性変化を伴うものではなく、製品機能を損なうものではありません。
The housing material of this product is made from a high heat resistant Nylon. The soldering condition and the
water absorption properties of the housing material may cause blistering on the housing surface. Because this
blister is not caused by property change, it does not damage the product's features.

| | | | | |
|---------------------------------|-------------------|---|------------------|---------------------|
| REVISE ON PC ONLY | | TITLE: | | |
| A | SEE SHEET 1 OF 16 | Mini-Latch 2.5 W/B SINGLE ROW CONNECTORS | | |
| | | 製品仕様書 | | |
| REV. | DESCRIPTION | <small>THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION</small> | | |
| DOCUMENT NUMBER 511910000-PS | | DOC. TYPE PS | DOC. PART 000 | CUSTOMER GENERAL |
| | | | | SHEET 15 OF 16 |
| EN-127(2015-12) | | | | |



The subject products should meet the following requirements.

1. Electrical Performance

| | Item | Test Condition | Requirement |
|-----|---------------------------|---|--------------------------|
| 1-1 | Rated voltage and current | | AC 250V 3A DC 250V 3A |
| 1-2 | Contact resistance | Mate connectors measure by Dry Circuit, 20mV max., 10mA. | 20 mΩ max. |
| 1-3 | Dielectric strength | When applied AC 1000V 1 minute between adjacent terminals or ground | No breakdown |
| 1-4 | Insulation resistance | When applied DC 500V between adjacent terminals or ground | 1000 MΩ min. |

2. Mechanical Performance

| | Item | Test Condition | Requirement | |
|-----|--------------------------|--|----------------------------|------------|
| 2-1 | Insertion force | Mating speed : 25±3mm/minute | See para 6 | |
| 2-2 | Extraction force | Disengaging speed : 25±3mm/minute | See para 6 | |
| 2-3 | Duability | When mated up to 30 cycles by the rate of 10 cycles per minute | Contact resistance | 40 mΩ max. |
| | | | Insertion extraction force | See para 6 |
| 2-4 | Terminal retention force | Pull speed : 25±3mm/minute | 1.0 kg Min. | |
| 2-5 | Terminal strength | When applied a load of 500gw, 1 minute | No damage | |

3. Environmental Performance

| | Item | Test Condition | Requirement | |
|-----|------------------|--|--------------------|--------------|
| 3-1 | Temperature rise | When carried the rated current | 30 °C max. | |
| 3-2 | Vibration | 1.5mm, 10-55-10Hz/min., each 2 hrs. for X, Y & Z directions, applying 1mA-DC current | Contact resistance | 40 mΩ max. |
| | | | Discontinuity | 1 μsec. max. |
| | | | Appearance | No damage |
| 3-3 | Shock | 50G, each 3 times for X, Y, Z directions, applying 1mA-DC current | Discontinuity | 1 μsec. max. |
| | | | Appearance | No damage |

REV.C

| | Item | Test Condition | Requirement | |
|------|----------------------------------|---|---------------------------|--------------------------|
| 3-4 | Solderability | Soldering time : 3 ± 0.5 sec. Soldering pot : 230 ± 5 °C | Min. 3/4 of immersed area | |
| 3-5 | Resistance to soldering heat | Soldering time : 5 ± 0.5 sec. Soldering pot : 260 ± 5 °C | No damage | |
| 3-6 | Heat resistance | 105 ± 2 °C, 96 hours | Contact resistance | 40 mΩ max. |
| | | | Appearance | No damage |
| 3-7 | Humidity | Temperature : 40 ± 2 °C Relative Humidity: 90~95% Duration : 96 hours Measurement must be taken within 30 minutes after tested | Contact resistance | 40 mΩ max. |
| | | | Dielectric strength | To pass para 1-3 |
| | | | Insulation resistance | 100 MΩ min. |
| | | | Appearance | No damage |
| 3-8 | Temperature cycling (5 cycles) | One cycle consists of (1) -55 ± 3 °C, 30 minutes (2) Room temp. 10~15 minutes (3) 105 ± 2 °C, 30 minutes (4) Room temp. 10~15 minutes | Contact resistance | 40 mΩ max. |
| | | | Appearance | No damage |
| 3-9 | Salt Spray | Temperature: 35 ± 2 °C Solution : 5 ± 1 % Spray time : 48 ± 4 hours Measurement must be taken after water rinse. | Contact resistance | 40 mΩ max. |
| | | | Appearance | No significant corrosion |
| 3-10 | SO ₂ Gas | 24 hours in sulfur dioxide gas (SO ₂) 50 ± 5 ppm at 40 ± 2 °C | Contact resistance | 40 mΩ max. |

4. Ambient Temperature Range : -40 °C ~ 105 °C*

* : Including terminal temperature rise.

5. Construction, Dimension and Material : Specified by the attached drawing.

REV.C



6. Insertion and Extraction Force

| No of Ckt. | Insertion Force (kgf, max.) | | | Extraction Force (kgf, min.) | | |
|------------|-----------------------------|------|------|------------------------------|------|------|
| | 1st | 6th | 30th | 1st | 6th | 30th |
| 2 | 3.6 | 3.4 | 3.4 | 0.65 | 0.55 | 0.55 |
| 3 | 4.4 | 4.1 | 4.1 | 0.70 | 0.60 | 0.60 |
| 4 | 5.2 | 4.8 | 4.8 | 0.75 | 0.65 | 0.65 |
| 5 | 6.0 | 5.5 | 5.5 | 0.80 | 0.70 | 0.70 |
| 6 | 6.6 | 6.0 | 6.0 | 0.90 | 0.80 | 0.80 |
| 7 | 7.2 | 6.5 | 6.5 | 1.00 | 0.90 | 0.90 |
| 8 | 7.8 | 7.0 | 7.0 | 1.15 | 1.00 | 1.00 |
| 9 | 8.4 | 7.5 | 7.5 | 1.30 | 1.15 | 1.15 |
| 10 | 9.0 | 8.0 | 8.0 | 1.45 | 1.30 | 1.30 |
| 11 | 9.6 | 8.5 | 8.5 | 1.60 | 1.45 | 1.45 |
| 12 | 10.2 | 9.0 | 9.0 | 1.85 | 1.60 | 1.60 |
| 13 | 10.8 | 9.5 | 9.5 | 2.00 | 1.75 | 1.75 |
| 14 | 11.4 | 10.0 | 10.0 | 2.15 | 1.90 | 1.90 |
| 15 | 12.0 | 10.5 | 10.5 | 2.30 | 2.05 | 2.05 |
| 16 | 12.6 | 11.0 | 11.0 | 2.45 | 2.20 | 2.20 |
| 17 | 13.2 | 11.5 | 11.5 | 2.60 | 2.35 | 2.35 |
| 18 | 13.8 | 12.0 | 12.0 | 2.75 | 2.50 | 2.50 |
| 19 | 14.4 | 12.5 | 12.5 | 2.90 | 2.65 | 2.65 |
| 20 | 15.0 | 13.0 | 13.0 | 3.05 | 2.80 | 2.80 |

Mated with Molex parts No.

5051 - N (TERMINAL: 5159 SERIES)

REV.C

仕 様 書

本仕様書は、_____ 殿 に納入する

_____ 5045-NA _____ に適用する。

【1. 電気的性能】

| 項番 | 項 目 | 条 件 | 規 格 |
|-----|-----------------|---------------------------------------|--------------------------|
| 1-1 | 最 大 定 格 電 圧 電 流 | | AC 250V 3A DC 250V 3A |
| 1-2 | 接 触 抵 抗 | コネクタを嵌合させ、開放電圧 20mV 以下、短絡電流 10mA にて測定 | 20 mΩ 以下 |
| 1-3 | 耐 電 圧 | 端子相互間、端子アース間に AC1000Vを1分間印加し | 異常なきこと |
| 1-4 | 絶 縁 抵 抗 | 端子相互間、端子アース間に DC500V印加 | 1000MΩ 以上 |

【2. 機械的性能】

| 項番 | 項 目 | 条 件 | 規 格 | |
|-----|-----------|-----------------------------------|------------|-----------|
| 2-1 | 挿 入 力 | 毎分 25±3mm の速さで | 第 6 項 参 照 | |
| 2-2 | 抜 去 力 | 毎分 25±3mm の速さで | 第 6 項 参 照 | |
| 2-3 | 繰 返 し 動 作 | 無通電状態にて1分間に10回以下の速さで、挿入、抜去を30回繰返す | 接 触 抵 抗 | 40 mΩ 以下 |
| | | | 挿 入 力 | 第 6 項 参 照 |
| | | | 抜 去 力 | 第 6 項 参 照 |
| 2-4 | 端 子 保 持 力 | 各端子毎の引抜けは毎分25±3mmの速さで | 1.0 kgf 以上 | |
| 2-5 | 端 子 強 度 | 全ての方向に1分間、500gfの力を加え | 割れ,折れのないこと | |

【3. その他】

| 項番 | 項 目 | 条 件 | 規 格 | |
|-----|---------|---|---------|-------------|
| 3-1 | 端子温度上昇 | コネクタを嵌合させ、全極にAC最大定格電流を通電し、任意の単極の温度上昇を測定 | 30 ℃ 以下 | |
| 3-2 | 耐 振 動 性 | DC 1mA 通電状態において 相対振巾 1.5mm 10~55~10Hz/分 XYZ方向 各2時間 | 外 観 | 異常なきこと |
| | | | 接 触 抵 抗 | 40 mΩ 以下 |
| | | | 瞬 断 | 1 μ sec. 以下 |

| 項番 | 項 目 | 条 件 | 規 格 | |
|------|----------------------------------|--|-----------------------|---------------------|
| 3- 3 | 耐 衝 撃 性 | DC 1mA通電状態にて、50Gを X Y Z方向 各3回加え | 外 観 | 異状なきこと |
| | | | 瞬 断 | 1 μ sec. 以下 |
| 3- 4 | 半 田 付 け 性 | 端子を本体の取付け基準面より1.2mm迄、 230 \pm 5 $^{\circ}$ Cの半田に3 \pm 0.5秒浸し | 浸した表面の3/4 以上に付着のこと | |
| 3- 5 | 半 田 耐 熱 性 | 端子を本体の取付け基準面より1.2mm迄 260 \pm 5 $^{\circ}$ Cの半田に5 \pm 0.5秒浸し | 端子のガタ、割れ等 異状なきこと | |
| 3- 6 | 耐 熱 性 | コネクタを嵌合させ、105 \pm 2 $^{\circ}$ C の雰囲気中に 96時間 放置後 取り出し、1~2時間 室温に放 置 | 外 観 | 異状なきこと |
| | | | 接触抵抗 | 40 m Ω 以下 |
| 3- 7 | 耐 湿 性 | 40 \pm 2 $^{\circ}$ C 90~95%に96時間放置 後取出し、30分以内に測定 水滴は拭きとる | 外 観 | 異状なきこと |
| | | | 接触抵抗 | 40 m Ω 以下 |
| | | | 耐 電 圧 | 1-3項満足のこと |
| | | | 絶縁抵抗 | 100 M Ω 以上 |
| 3- 8 | 温度サイクル | -55 \pm 3 $^{\circ}$ Cに30分、常温常湿に 10~15分、105 \pm 2 $^{\circ}$ Cに30分、常 温常湿に10~15分を 1サイクル とし、5サイクル繰返し後 | 外 観 | 異状なきこと |
| | | | 接触抵抗 | 40 m Ω 以下 |
| 3- 9 | 塩 水 噴 霧 | 35 \pm 2 $^{\circ}$ Cにて 5 \pm 1%重量比の塩 水を、48 \pm 4 時間噴霧後、常温 で水洗し | 外 観 | 割れ、著しい腐食等 異状なきこと |
| | | | 接触抵抗 | 40 m Ω 以下 |
| 3-10 | 亜 硫 酸 ガ ス (S O ₂) | 40 \pm 2 $^{\circ}$ Cにて 50 \pm 5ppmの亜硫酸 ガス中に 24時間放置後 | 接触抵抗 | 40 m Ω 以下 |

【4. 使用温度範囲】

-40 $^{\circ}$ C ~ +105 $^{\circ}$ C (通電による温度上昇分を含む。)

