



# TEST SUMMARY

## Micro-Fit (3.0) Connector Systems Single and Dual Row – Wire to Board and Wire to Wire

### 1.0 SCOPE

This Test Summary covers the Micro-Fit 3.00 mm (.118 inch) centerline (pitch) connector series terminated with 18-30 AWG wire using crimp technology manufactured in multiple locations.

### 2.0 PRODUCT DESCRIPTION

#### 2.1 PRODUCT NAME, SERIES, AND PART NUMBER(S)

Micro-Fit (3.0) Receptacle Series: 43645, 43025  
Micro-Fit (3.0) Plug Series: 43640, 43020  
Micro-Fit (3.0) Header Series: 43650, 43045, 44067  
Micro-Fit (3.0) Female Crimp Terminal Series: 43030  
Micro-Fit (3.0) Male Crimp Terminal Series: 43031

#### 2.1.1 CRIMP TERMINAL, HOUSING, AND MATING HEADER SERIES USED FOR TESTING:

Micro-Fit (3.0) Recept: 43645-0200, 43025-0400, 43025-0600, 43025-0800, 43025-1000  
Micro-Fit (3.0) Plug: 43020-0601, 43020-1800, 43020-2400  
Micro-Fit (3.0) Header: 43045-0424, 43045-0612, 43045-0613, 43045-0618, 43045-0711, 43045-1012  
Micro-Fit (3.0) Female Crimp Terminal: 43030-0001, 43030-0002, 43030-0006  
Micro-Fit (3.0) Male Crimp Terminal: 43031-0001, 43031-0002, 43031-0003, 43031-0006

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

Refer to the appropriate sales drawings for information on dimensions, materials, plating, and markings.

#### 2.3 PRODUCT SPECIFICATION TITLE AND DOCUMENT NUMBER

Product Specification: Micro-Fit (3.0) Single Row      Document Number: PS-43650  
Product Specification: Micro-Fit (3.0) Dual Row      Document Number: PS-43045

### 3.0 TEST OBJECTIVE

This side-by-side screen testing was conducted to demonstrate the equivalent performance of product manufactured in the Molex Lincoln (designated as Existing) and Molex Shanghai (designated as New) facilities.

### 4.0 CONCLUSION

All completed testing demonstrates the performance of the same product manufactured in either location is equivalent.

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| <u>DOCUMENT NUMBER:</u><br><b>430450005-TS</b> | <u>CREATED / REVISED BY:</u><br><b>AFAVAZZA</b>                                | <u>CHECKED BY:</u><br><b>SSOUSEK</b>   | <u>APPROVED BY:</u><br><b>FSMITH</b> |



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## 5.0 TESTING PROCEDURES

### 5.1 TERMINAL RETENTION FORCE IN HOUSING

Microfit 43030 and 43031 terminals were crimped to 20 awg wires and inserted into receptacle and plug housings, respectively. An axial pullout force was applied to each terminal by pulling on the wire at a rate of 1.0 inch per minute. The maximum force to dislodge each terminal from the housing was recorded. Microfit 43045 headers had an axial pushout force applied to each pin in the opposite direction of insertion at a rate of 1.0 inch per minute. The maximum force to dislodge each pin from the housing was recorded. (Reference EIA-364-29)

### 5.2 WIRE PULLOUT FORCE (WIRE FROM TERMINAL)

Microfit 43030 and 43031 terminals were crimped to 20 awg, 24 awg, 26 awg, and 28 awg wires. Terminals were clamped in a vise and the wire was forcibly removed from the crimp by applying an axial force on the wire at a rate of 1.0 inch per minute. The maximum force to remove the wire from the terminal was recorded. Samples were tested both with and without insulation crimp influence.

### 5.3 MATE AND UNMATE FORCE

Wire connectors were fully populated with female or male crimp terminals and PCB connectors were fully populated with header terminals. An axial force was applied in the mating and unmating direction at a rate of 1.0 inch per minute. The maximum force to mate and unmate the connectors was recorded for the first, fifth, and tenth mating cycle. This testing was conducted with the thumb latch disabled. (Reference EIA-364-13E)

### 5.4 THUMB LATCH TO RAMP YIELD STRENGTH

This testing was conducted without terminals inserted in the housing. Receptacles were mated to header housings. Header housings were secured to the base table and the receptacle housings were secured within a grip fixture attached to the load cell of a motorized force testing device. The crosshead of the device was then moved in the direction of unmating at a rate of 1.0 inch per minute until the latching geometry of either the receptacle or the header housing yielded. The maximum force to yield the latch was recorded.