【5. 外観形状及び寸法・材質】

添 付 図 面 参 照

【6. 挿入力及び抜去力】

[単位:kgf]

| 極 数 | 挿入力 (最大値) | | | 抜去力 (最小値) | | |
|--------|-----------|------|------|-----------|------|------|
| | 初 回 | 6回目 | 30回目 | 初 回 | 6回目 | 30回目 |
| 2 | 3.6 | 3.4 | 3.4 | 0.65 | 0.55 | 0.55 |
| 3 | 4.4 | 4.1 | 4.1 | 0.70 | 0.60 | 0.60 |
| 4 | 5.2 | 4.8 | 4.8 | 0.75 | 0.65 | 0.65 |
| 5 | 6.0 | 5.5 | 5.5 | 0.80 | 0.70 | 0.70 |
| 6 | 6.6 | 6.0 | 6.0 | 0.90 | 0.80 | 0.80 |
| 7 | 7.2 | 6.5 | 6.5 | 1.00 | 0.90 | 0.90 |
| 8 | 7.8 | 7.0 | 7.0 | 1.15 | 1.00 | 1.00 |
| 9 | 8.4 | 7.5 | 7.5 | 1.30 | 1.15 | 1.15 |
| 10 | 9.0 | 8.0 | 8.0 | 1.45 | 1.30 | 1.30 |
| 11 | 9.6 | 8.5 | 8.5 | 1.60 | 1.45 | 1.45 |
| 12 | 10.2 | 9.0 | 9.0 | 1.85 | 1.60 | 1.60 |
| 13 | 10.8 | 9.5 | 9.5 | 2.00 | 1.75 | 1.75 |
| 14 | 11.4 | 10.0 | 10.0 | 2.15 | 1.90 | 1.90 |
| 15 | 12.0 | 10.5 | 10.5 | 2.30 | 2.05 | 2.05 |
| 16 | 12.6 | 11.0 | 11.0 | 2.45 | 2.20 | 2.20 |
| 17 | 13.2 | 11.5 | 11.5 | 2.60 | 2.35 | 2.35 |
| 18 | 13.8 | 12.0 | 12.0 | 2.75 | 2.50 | 2.50 |
| 19 | 14.4 | 12.5 | 12.5 | 2.90 | 2.65 | 2.65 |
| 20 | 15.0 | 13.0 | 13.0 | 3.05 | 2.80 | 2.80 |

嵌合相手モレックス製品番号

5051-N (5159T/TL/PBT/PBTL)

APPLICATION SPECIFICATION
Mini-Latch 2.50MM PITCH WIRE TO BOARD

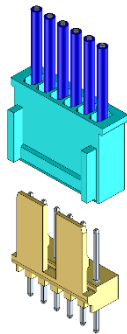
SINGLE DIP TYPE

[1. APPLICATION]

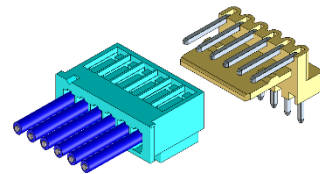
| | | | |
|-----------------|------------------------------------|----------|-----------------------|
| | Product Name | | Part Number |
| HARNESS SIDE | RECEPTACLE HOUSING | | 51191**00 |
| | RECEPTACLE TERMINAL | | 50802**** |
| | APPLICABLE WIRE (※) | | AWG#22~28 |
| | APPLICABLE CRIMP DIE MODEL No. (※) | | JM5857 |
| BOARD SIDE | HEADER ASS'Y PACKAGE: POLYBAG | S/T TYPE | 5045-NA 205505**** |
| | | R/A TYPE | 5046-NA |

※ Refer to CS-50802 for further details.

S/T TYPE



R/A TYPE



— Before using —

- Read this manual before using connectors.
- Keep this manual handy for later reference.
- The displays and illustrations shown in this manual may differ from the actual products by printings.
- The contents of this manual are subject to change without notice.
- Please contact us if you have any concerns related to this manual.

| | | | | | | |
|-------------------|---|------|---|---------------------------|-------------------------|-------------------------|
| REV. | A | B | | | | |
| SHEET | 1-26 | 1-26 | | | | |
| REVISE ON PC ONLY | | | TITLE: | | | |
| B | 変更 REVISED 175910 `18/05/07 K.YAMADA | | Mini-Latch 2.50MM PITCH WIRE TO BOARD SINGLE DIP TYPE APPLICATION SPECIFICATION | | | |
| | DESCRIPTION | | THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | | |
| REV. | DESIGN CONTROL | | STATUS | WRITTEN BY: HKOBAYASHI | CHECKED BY: SAKIYAMA | APPROVED BY: TKANEKO |
| | J | | | | | DATE: 2018/01/19 |

| | | | | |
|---------------------------------|-----------------|------------------|---------------------|------------------|
| DOCUMENT NUMBER 511910000-AS | DOC. TYPE PS | DOC. PART 001 | CUSTOMER GENERAL | SHEET 1 OF 26 |
|---------------------------------|-----------------|------------------|---------------------|------------------|

Contents

| | |
|---|---------|
| 1. <u>Application</u> | P-1 |
| 2. <u>Instructions</u> | |
| 2-1. <u>Product exterior</u> | P-3 |
| 2-2. <u>Applicable wire and crimping tooling</u> | P-3 |
| 2-3. <u>Storage before harness and the surface mount process</u> | P-3 |
| 2-4. <u>Harness and surface mount process instruction</u> | P-4~5 |
| 2-5. <u>Use in the machinery</u> | P-5 |
| 2-6. <u>Rating / performance standard</u> | P-5 |
| 2-7. <u>Use of products</u> | P-6 |
| 3. <u>Names of each part & explanation</u> | |
| 3-1. <u>Receptacle crimping terminal</u> | P-7 |
| 3-2. <u>Receptacle housing</u> | P-8 |
| 3-3. <u>Straight Header assembly</u> | P-9 |
| 3-4. <u>Right Angle Header assembly</u> | P-9 |
| 4. <u>Confirmation of terminal crimping process</u> | |
| 4-1. <u>Appearance before crimping</u> | P-10 |
| 4-2. <u>Appearance after crimping</u> | P-10 |
| 4-3. <u>Crimping failure</u> | P-10~13 |
| 5. <u>Bond of wire after crimping and packaging</u> | P-14 |
| 6. <u>Method of crimping terminal mounting to Receptacle Housing (harness process)</u> | |
| 6-1. <u>Crimping terminal mounting</u> | P-15~18 |
| 6-2. <u>Crimping terminal repair</u> | P-18 |
| 7. <u>Bond of harness</u> | P-19 |
| 8. <u>Harness packaging</u> | P-20~21 |
| 9. <u>Instructions when mating with HDR connector</u> | |
| 9-1. <u>Recommended insertion method</u> | P-22 |
| 9-2. <u>Recommended removal method</u> | P-23 |
| 9-3. <u>Wiring after mating</u> | P-24~25 |

| | | | | | |
|---------------------------------|-------------------|---|---|---------------------|------------------|
| REVISE ON PC ONLY | | TITLE: | | | |
| B | SEE SHEET 1 OF 26 | Mini-Latch 2.50MM PITCH WIRE TO BOARD SINGLE DIP TYPE APPLICATION SPECIFICATION | | | |
| | REV. | DESCRIPTION | <small>THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION</small> | | |
| DOCUMENT NUMBER 511910000-AS | | DOC. TYPE PS | DOC. PART 001 | CUSTOMER GENERAL | SHEET 2 OF 26 |
| EN-127(2015-12) | | | | | |

[2.Instructions]

2-1. Product exterior

1. There is no influence on this product performance though the black spots or bubbles etc. may be confirmed with its plastic part, and the color may be different (discoloration by secular change etc.).
2. Slide marks may sometimes appear in plating parts of this product, however, there is no impact on its function.
3. Resin and terminal plating may have some changes in color under flow condition, however, there is no negative impact on its function.
4. Connectors may be damaged by applying force in the machines. Check before using.

2-2. Applicable wire and crimping tooling

1. Please contact us since our guarantee is void when a product is used with wires out of application ranges specified in the product specifications.
2. Our guarantee is void when a product is used with a tooling which is not specified by Molex.
3. The recommended electric wires are tin plating. Check separately about the use of other electric wires.

2-3. Storage before harness and the surface mount process

1. Keep a product under our packing condition, normal temperature and humidity avoiding direct sunlight. Any damages and changes in color may cause material deterioration.
2. Keep a product without any external forces during storage. This may cause jammed or changes in shape.
3. Take note to prevent shocks or dropping products during handling. This also may cause damages or changes in shape.
4. First-in first-out method of stocks is recommended.
5. Keep a product in original packaging before using.
6. A product should be inspected its appearance and solder performance before using if it is expired the duration of our recommended use.

| | | | | | |
|--|-------------------|---|-------------------------|----------------------------|------------------|
| B | REVISE ON PC ONLY | TITLE: Mini-Latch 2.50MM PITCH WIRE TO BOARD SINGLE DIP TYPE APPLICATION SPECIFICATION | | | |
| | SEE SHEET 1 OF 26 | | | | |
| REV. | DESCRIPTION | THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | | |
| DOCUMENT NUMBER 511910000-AS | | DOC. TYPE PS | DOC. PART 001 | CUSTOMER GENERAL | SHEET 3 OF 26 |
| EN-127(2015-12) | | | | | |

2-4. Harness process and surface mount process instruction.

1. Confirm if a product, crimping machine, crimping condition and its applicable wire are equal to our product drawing as well as crimping specifications before using.
2. Beware of unintended damages caused by dust, debris or foreign objects before using a product.
It may cause the unsatisfied result of the insertion performance to the housing and electric performance.
3. Do not touch terminals with your bare hand.
4. Do not pull a terminal by force when it is twisted or tangled before or after crimping. It may cause damages.
5. Do not apply any forces to products, terminals or harnesses etc. Products may be damaged and cause malfunction as connectors.
6. Do not expose products and harness half-finished goods to the following conditions.
 - Dust
 - Corrosive material
 - Corrosive gas
 - High temperature and high humidity
 - Direct sunlight
 The conditions mentioned above may cause poor contact, the corrosion of terminals, insulation performance and the deterioration of housing. Keep products in a box.
7. Do not add any loads to connectors and harness half-finished goods during production, packaging, transportation or storage. It may cause damages and result in poor performance.
8. When pulling the electric wires of harness half-finished goods, the contact defect may be caused by adding loads to contacts, crimping parts and lock parts. **When performing the guidance wiring of the electric wires, do not apply excessive forces that a connector cannot be pulled.**
9. Do not damage receptacle crimping housing and crimping terminals intentionally. Product performance can be affected by the condition.
10. Use products within the day once you open the package. Moisture absorption or drying may cause the deterioration of materials by surrounding environments. When you cannot use them up, seal the bag again and keep them in a box.
11. Be aware to prevent injury by products' edges such as metal parts when handling connectors.
12. To avoid injury, be careful when handling papers between terminals and metal carriers on reels.
13. Our evaluation is with the use of standard rigid PCB. When products are used on flexible printed circuits (FPC), check them in advance.
14. Solder all terminal departments and nail parts. Non-soldered parts may cause defects.
15. In the case of changing our recommended board pattern size or design, please contact us in advance since those changes may cause defects.
16. Do not apply loads to connectors. For example, carrying the PCB when a connector is mated may cause damages.
17. Do not stack PCB after connectors have soldered to PCB.
18. Follow the conditions of specifications, when mounting a connector with a soldering iron. For any conditions exceeding specifications, the connector may be damaged.

| | | | | |
|--|-------------------|---|-------------------------|----------------------------|
| REVISE ON PC ONLY | | TITLE: | | |
| B | SEE SHEET 1 OF 26 | Mini-Latch 2.50MM PITCH WIRE TO BOARD SINGLE DIP TYPE APPLICATION SPECIFICATION | | |
| REV. | DESCRIPTION | <small>THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION</small> | | |
| DOCUMENT NUMBER 511910000-AS | | DOC. TYPE PS | DOC. PART 001 | CUSTOMER GENERAL |
| | | | | SHEET 4 OF 26 |
| EN-127(2015-12) | | | | |

- 19. When using a solder iron, do not use excessive solder and flux. It may cause poor contact performance by solder wicking and flux wicking.
- 20. There may be changes in color of the resin part and twisting in the terminal plating parts depending on flow conditions, but it does not degrade product performance.

2-5. Use in the machinery.

- 1. Vibration of an electric wire or printed circuit board due to machinery vibration or rotation must be prevented damages to connectors at contact area. Contact failures due to abrasion may be caused. Fix electric wires and printed circuit boards in the machinery and manage to hold resonances.
- 2. Do not fix only printed circuit boards when using connectors. It must be fixed or supported by other measurements.
- 3. Do not touch terminals and fitting nails before and after mounting on a board.
- 4. Insert and pull connectors along fixed axis. The diagonal insertion and pulling may cause damages to connectors.
- 5. After mating, do not intentionally apply forces to span or rotate connectors. Such force may cause damages to connectors or solder cracking.
- 6. If electric wires are pulled after mating connectors, it may damage contacts or crimping areas or the lock areas and result in contact failures. When performing the guidance wiring of electric wires, keep the wires loose to avoid applying excessive force to connectors.
- 7. When pulling connectors, hold wires softly by entire fingers.
- 8. Plastic lances may be damaged after removing crimping terminals. Use a new crimping housing when repairing connectors.

2-6. Rating / performance standard.

- 1. Use products in the range of rating and standard of product specifications.
PS-51191-002, 2055050000-PS PS000
- 2. This product is not designed for usage in “hot-swap” applications where a power is on.
- 3. Confirm that machinery design standards are satisfied before using connectors.
- 4. To prevent short circuits, do not allow connectors to contact with any metal objects.
- 5. Do not divide to use several circuits over the rating current per 1PIN.

| | | | | | |
|--|-------------------|---------------------------|---|----------------------------|-------------------------|
| | REVISE ON PC ONLY | | TITLE: Mini-Latch 2.50MM PITCH WIRE TO BOARD SINGLE DIP TYPE APPLICATION SPECIFICATION | | |
| | B | SEE SHEET 1 OF 26 | | | |
| | REV. | DESCRIPTION | THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | |
| DOCUMENT NUMBER 511910000-AS | | DOC. TYPE PS | DOC. PART 001 | CUSTOMER GENERAL | SHEET 5 OF 26 |
| EN-127(2015-12) | | | | | |

2-7. Use of product

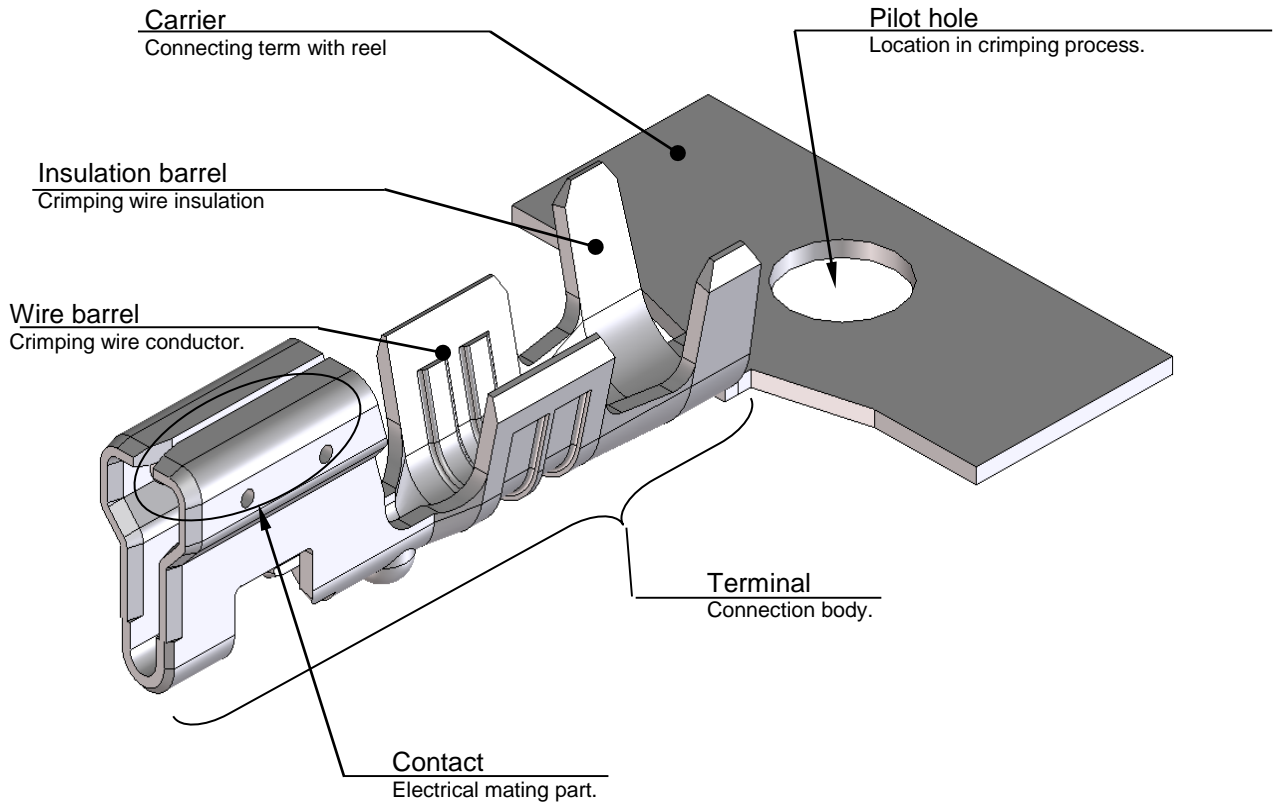
1. This product is not designed and produced for the machinery to be used under the condition involving human lives or system use. If you use it in special use such as medical, aerospace or nuclear power etc., please contact us before using.
2. Please contact us before using if you use it for automobile and ship etc. (We will investigate if it can be applied under a specific condition).
3. Avoid using the product in outdoors or under similar environments.

| | | | | | | |
|---------------------------------|-------------------|-------------------|--|------------------|---------------------|------------------|
| | REVISE ON PC ONLY | | TITLE: Mini-Latch 2.50MM PITCH WIRE TO BOARD SINGLE DIP TYPE APPLICATION SPECIFICATION | | | |
| | B | SEE SHEET 1 OF 26 | | | | |
| REV. | DESCRIPTION | | THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | | |
| DOCUMENT NUMBER 511910000-AS | | | DOC. TYPE PS | DOC. PART 001 | CUSTOMER GENERAL | SHEET 6 OF 26 |
| EN-127(2015-12) | | | | | | |

[3. Names of each part & explanation]

3-1. Receptacle crimping terminal : 50802**.**

Show Reel condition



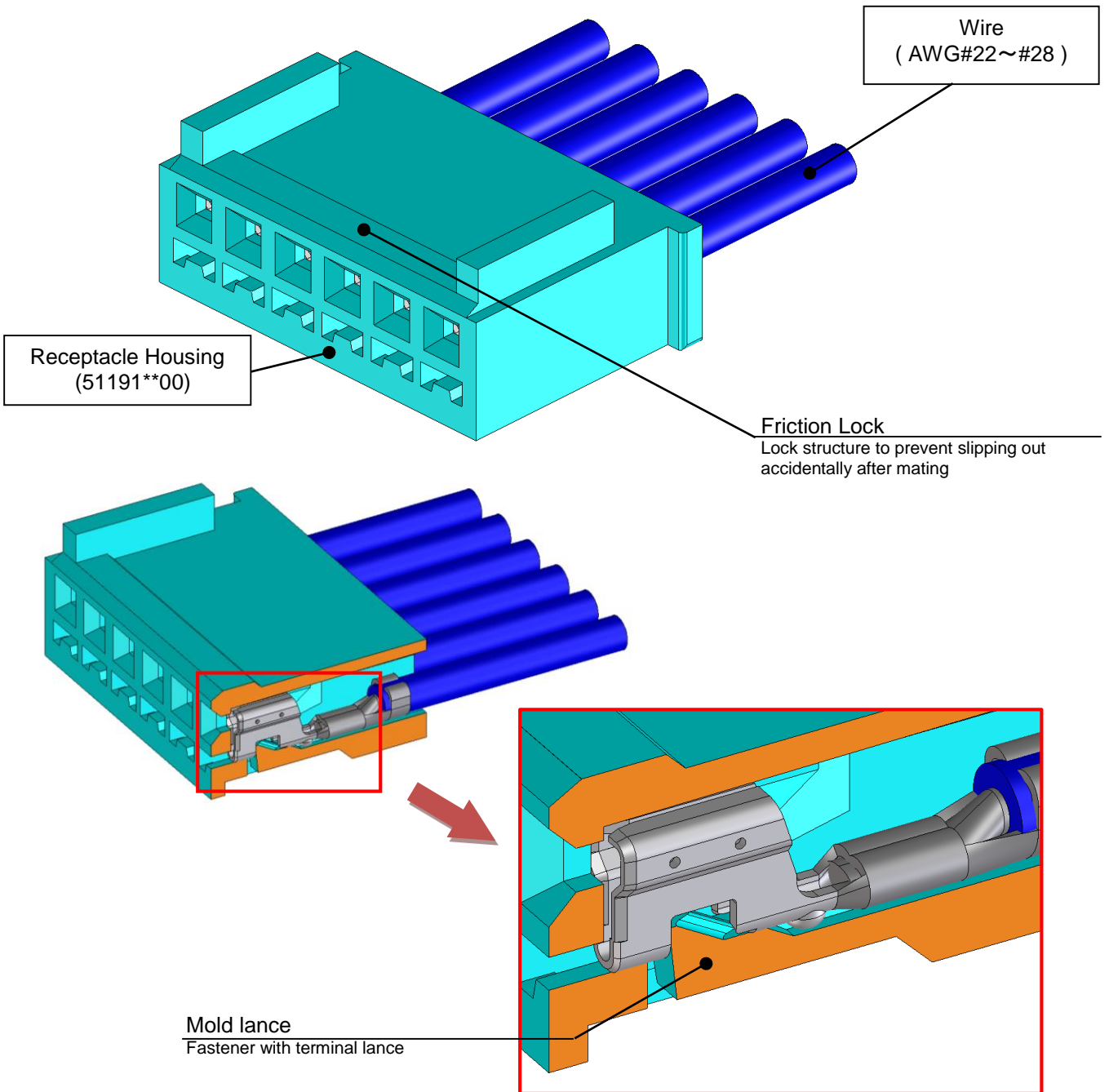
※ Refer to sales drawing for product form and its dimensions. : SD-50802-002

—APPLICABLE WIRE AND APPLICABLE CRIMP DIE MODEL—

| | | |
|--------------------------------|-----------|--------------------|
| Part Number | WIRE SIZE | CONDUCTOR SPEC. |
| 50802**** | AWG#22~28 | TINNED COPPER WIRE |
| APPLICABLE CRIMP DIE MODEL No. | | JM5857 |

| | | | | |
|---------------------------------|-------------------|--|------------------|---------------------|
| REVISE ON PC ONLY | | TITLE: | | |
| B | SEE SHEET 1 OF 26 | Mini-Latch 2.50MM PITCH WIRE TO BOARD SINGLE DIP TYPE APPLICATION SPECIFICATION | | |
| REV. | DESCRIPTION | THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | |
| DOCUMENT NUMBER 511910000-AS | | DOC. TYPE PS | DOC. PART 001 | CUSTOMER GENERAL |
| | | | | SHEET 7 OF 26 |
| EN-127(2015-12) | | | | |