### 5.5 PANEL MOUNT RETENTION

Panel mount plugs were inserted into a .055 and .100 inch thick panel. The panel was supported elevated above the base table and an axial load was applied to the plug in the opposite direction of insertion with the crosshead moving at a rate of 1.0 inch per minute until the plug released from the panel or a 50 lb force was achieved. The maximum force to yield the panel latches was recorded.

### 5.6 TEMPERATURE PROFILE

Samples were fully populated, electrically wired in series, and connected to a power supply. Thermocouples were attached to record temperature of the terminals. Ambient temperature was also recorded. An initial test current was applied to the specimens and they were allowed to thermally stabilize. Test current was then incremented to the next level. The current was increased successively in 0.5 amp steps after attaining thermal stability. Testing was terminated

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at 0.5 amps above rated current. Temperature rise is calculated as the temperature of the terminal less ambient temperature at the specified current. (Reference EIA-364-70)

## 5.7 TEMPERATURE RISE – 18 DAY STABILITY

Samples were powered with the rated current for 4 days steady, 10 days cycled (15 minutes off, 45 minutes on), and 4 days steady. Temperature rise was recorded at 10-minute intervals throughout testing. Samples which did not have current applied were used as ambient reference.

## 6.0 PERFORMANCE RESULTS

### 6.1 TERMINAL RETENTION FORCE

**6.1.1 Crimp Terminal in Housing: All values in Newtons. Specification: 24.5 N MINIMUM**

| <i>Housing</i> | <i>Existing / New</i> | <i>Terminal</i> | <i>Existing / New</i> | <i>mean</i> | <i>min</i> | <i>max</i> |
|----------------|-----------------------|-----------------|-----------------------|-------------|------------|------------|
| 43025          | Existing              | 43030 Sn        | Existing              | 38.70       | 25.76      | 45.55      |
|                |                       |                 | New                   | 36.39       | 32.74      | 38.30      |
|                |                       | 43030 Au        | Existing              | 41.99       | 39.76      | 44.23      |
|                |                       |                 | New                   | 38.79       | 32.21      | 39.59      |
|                | New                   | 43030 Au        | Existing              | 46.88       | 41.10      | 51.78      |
|                |                       |                 | New                   | 37.90       | 35.02      | 43.48      |
| 43020          | Existing              | 43031 Sn        | Existing              | 38.80       | 35.88      | 42.32      |
|                |                       |                 | New                   | 39.58       | 33.06      | 69.38      |
|                |                       | 43031 Au        | Existing              | 65.70       | 55.98      | 72.83      |
|                |                       |                 | New                   | 46.64       | 36.13      | 84.57      |
|                | New                   | 43031 Au        | Existing              | 50.84       | 49.06      | 52.18      |
|                |                       |                 |                       |             |            |            |

**6.1.2 Pin in Header: All values in Newtons. Specification: 13.7 N MINIMUM**

| <i>Header</i>                | <i>Existing / New</i> | <i>mean</i> | <i>min</i> | <i>max</i> |
|------------------------------|-----------------------|-------------|------------|------------|
| 43045-0612<br>TH, Reflow Sn  | Existing              | 42.70       | 39.32      | 47.30      |
|                              | New                   | 45.85       | 38.64      | 58.16      |
| 43045-0711<br>TH, Matte Sn   | Existing              | 51.70       | 43.13      | 60.21      |
|                              | New                   | 56.09       | 47.12      | 67.70      |
| 43045-0613<br>TH, Au         | Existing              | 41.30       | 37.48      | 46.10      |
|                              | New                   | 38.31       | 24.65      | 47.95      |
| 43045-0618<br>SMT, Reflow Sn | Existing              | 53.69       | 48.13      | 58.45      |
|                              | New                   | 45.06       | 39.28      | 51.15      |
| 43045-0424<br>TH, Reflow Sn  | Existing              | 25.62       | 20.55      | 41.19      |
|                              | New                   | 38.34       | 33.63      | 42.75      |

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## 6.2 WIRE PULLOUT FORCE (WIRE FROM TERMINAL)

All values in lbf. Specification as indicated.