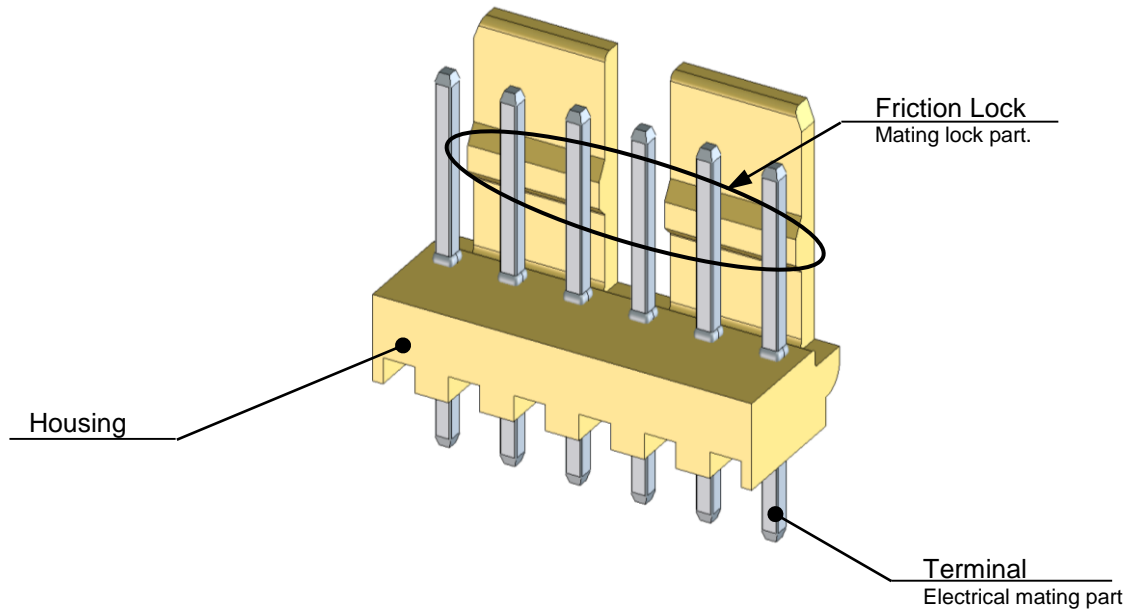
3-2. Receptacle housing : 5119100**



※ Refer to sales drawing for product form and its dimensions. : SD-51191-004

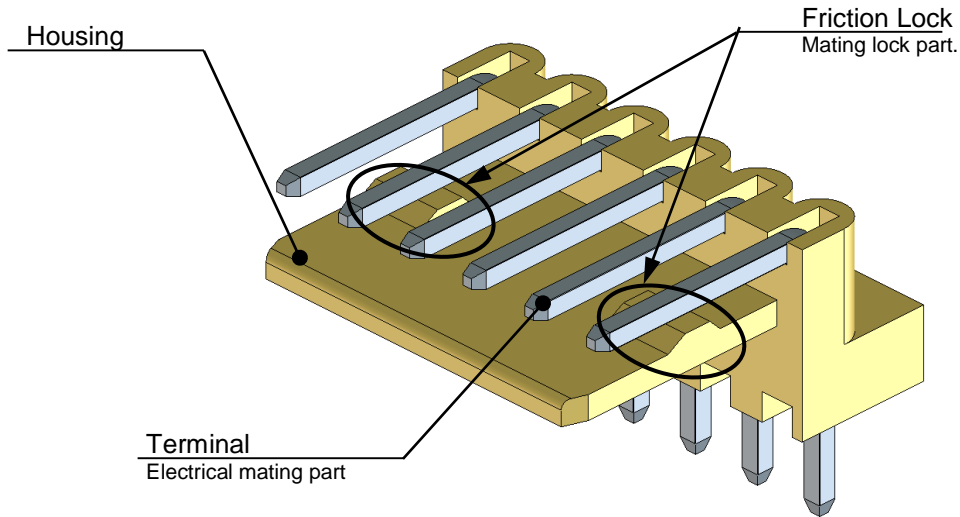
| | | | | | |
|---------------------------------|-------------------|---|------------------|---------------------|------------------|
| REVISE ON PC ONLY | | TITLE: | | | |
| B | SEE SHEET 1 OF 26 | Mini-Latch 2.50MM PITCH WIRE TO BOARD SINGLE DIP TYPE APPLICATION SPECIFICATION | | | |
| REV. | DESCRIPTION | THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | | |
| DOCUMENT NUMBER 511910000-AS | | DOC. TYPE PS | DOC. PART 001 | CUSTOMER GENERAL | SHEET 8 OF 26 |
| EN-127(2015-12) | | | | | |

3-3. Header Assembly : 5045-NA, 205505** (STRAIGHT TYPE)**



※ Refer to sales drawing for product form and its dimensions.
:SD-5045-NA, 2055050000 PSD 000

3-4. Header Assembly : 5046-NA (RIGHT ANGLE TYPE)



※ Refer to sales drawing for product form and its dimensions.
:SD-5046-NA

| | | | | |
|---------------------------------|-------------------|---|------------------|---------------------|
| REVISE ON PC ONLY | | TITLE: | | |
| B | SEE SHEET 1 OF 26 | Mini-Latch 2.50MM PITCH WIRE TO BOARD SINGLE DIP TYPE APPLICATION SPECIFICATION | | |
| REV. | DESCRIPTION | THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | |
| DOCUMENT NUMBER 511910000-AS | | DOC. TYPE PS | DOC. PART 001 | CUSTOMER GENERAL |
| | | | | SHEET 9 OF 26 |
| EN-127(2015-12) | | | | |

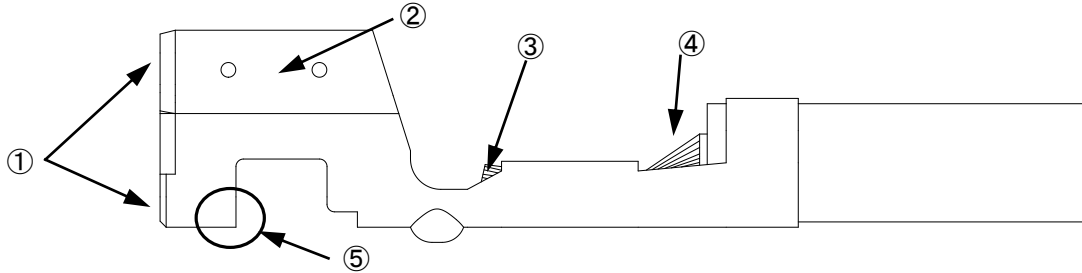
[4. Confirmation of terminal crimping process]

4-1. Appearance before crimping.

Make sure that there is no deformation of crimping terminals and no crush of contact boxes before crimping. If you find that terminals are tangled, do not remove them forcibly. Refer to sales drawing (SD-50802-002) for product form and its dimensions.

4-2. Appearance after crimping.

Confirmation items and crimping failure after crimping are shown as follows. Refer to CS-50802 for specified crimping height, pulling test and applicable wire specifications.



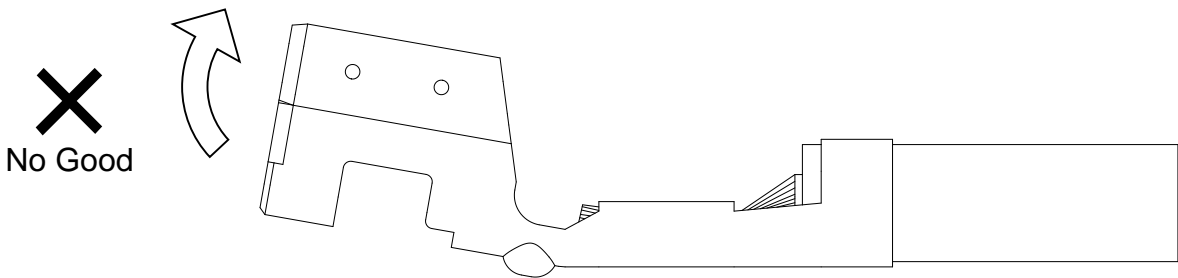
- ① No visible damage on terminal.
- ② No visible damage or deformation on spring contact area.
- ③ All wire strands are in conductor barrel.
- ④ The insulator part of electric wire is in the intermediate position of wire barrel and insulation barrel.
- ⑤ No damage on terminal lance.
- ⑥ No damage on appearance (Dirt / foreign objects).

4-3. Crimping failure.

Beware of the crimping failure as shown below. It may affect the insertion to housing as well as product functions.

① **Bend up**

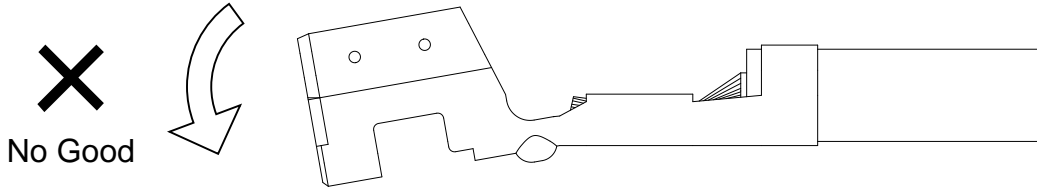
It may deteriorate the insertion to housing and terminal retention force and cause contact failures.



| | | | | |
|---------------------------------|-------------------|---|------------------|---------------------|
| REVISE ON PC ONLY | | TITLE: | | |
| B | SEE SHEET 1 OF 26 | Mini-Latch 2.50MM PITCH WIRE TO BOARD SINGLE DIP TYPE APPLICATION SPECIFICATION | | |
| REV. | DESCRIPTION | <small>THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION</small> | | |
| DOCUMENT NUMBER 511910000-AS | | DOC. TYPE PS | DOC. PART 001 | CUSTOMER GENERAL |
| | | | | SHEET 10 OF 26 |
| EN-127(2015-12) | | | | |

② **Bend down**

It may deteriorate the insertion to housing and terminal retention force and cause contact failures.

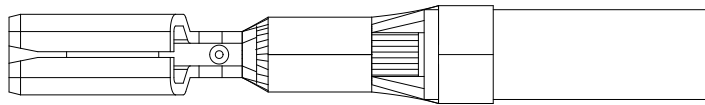


③ **Twist**

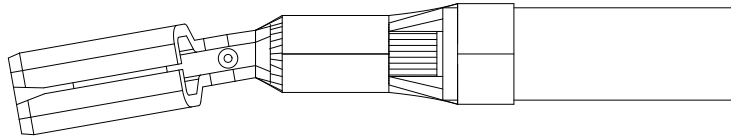
It may deteriorate the insertion to housing and terminal retention force and cause contact failures.



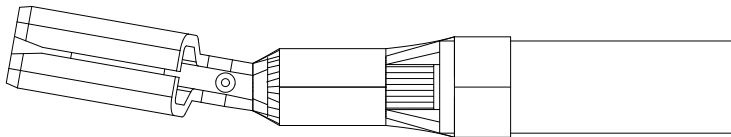
Good



No Good



No Good



REVISE ON PC ONLY

B

SEE SHEET 1 OF 26

REV.

DESCRIPTION

TITLE:

Mini-Latch 2.50MM PITCH
WIRE TO BOARD SINGLE DIP TYPE
APPLICATION SPECIFICATION

THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

DOCUMENT NUMBER
511910000-AS

DOC. TYPE
PS

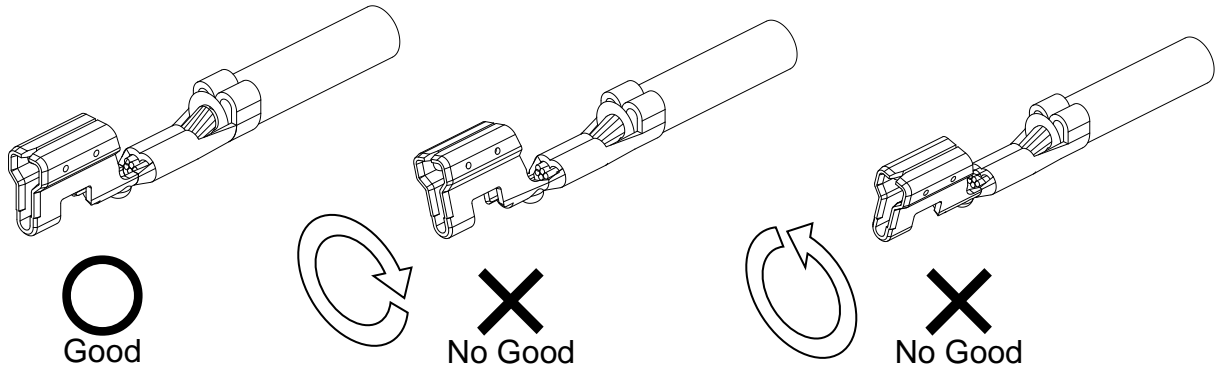
DOC. PART
001

CUSTOMER
GENERAL

SHEET
11 OF 26

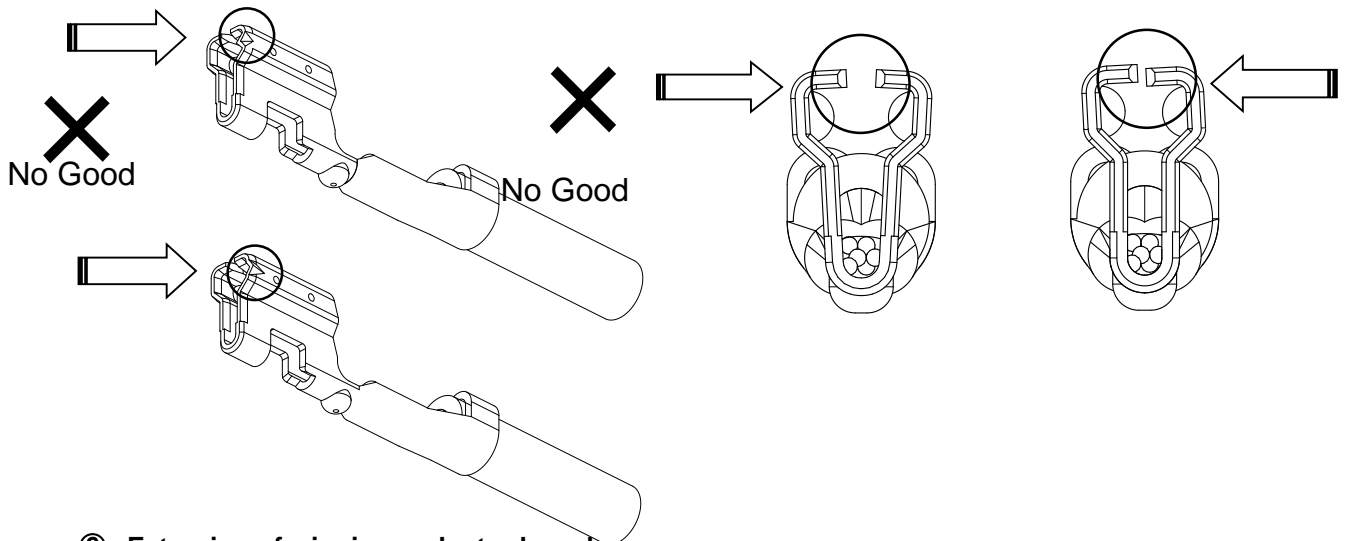
④ Rolling

It may deteriorate the insertion to housing and terminal retention force and cause contact failures.