| <i>Terminal</i> | <i>AWG</i> | <i>With or Without Insulation Crimp</i> | <i>Existing / New</i> | <i>mean</i> | <i>min</i> | <i>max</i> | <i>Specification</i> |
|-----------------|------------|---|-----------------------|-------------|------------|------------|----------------------|
| 43030 Sn        | 20         | With                                    | Existing **           | 26.81       | 23.93      | 32.29      | 13.0                 |
|                 |            |   | New **                | 30.69       | 28.77      | 31.88      |                      |
|                 | 24         | With                                    | Existing **           | 12.87       | 12.46      | 13.58      | 5.0                  |
|                 |            |   | New **                | 12.94       | 11.04      | 14.19      |                      |
| 43030 Au        | 20         | With                                    | Existing **           | 30.39       | 29.84      | 30.78      | 13.0                 |
|                 |            |   | New **                | 30.77       | 30.35      | 31.48      |                      |
|                 |            | Without                                 | Existing **           | 25.88       | 23.63      | 28.33      |                      |
|                 |            |   | New **                | 26.89       | 25.85      | 28.48      |                      |
|                 | 24         | With                                    | Existing *            | 12.27       | 11.20      | 12.81      | 5.0                  |
|                 |            |   | New *                 | 12.94       | 11.83      | 13.52      |                      |
|                 | 26         | With                                    | Existing *            | 9.80        | 9.37       | 10.40      | 3.0                  |
|                 |            |   | New **                | 7.93        | 3.49 *     | 10.36      |                      |
|                 | 28         | With                                    | Existing *            | 7.87        | 6.84       | 8.17       | 2.0                  |
|                 |            |   | New **                | 8.34        | 8.00       | 8.65       |                      |
| 43031 Sn        | 20         | Without                                 | Existing *            | 28.69       | 23.16      | 29.63      | 13.0                 |
|                 |            |   | New *                 | 29.27       | 26.73      | 30.21      |                      |
| 43031 Au        | 20         | With                                    | Existing *            | 30.14       | 28.56      | 31.57      | 13.0                 |
|                 |            |   | New *                 | 31.58       | 31.01      | 32.43      |                      |
|                 |            | Without                                 | Existing *            | 28.87       | 28.46      | 29.29      |                      |
|                 |            |   | New *                 | 29.18       | 27.54      | 30.57      |                      |
|                 | 24         | With                                    | Existing *            | 12.14       | 11.40      | 12.87      | 5.0                  |
|                 |            |   | New *                 | 12.17       | 11.50      | 12.71      |                      |
|                 | 26         | With                                    | Existing *            | 8.54        | 3.87       | 10.37      | 3.0                  |
|                 |            |   | New *                 | 9.06        | 7.92       | 9.75       |                      |
|                 | 28         | With                                    | Existing **           | 7.86        | 7.76       | 8.12       | 2.0                  |
|                 |            |   | New **                | 7.91        | 7.72       | 8.06       |                      |

\* Failure mode was broken conductor

\*\* Failure mode was conductor pulled out or terminal broke

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## 6.3 MATE AND UNMATE FORCE

Mate Force: All values in Newtons. Specification: 8.0 N MAX per circuit (1<sup>st</sup> cycle only; cycles 5 and 10 are for reference only)