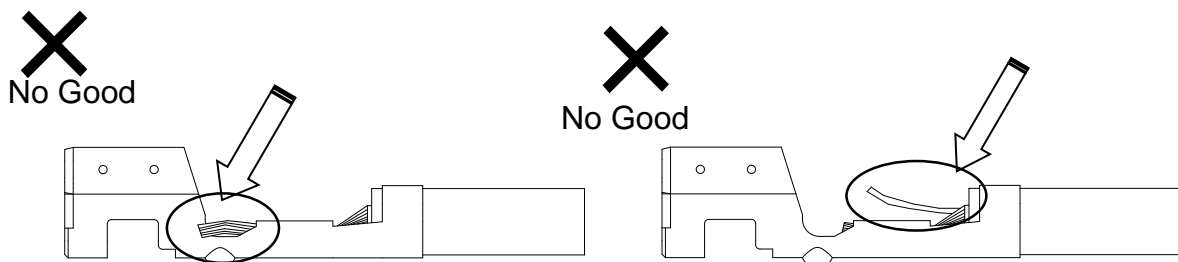
⑤ Crush and deformation of contact area and contact box

It may deteriorate the insertion to housing and terminal retention force and cause contact failures.



⑥ Extrusion of wire in conductor barrel

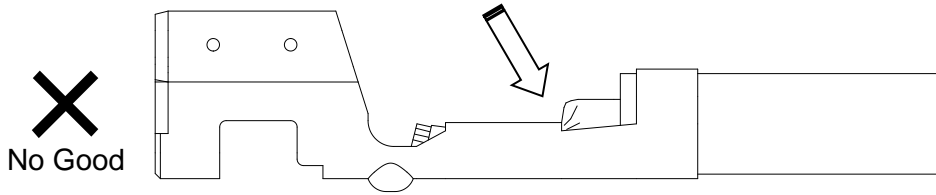
It may deteriorate the insertion to housing and cause contact failures.



| | | | | |
|---------------------------------|-------------------|--|------------------|---------------------|
| REVISE ON PC ONLY | | TITLE: | | |
| B | SEE SHEET 1 OF 26 | Mini-Latch 2.50MM PITCH WIRE TO BOARD SINGLE DIP TYPE APPLICATION SPECIFICATION | | |
| REV. | DESCRIPTION | THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | |
| DOCUMENT NUMBER 511910000-AS | | DOC. TYPE PS | DOC. PART 001 | CUSTOMER GENERAL |
| | | | | SHEET 12 OF 26 |
| EN-127(2015-12) | | | | |

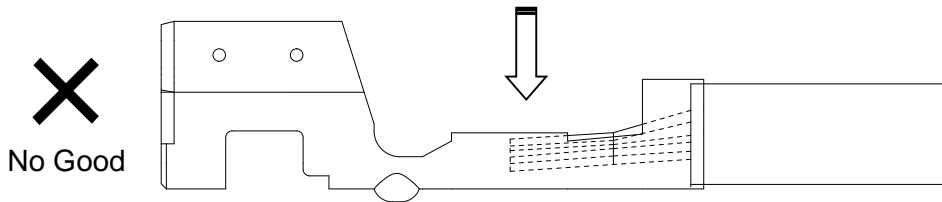
⑦ **Crimping position: if it is too front**

It may cause breaking wire, deterioration of wire crimping strength and disconnection by crimping insulator.

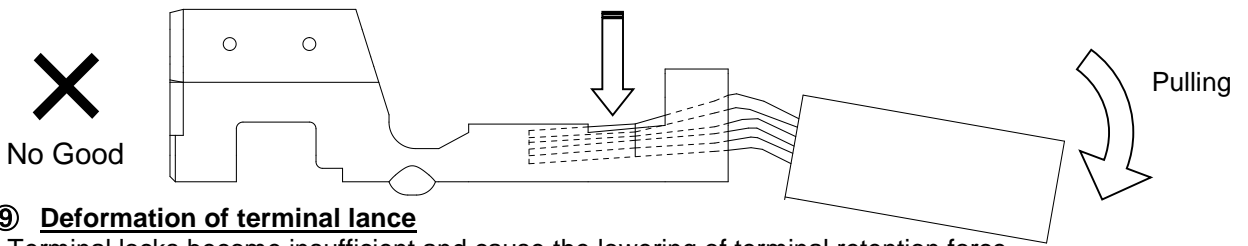


⑧ **Crimping position: if it is too back**

It may cause deterioration of wire crimping strength and disconnection if not have enough crimping margin.

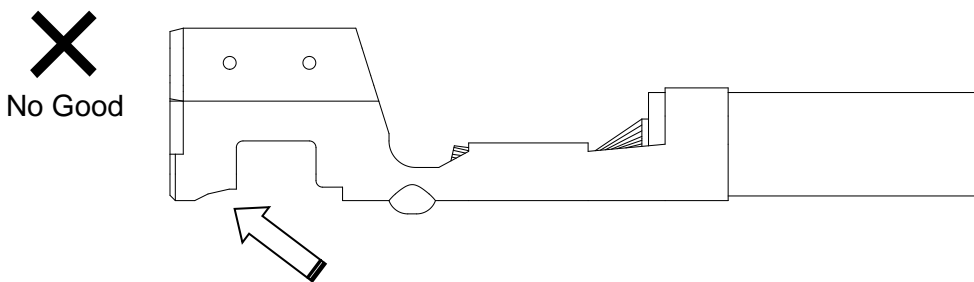


As wire Insulation is not crimped completely, wire insulation falls off easily when the wire is pulled.



⑨ **Deformation of terminal lance**

Terminal locks become insufficient and cause the lowering of terminal retention force.



Deformation (Crush)

| | | | | |
|---------------------------------|-------------------|---|------------------|---------------------|
| REVISE ON PC ONLY | | TITLE: | | |
| B | SEE SHEET 1 OF 26 | Mini-Latch 2.50MM PITCH WIRE TO BOARD SINGLE DIP TYPE APPLICATION SPECIFICATION | | |
| REV. | DESCRIPTION | THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | |
| DOCUMENT NUMBER 511910000-AS | | DOC. TYPE PS | DOC. PART 001 | CUSTOMER GENERAL |
| | | | | SHEET 13 OF 26 |
| EN-127(2015-12) | | | | |

[5. Bond of wire after crimping and packaging]

Check for damaged terminals and wire insulation when bundling wires.
 Check for a quantity per a packing box.
 Do not overpack crimping wires in a box as there is a risk of damaging terminals.

Instructions

- ※When bundling wires, beware not to apply excessive force to terminals.
- ※When packing bundled harnesses processed products in a packing box, put products alternately not to be applied to connectors over a long time by piling up. (cross shape) in a fitting box. **(Fig.5-2)**
- ※Use buffer materials on the bottom and top of a packing box. To avoid applying force to connector over a long time by stacking wires, use buffer materials. **(Fig.5-2)**

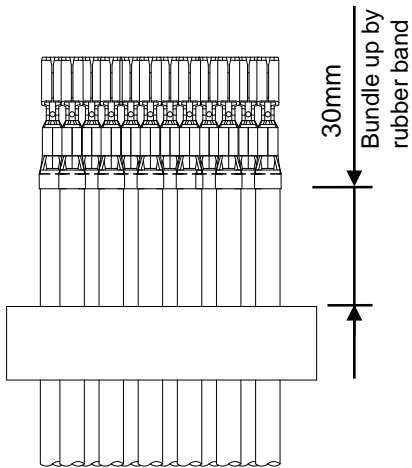


Fig. 5-1

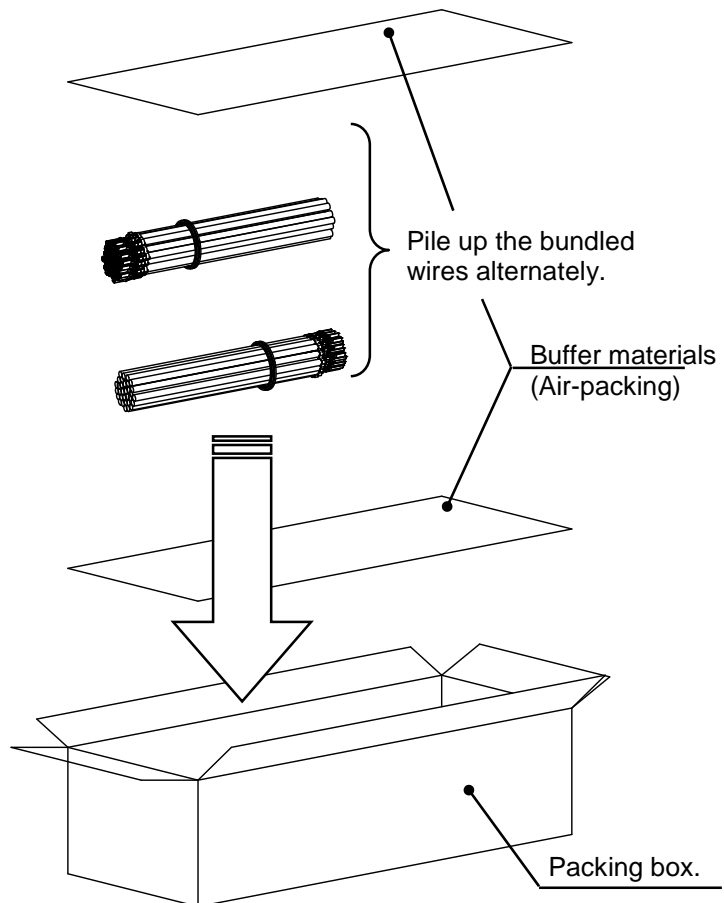


Fig. 5-2

| | | | | |
|---------------------------------|-------------------|---|------------------|---------------------|
| REVISE ON PC ONLY | | TITLE: | | |
| B | SEE SHEET 1 OF 26 | Mini-Latch 2.50MM PITCH WIRE TO BOARD SINGLE DIP TYPE APPLICATION SPECIFICATION | | |
| REV. | DESCRIPTION | THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | |
| DOCUMENT NUMBER 511910000-AS | | DOC. TYPE PS | DOC. PART 001 | CUSTOMER GENERAL |
| | | | | SHEET 14 OF 26 |
| EN-127(2015-12) | | | | |

[6. Method of crimping terminal mounting to Receptacle Housing (harness process)]

Repair procedures and instructions (※) for crimping terminals are shown as follows:

6-1. Crimping terminal mounting

- ① Hold receptacle housing to pinch right and left side.
- ② Hold a cable in the position about 10mm away from the crimp-end with a finger softly.