| Terminal | Existing / New                   | Mating Part                      | Existing / New | Cycle | Connector Mate Force |       |       | Mate Force Per Circuit |      |      |
|----------|----------------------------------|----------------------------------|----------------|-------|----------------------|-------|-------|------------------------|------|------|
|          |                                  |                                  |                |       | mean                 | min   | max   | mean                   | min  | max  |
| 43030 Sn | Existing                         | 43045<br>10 circuit<br>Reflow Sn | Existing       | 1     | 43.06                | 40.39 | 45.68 | 4.31                   | 4.05 | 4.58 |
|          | New                              |                                  |                | 1     | 37.32                | 35.72 | 38.92 | 3.74                   | 3.56 | 3.91 |
|          | Existing                         | 43045<br>6 circuit<br>Reflow Sn  | Existing       | 1     | 22.62                | 21.21 | 23.83 | 3.77                   | 3.54 | 3.97 |
|          |                                  |                                  |                | 5     | 28.03                | 26.90 | 29.68 | 4.67                   | 4.48 | 4.95 |
|          | New                              | 43045<br>6 circuit<br>Reflow Sn  | New            | 10    | 36.60                | 32.88 | 41.10 | 6.10                   | 5.48 | 6.85 |
|          |                                  |                                  |                | 1     | 21.14                | 18.57 | 25.96 | 3.52                   | 3.10 | 4.33 |
|          |                                  |                                  |                | 5     | 27.95                | 24.47 | 31.64 | 4.66                   | 4.08 | 5.27 |
|          | Existing                         | 43045<br>6 circuit<br>Matte Sn   | Existing       | 10    | 30.82                | 27.46 | 34.11 | 5.14                   | 4.58 | 5.69 |
|          |                                  |                                  |                | 1     | 25.00                | 24.02 | 26.16 | 4.17                   | 4.00 | 4.36 |
|          |                                  |                                  |                | 5     | 32.42                | 31.22 | 33.01 | 5.40                   | 5.20 | 5.50 |
|          | New                              | 43045<br>6 circuit<br>Matte Sn   | New            | 10    | 39.50                | 38.02 | 42.09 | 6.58                   | 6.34 | 7.02 |
|          |                                  |                                  |                | 1     | 23.53                | 21.86 | 25.99 | 3.92                   | 3.64 | 4.33 |
| 5        |                                  |                                  |                | 33.51 | 31.93                | 36.33 | 5.59  | 5.32                   | 6.06 |      |
| 43030 Au | Existing                         | 43045<br>6 circuit Au            | Existing       | 10    | 35.70                | 32.49 | 37.47 | 5.95                   | 5.42 | 6.25 |
|          |                                  |                                  |                | 1     | 20.42                | 19.76 | 21.75 | 3.40                   | 3.29 | 3.63 |
|          |                                  |                                  |                | 5     | 18.50                | 17.80 | 19.09 | 3.08                   | 2.97 | 3.18 |
|          | New                              | 43045<br>6 circuit Au            | New            | 10    | 20.04                | 19.26 | 20.59 | 3.34                   | 3.21 | 3.43 |
|          |                                  |                                  |                | 1     | 28.96                | 27.99 | 29.75 | 4.83                   | 4.67 | 4.96 |
|          |                                  |                                  |                | 5     | 25.31                | 23.60 | 27.28 | 4.22                   | 3.93 | 4.55 |
| 43031 Sn | Existing                         | 43025<br>6 circuit<br>(43030 Sn) | Existing       | 10    | 27.99                | 26.30 | 30.25 | 4.67                   | 4.38 | 5.04 |
|          |                                  |                                  |                | 1     | 29.07                | 25.71 | 31.17 | 4.84                   | 4.29 | 5.20 |
|          |                                  |                                  |                | 5     | 16.10                | 14.23 | 17.59 | 2.68                   | 2.37 | 2.93 |
|          | New                              | 43025<br>6 circuit<br>(43030 Sn) | New            | 10    | 17.28                | 15.65 | 19.79 | 2.88                   | 2.61 | 3.30 |
|          |                                  |                                  |                | 1     | 22.37                | 21.41 | 23.25 | 3.73                   | 3.57 | 3.88 |
|          |                                  |                                  |                | 5     | 22.85                | 21.30 | 24.88 | 3.81                   | 3.55 | 4.15 |
| 43031 Au | Existing                         | 43025<br>6 circuit<br>(43030 Au) | Existing       | 10    | 21.06                | 19.65 | 21.96 | 3.51                   | 3.28 | 3.66 |
|          |                                  |                                  |                | 1     | 26.47                | 25.89 | 26.91 | 4.40                   | 4.31 | 4.49 |
|          |                                  |                                  |                | 5     | 29.63                | 28.78 | 31.09 | 4.94                   | 4.80 | 5.20 |
|          | New                              | 43025<br>6 circuit<br>(43030 Au) | New            | 10    | 23.26                | 19.48 | 28.60 | 3.87                   | 3.25 | 4.76 |
|          |                                  |                                  |                | 1     | 25.74                | 23.14 | 28.86 | 4.29                   | 3.86 | 4.81 |
|          |                                  |                                  |                | 5     | 20.42                | 18.66 | 22.03 | 3.40                   | 3.11 | 3.67 |
| Existing | 43025<br>6 circuit<br>(43030 Au) | Existing                         | 10             | 20.37 | 18.33                | 21.69 | 3.39  | 3.06                   | 3.62 |      |
|          |                                  |                                  | 1              | 23.07 | 22.18                | 23.92 | 3.85  | 3.70                   | 3.99 |      |
|          |                                  |                                  | 5              | 19.72 | 18.88                | 21.63 | 3.29  | 3.15                   | 3.61 |      |
| New      | 43025<br>6 circuit<br>(43030 Au) | New                              | 10             | 22.62 | 21.05                | 25.05 | 3.77  | 3.51                   | 4.18 |      |