Instructions

- ※ If you hold a wire in a long distance from a terminal, wires will be easily bent and it may be difficult to insert.
 - ※ Distance value depends on wire gauge, UL, etc. Check a wire before using if it is appropriate.
- ③ Hold terminal lance part toward the center of receptacle housing and insert terminal slowly and straightly till the tip of terminal touches housing (with force of max. 14.7N). (Fig.6-1)

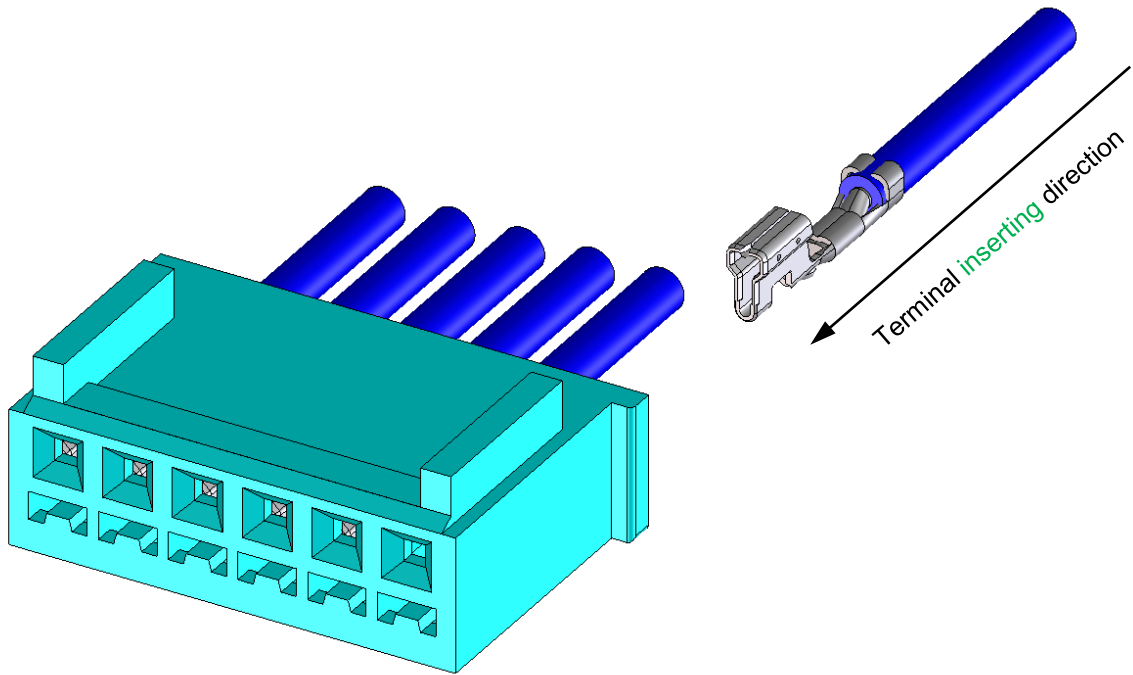
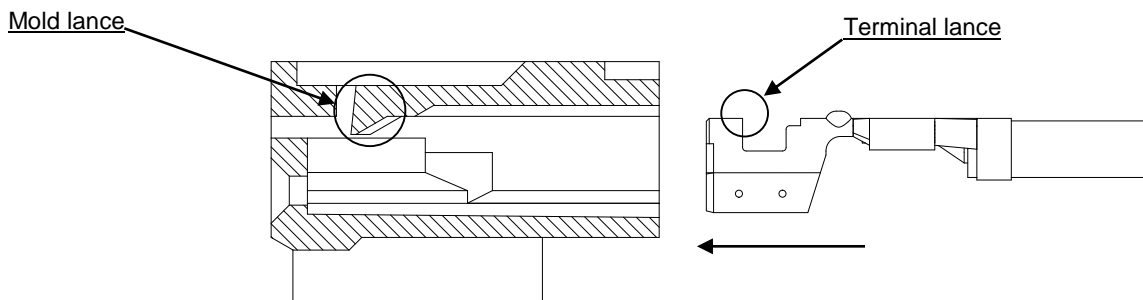


Fig. 6-1

| | | | | |
|---------------------------------|-------------------|--|------------------|---------------------|
| REVISE ON PC ONLY | | TITLE: | | |
| B | SEE SHEET 1 OF 26 | Mini-Latch 2.50MM PITCH WIRE TO BOARD SINGLE DIP TYPE APPLICATION SPECIFICATION | | |
| REV. | DESCRIPTION | THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | |
| DOCUMENT NUMBER 511910000-AS | | DOC. TYPE PS | DOC. PART 001 | CUSTOMER GENERAL |
| | | | | SHEET 15 OF 26 |
| EN-127(2015-12) | | | | |

Instructions

- ※ If crimping height and width are too big, it may cause of terminal insertion failure. Follow the instructed crimping height. (Refer to crimping specifications CS-50802)
- ※ Stop your work if you are not sure for hooking directions or angles. After checking there are any damages of a terminal or a receptacle housing, you can insert it again. If any damages are found, do not use the terminal and the receptacle housing.
- ※ Be aware with the direction of terminal when inserting to receptacle housing. **(Fig.6-2,6-3)** Also be aware whether the terminal is not upside down, not having an angle or not rotating max. 5 degrees against receptacle housing. This may cause of terminal deformations or damages to receptacle housing.



○ Fig.6-2 Right inserting direction

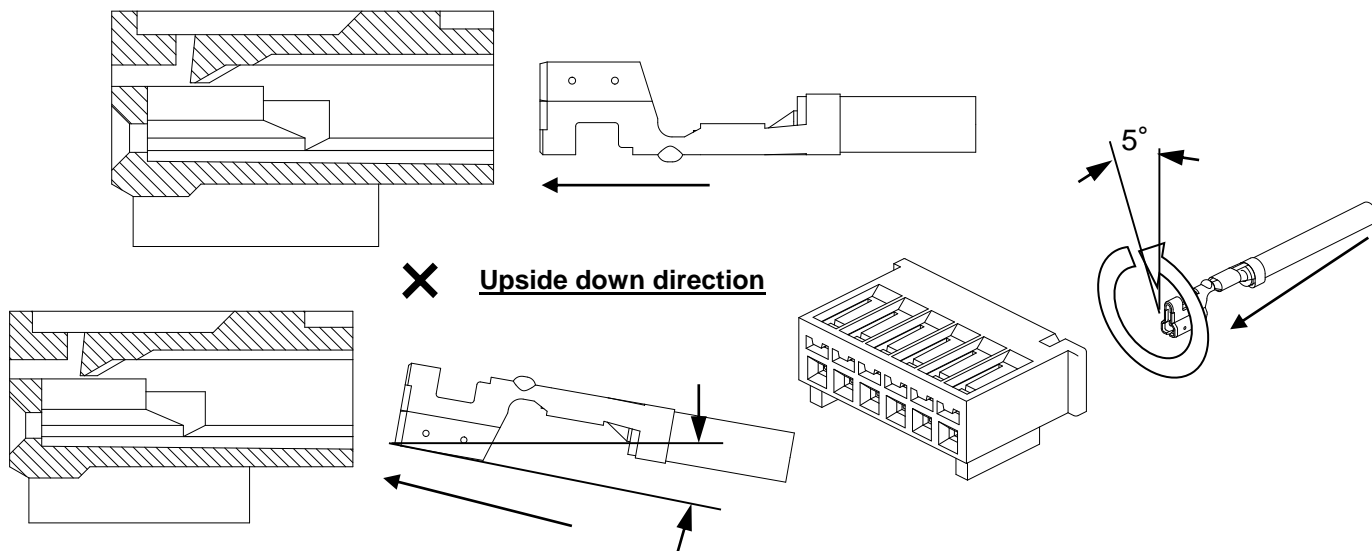


Fig.6-3 Inappropriate inserting direction

| | | | | |
|---------------------------------|-------------------|---|------------------|---------------------|
| REVISE ON PC ONLY | | TITLE: | | |
| B | SEE SHEET 1 OF 26 | Mini-Latch 2.50MM PITCH WIRE TO BOARD SINGLE DIP TYPE APPLICATION SPECIFICATION | | |
| REV. | DESCRIPTION | THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | |
| DOCUMENT NUMBER 511910000-AS | | DOC. TYPE PS | DOC. PART 001 | CUSTOMER GENERAL |
| | | | | SHEET 16 OF 26 |

- ④ After inserting a terminal, confirm whether terminals are not pulled out from receptacle housing by pulling wires softly (with a force upward of 1N)
(Confirmation with excessive tension may break a connector.)
- ⑤ After inserting all terminals, confirm the position of terminal lance from the window of receptacle mold lance. If they are inserted correctly, terminal lance is at the position where terminal lance rode up mold lance properly. You can confirm clearance by shaking them axially softly.
(Fig.6-4)

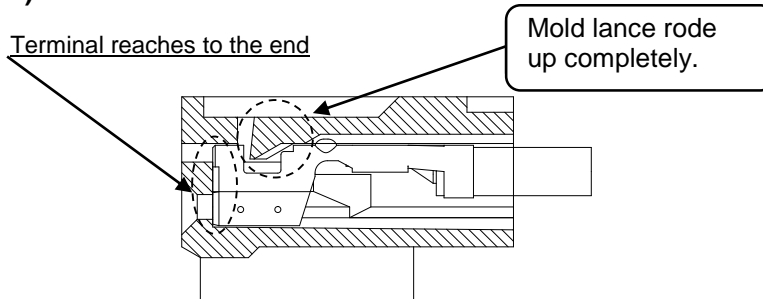


Fig.6-4 Case of correct insertion

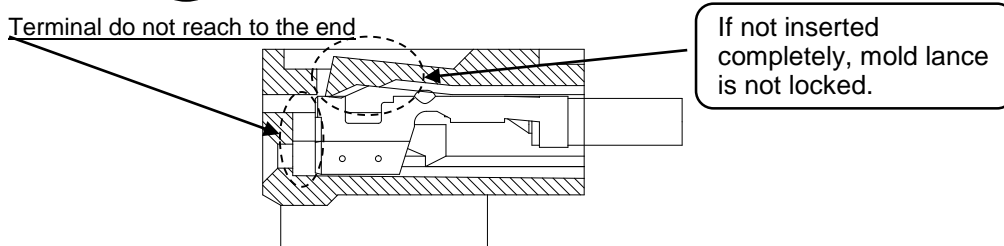


Fig.6-5 Case of incomplete insertion

Instructions

※If terminal is inserted incompletely, terminal lance is not locked with mold lance and then a terminal cannot be retained.

※In the area of incomplete insertion (see **Fig.6-5**), terminal lance is the most transformed. As if a terminal is re-inserted in this condition of harness, mold lance is transformed and not moving back to correct position, and then the retention force may be decreased. Be aware to change a new terminal in this case.

| | | | | |
|---------------------------------|-------------------|---|------------------|---------------------|
| REVISE ON PC ONLY | | TITLE: | | |
| B | SEE SHEET 1 OF 26 | Mini-Latch 2.50MM PITCH WIRE TO BOARD SINGLE DIP TYPE APPLICATION SPECIFICATION | | |
| REV. | DESCRIPTION | THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | |
| DOCUMENT NUMBER 511910000-AS | | DOC. TYPE PS | DOC. PART 001 | CUSTOMER GENERAL |
| | | | | SHEET 17 OF 26 |
| EN-127(2015-12) | | | | |

- ⑥ When checking after harness processing, avoid bending wire excessively or using with tension. This may cause contact failures since force is applied to terminal crimping parts or receptacle housing lance parts.
- ⑦ When having a conduction check, use only for applicable mating connector. This may cause contact failures for terminal transformations etc. if not.

6-2. Crimping terminal repair

When you pull crimping terminals inserted once, lift mold lance using a needle and pull it out. However, mold lance is transformed when lifting. The transformation will extremely decrease the strength so the terminal may come off easily from housing even if you insert it again. **Be aware to change the receptacle housing to a new one when you repair crimping terminal.** Use an appropriate magnifying glass, and repair with caution.

- ※ Avoid pulling off a terminal by force.
- ※ When repairing, be aware not to deform or scratch terminal lance.

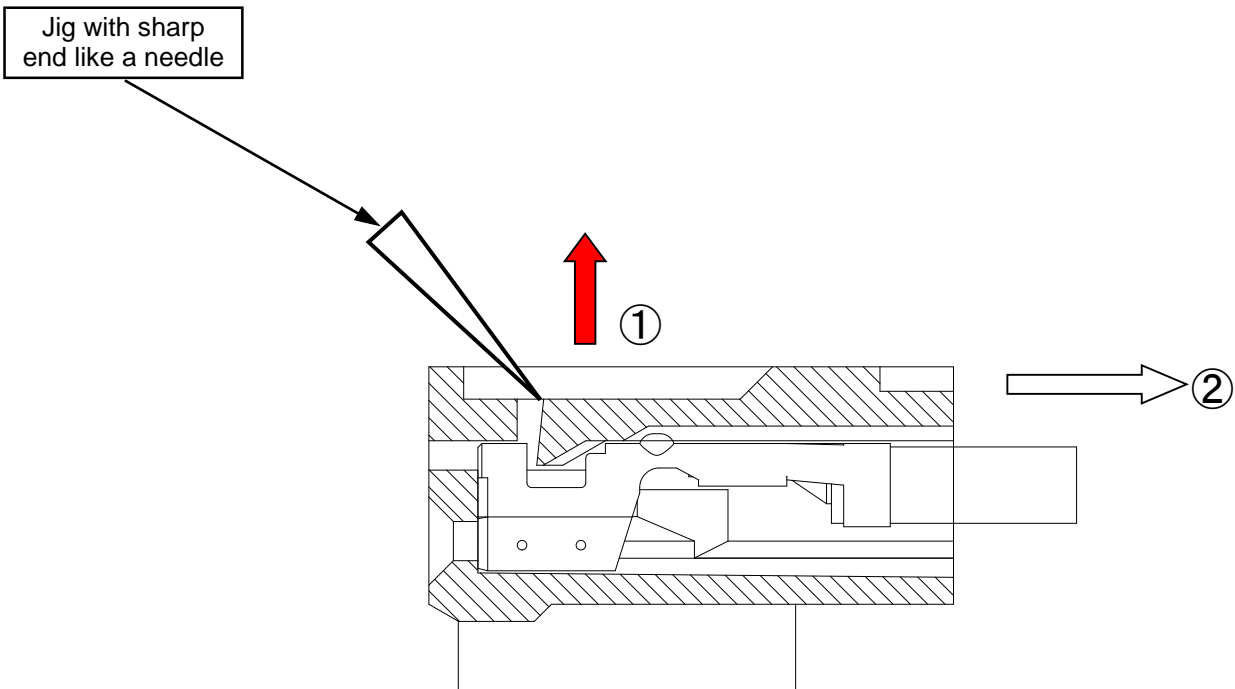


Fig.6-6 Pulling method of crimping terminal

| | | | | |
|---------------------------------|-------------------|---|------------------|---------------------|
| REVISE ON PC ONLY | | TITLE: | | |
| B | SEE SHEET 1 OF 26 | Mini-Latch 2.50MM PITCH WIRE TO BOARD SINGLE DIP TYPE APPLICATION SPECIFICATION | | |
| REV. | DESCRIPTION | <small>THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION</small> | | |
| DOCUMENT NUMBER 511910000-AS | | DOC. TYPE PS | DOC. PART 001 | CUSTOMER GENERAL |
| | | | | SHEET 18 OF 26 |
| EN-127(2015-12) | | | | |

[7. Bond of harness]

When banding after harness processing, be aware with the following points.

- ① Bundle wires at point of over 50mm away from a connector and uniformize the force applied to each wire. **(Fig.7-1)**
- ② Do not apply force to the only one wire (or a few specific wires) in the harness. **(Fig.7-2)**

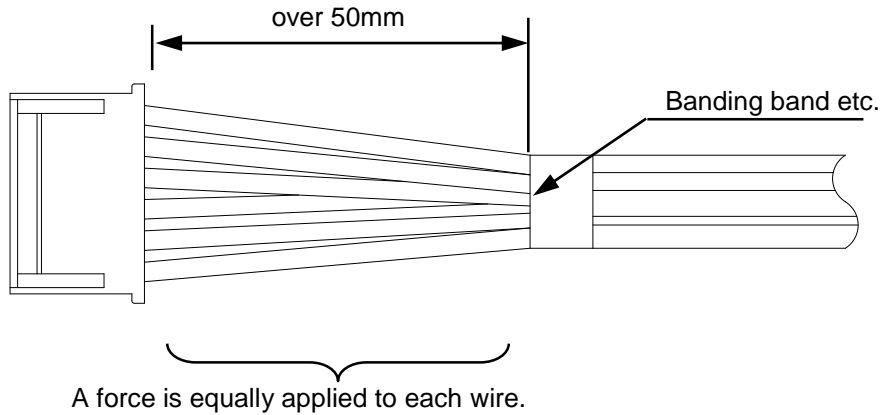


Fig.7-1 A harness is bundled properly

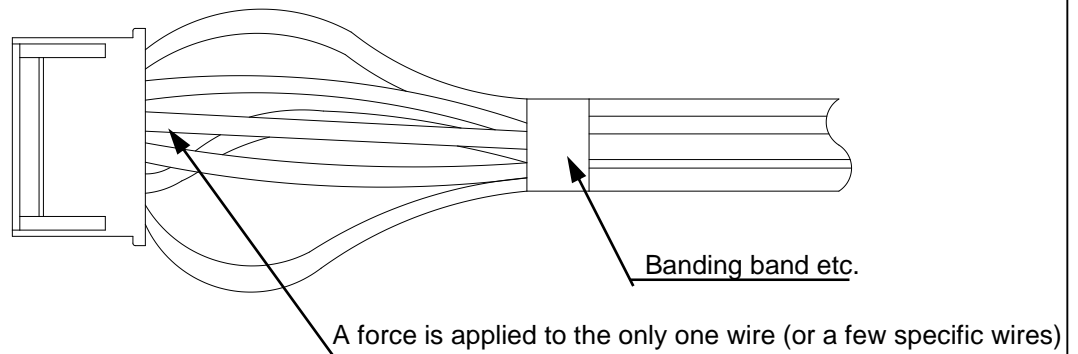


Fig.7-2 A harness is bundled improperly

Instructions

※When a harness is tangled each other, do not pull them by force. It may cause damages to connectors when excessive force is applied to terminals, and a terminal pulls off from a connector.

※ Do not drop products or hit them against other objects.

| | | | | |
|---------------------------------|-------------------|---|------------------|---------------------|
| REVISE ON PC ONLY | | TITLE: | | |
| B | SEE SHEET 1 OF 26 | Mini-Latch 2.50MM PITCH WIRE TO BOARD SINGLE DIP TYPE APPLICATION SPECIFICATION | | |
| REV. | DESCRIPTION | THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | |
| DOCUMENT NUMBER 511910000-AS | | DOC. TYPE PS | DOC. PART 001 | CUSTOMER GENERAL |
| | | | | SHEET 19 OF 26 |
| EN-127(2015-12) | | | | |

[8. Harness packaging]

Procedures and instructions (※) are shown below when packing harness processed products.

- ① Bundle the harness processed products. **Band max. 20 harnesses in one bunch.**

Instructions

※When bundling the harness, do not use a rubber band to avoid applying excessive force constantly. Band harness in the middle (at one point) with plastic string. Manage to protect a connector from shocks or loads by wrapping in each bunch of connectors with air packing. **(Fig.8-1)**

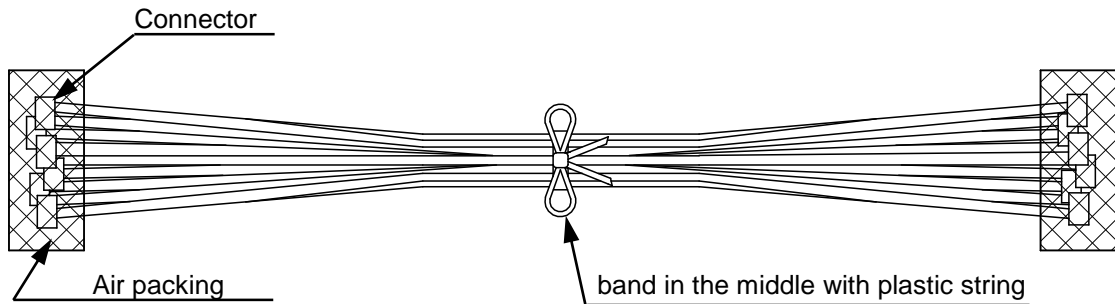


Fig.8-1 A bunch of harness

| | | | | | |
|--|-------------------|--|-------------------------|----------------------------|-------------------|
| B | REVISE ON PC ONLY | TITLE: Mini-Latch 2.50MM PITCH WIRE TO BOARD SINGLE DIP TYPE APPLICATION SPECIFICATION | | | |
| | SEE SHEET 1 OF 26 | THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | | |
| REV. | DESCRIPTION | DOC. TYPE PS | DOC. PART 001 | CUSTOMER GENERAL | SHEET 20 OF 26 |
| DOCUMENT NUMBER 511910000-AS | | | | | |
| EN-127(2015-12) | | | | | |

② Put banded harness into a packing box.

Figure below (**Fig 8-2**) is one of examples for recommended reference. Prevent to apply forces to connectors in a long-term loading when you use different packing methods for long harnesses.

Instructions

※When packing to bundle harness processed products in a packing box, follow the instructions and avoid applying excessive loads or forces to harnesses. (in a cross shape) (**Fig.8-2①**)

※Use air packing on the bottom of a packing box. Make sure to use air packing to prevent forces from applying to connectors for hours such as piling up packing boxes. (**Fig.8-2②**)

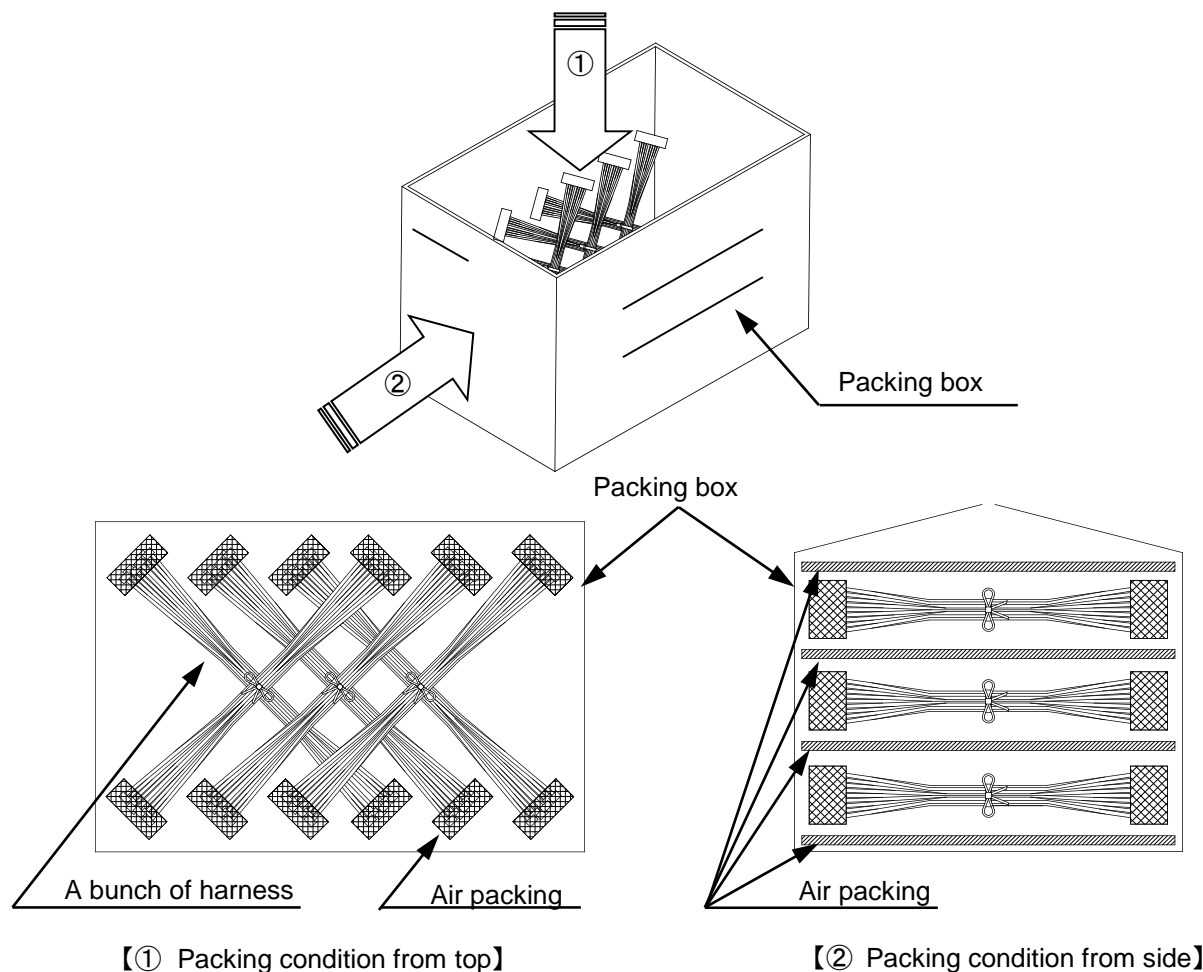


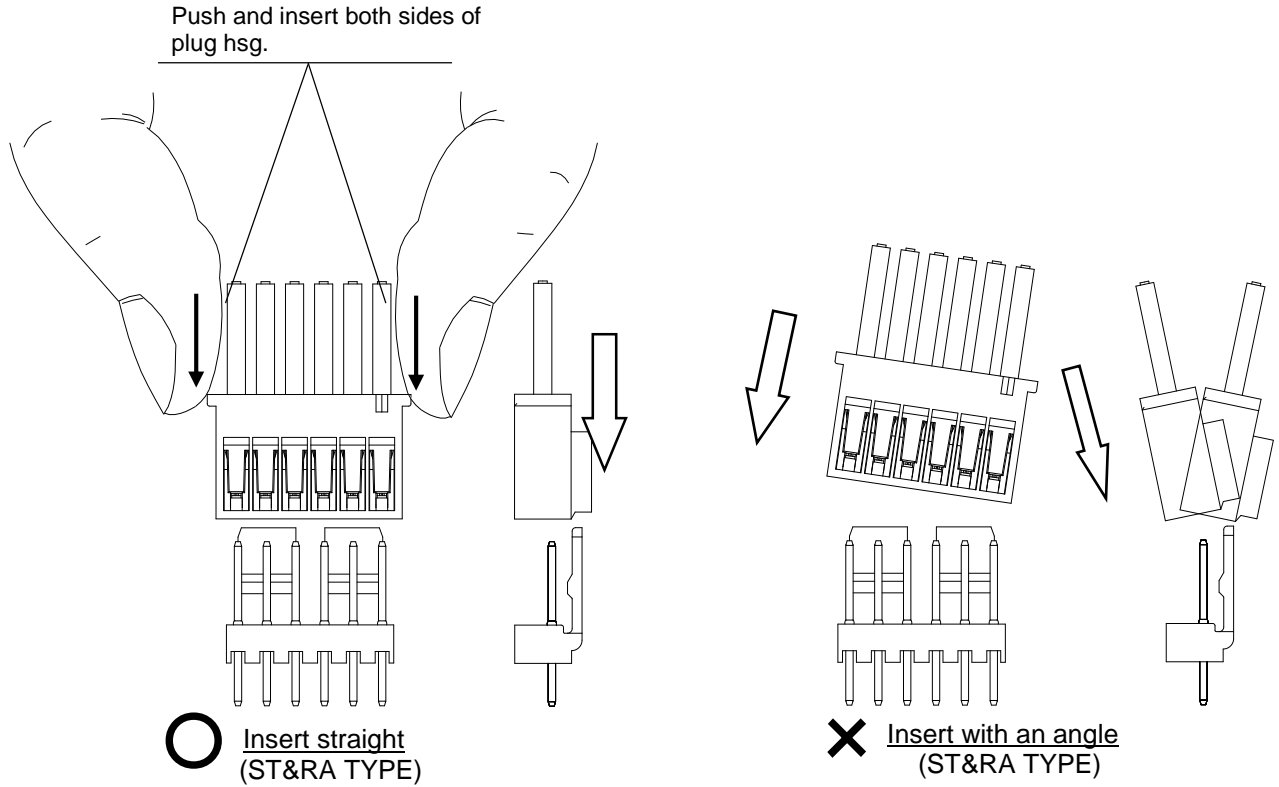
Fig.8-2 Packing condition

| | | | | |
|---------------------------------|-------------------|---|------------------|---------------------|
| REVISE ON PC ONLY | | TITLE: | | |
| B | SEE SHEET 1 OF 26 | Mini-Latch 2.50MM PITCH WIRE TO BOARD SINGLE DIP TYPE APPLICATION SPECIFICATION | | |
| REV. | DESCRIPTION | THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | |
| DOCUMENT NUMBER 511910000-AS | | DOC. TYPE PS | DOC. PART 001 | CUSTOMER GENERAL |
| | | | | SHEET 21 OF 26 |
| EN-127(2015-12) | | | | |

[9. Instructions when mating with HDR connector]

9-1. Recommended insertion method

Set a mating direction of receptacle housing (harness side) and plug housing (header side), and push both sides of receptacle housing to pitch direction (as shown with arrows) **until both connectors meet each other (complete mating position)**. After mating, confirm that locks are fastened completely.



Instructions

※Push receptacle housings and insert them straightly until they touch each other. If you cannot insert them smoothly, confirm whether there is no transformation of terminals and receptacle housings etc.

| | | | | |
|---------------------------------|-------------------|--|------------------|---------------------|
| REVISE ON PC ONLY | | TITLE: | | |
| B | SEE SHEET 1 OF 26 | Mini-Latch 2.50MM PITCH WIRE TO BOARD SINGLE DIP TYPE APPLICATION SPECIFICATION | | |
| REV. | DESCRIPTION | THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | |
| DOCUMENT NUMBER 511910000-AS | | DOC. TYPE PS | DOC. PART 001 | CUSTOMER GENERAL |
| | | | | SHEET 22 OF 26 |
| EN-127(2015-12) | | | | |

9-2. Recommended removal method

Hold wires all together softly. Use fingers to the housing and pull a receptacle housing slowly, axially and straightly. Avoid pulling them with an angle and roughly. It may cause damages to connectors.

Instructions

※ Do not pull to hold only a few specific wires. As excessive forces apply to specific terminals, it may cause damages to connectors, and terminals may slip out.

| | | | | | |
|---------------------------------|-------------------|--|---|---------------------|-------------------|
| | REVISE ON PC ONLY | | TITLE: | | |
| | B | SEE SHEET 1 OF 26 | Mini-Latch 2.50MM PITCH WIRE TO BOARD SINGLE DIP TYPE APPLICATION SPECIFICATION | | |
| REV. | DESCRIPTION | THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | | |
| DOCUMENT NUMBER 511910000-AS | | DOC. TYPE PS | DOC. PART 001 | CUSTOMER GENERAL | SHEET 23 OF 26 |
| EN-127(2015-12) | | | | | |

9-3. Wiring after mating

Instructions

※If you plan to pull wires in the machine, be aware to prevent applying forces to connectors directly such as having enough flexibility to wires. **(Fig.9-3-1)**

※When pulling wires in the machinery, do not use under the condition that wires are bent excessively and tensions are applied. It may cause to pull terminals out since forces are applied to terminal crimping zone or the terminal inserting portion of receptacle by wire tension. Especially, prevent forces to apply to only a few specific wires. **(Fig.9-3-2)**

※If forces are applied to one specific wire, the wire (crimping terminal) may be pulled off.

※Prevent to pull wires in over two directions when pulling wires in the machinery after mating. **(Fig.9-3-3)**

※Please contact us before using if you use in special wiring. **(Fig9-3-2/9-3-3 etc.)**

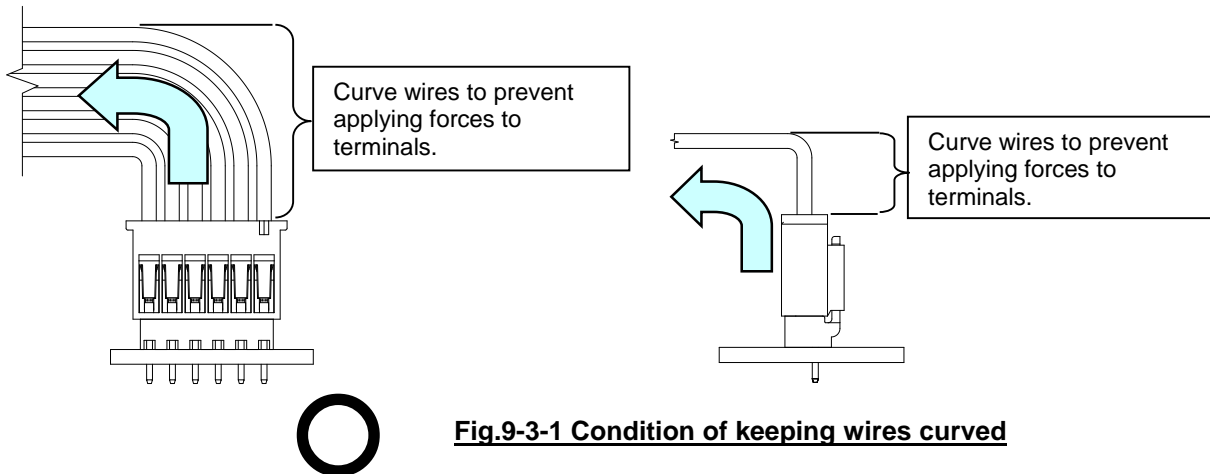


Fig.9-3-1 Condition of keeping wires curved

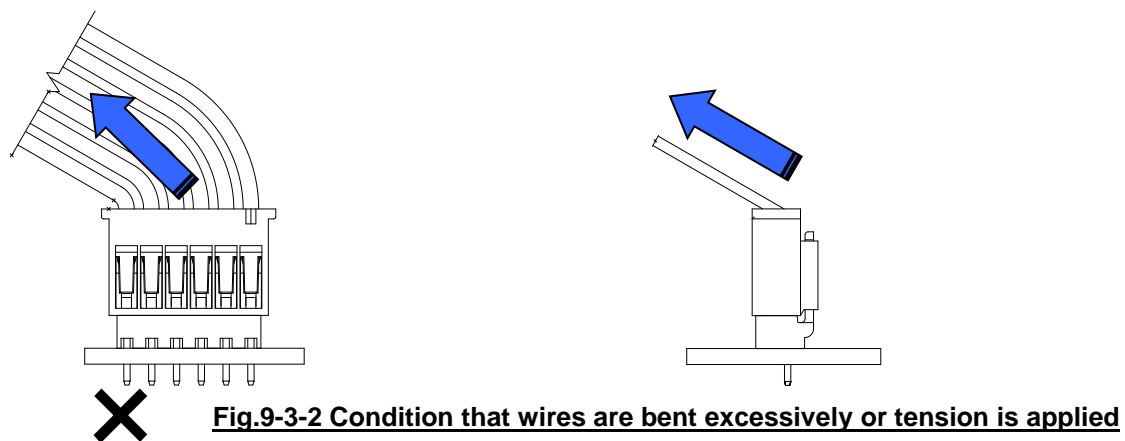


Fig.9-3-2 Condition that wires are bent excessively or tension is applied

| | | | | |
|---------------------------------|-------------------|--|------------------|---------------------|
| REVISE ON PC ONLY | | TITLE: | | |
| B | SEE SHEET 1 OF 26 | Mini-Latch 2.50MM PITCH WIRE TO BOARD SINGLE DIP TYPE APPLICATION SPECIFICATION | | |
| REV. | DESCRIPTION | THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | |
| DOCUMENT NUMBER 511910000-AS | | DOC. TYPE PS | DOC. PART 001 | CUSTOMER GENERAL |
| | | | | SHEET 24 OF 26 |
| EN-127(2015-12) | | | | |

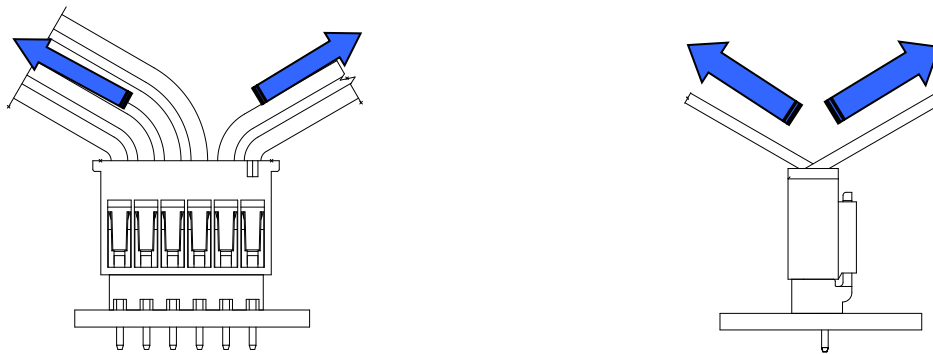


Fig.9-3-3 Wiring toward over 2 directions

| | | | | |
|---------------------------------|-------------------|---|------------------|---------------------|
| REVISE ON PC ONLY | | TITLE: | | |
| B | SEE SHEET 1 OF 26 | Mini-Latch 2.50MM PITCH WIRE TO BOARD SINGLE DIP TYPE APPLICATION SPECIFICATION | | |
| REV. | DESCRIPTION | <small>THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX ELECTRONIC TECHNOLOGIES, LLC AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION</small> | | |
| DOCUMENT NUMBER 511910000-AS | | DOC. TYPE PS | DOC. PART 001 | CUSTOMER GENERAL |
| | | | | SHEET 25 OF 26 |
| EN-127(2015-12) | | | | |