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**Unmate Force: All values in Newtons. Specification: 2.4 N MIN per circuit (1<sup>st</sup> cycle only; cycles 5 and 10 for reference only)**

| Terminal | Existing / New                   | Mating Part                      | Existing / New | Cycle | Connector Unmate Force |       |       | Unmate Force Per Circuit |      |      |
|----------|----------------------------------|----------------------------------|----------------|-------|------------------------|-------|-------|--------------------------|------|------|
|          |                                  |                                  |                |       | mean                   | min   | max   | mean                     | min  | max  |
| 43030 Sn | Existing                         | 43045<br>10 circuit<br>Reflow Sn | Existing       | 1     | 31.49                  | 28.87 | 34.12 | 3.16                     | 2.89 | 3.43 |
|          | New                              |                                  |                | 1     | 31.76                  | 31.40 | 32.07 | 3.20                     | 3.16 | 3.20 |
|          | Existing                         | 43045<br>6 circuit<br>Reflow Sn  | Existing       | 1     | 20.12                  | 18.54 | 21.69 | 3.53                     | 3.09 | 3.62 |
|          |                                  |                                  |                | 5     | 26.82                  | 25.29 | 29.88 | 4.47                     | 4.22 | 4.98 |
|          | New                              | 43045<br>6 circuit<br>Reflow Sn  | New            | 10    | 38.07                  | 36.06 | 41.07 | 6.35                     | 6.01 | 6.85 |
|          |                                  |                                  |                | 1     | 18.50                  | 17.36 | 19.27 | 3.08                     | 2.89 | 3.21 |
|          |                                  |                                  |                | 5     | 28.98                  | 27.85 | 30.25 | 4.83                     | 4.64 | 5.04 |
|          | Existing                         | 43045<br>6 circuit<br>Matte Sn   | Existing       | 10    | 31.05                  | 28.78 | 33.50 | 5.18                     | 4.80 | 5.58 |
|          |                                  |                                  |                | 1     | 21.43                  | 19.95 | 23.42 | 3.57                     | 3.33 | 3.90 |
|          | New                              | 43045<br>6 circuit<br>Matte Sn   | New            | 5     | 24.47                  | 23.05 | 25.50 | 4.08                     | 3.84 | 4.25 |
|          |                                  |                                  |                | 10    | 40.74                  | 38.27 | 43.71 | 6.79                     | 6.38 | 7.29 |
|          |                                  |                                  |                | 1     | 24.03                  | 22.93 | 26.21 | 4.01                     | 3.82 | 4.37 |
| 43030 Au | Existing                         | 43045<br>6 circuit<br>Au         | Existing       | 5     | 26.09                  | 24.55 | 28.61 | 4.35                     | 4.09 | 4.77 |
|          |                                  |                                  |                | 10    | 34.57                  | 32.43 | 36.98 | 5.76                     | 5.41 | 6.16 |
|          |                                  |                                  |                | 1     | 16.84                  | 16.35 | 17.47 | 2.81                     | 2.73 | 2.91 |
|          | New                              | 43045<br>6 circuit<br>Au         | New            | 5     | 17.10                  | 16.11 | 20.55 | 2.85                     | 2.69 | 3.43 |
|          |                                  |                                  |                | 10    | 17.44                  | 17.17 | 17.83 | 2.91                     | 2.86 | 2.97 |
|          |                                  |                                  |                | 1     | 21.49                  | 20.88 | 22.01 | 3.58                     | 3.48 | 3.67 |
| 43031 Sn | Existing                         | 43025<br>6 circuit<br>(43030 Sn) | Existing       | 5     | 24.26                  | 23.48 | 25.30 | 4.04                     | 3.91 | 4.22 |
|          |                                  |                                  |                | 10    | 26.89                  | 25.78 | 28.36 | 4.48                     | 4.30 | 4.73 |
|          |                                  |                                  |                | 1     | 19.29                  | 18.39 | 20.26 | 3.22                     | 3.07 | 3.38 |
|          | New                              | 43025<br>6 circuit<br>(43030 Sn) | New            | 5     | 12.43                  | 10.95 | 13.44 | 2.07                     | 1.83 | 2.24 |
|          |                                  |                                  |                | 10    | 14.30                  | 13.25 | 16.41 | 2.38                     | 2.21 | 2.74 |
|          |                                  |                                  |                | 1     | 19.49                  | 19.14 | 20.03 | 3.25                     | 3.19 | 3.34 |
| 43031 Au | Existing                         | 43025<br>6 circuit<br>(43030 Au) | Existing       | 5     | 19.75                  | 19.31 | 20.13 | 3.29                     | 3.22 | 3.36 |
|          |                                  |                                  |                | 10    | 19.28                  | 18.64 | 20.26 | 3.21                     | 3.11 | 3.38 |
|          |                                  |                                  |                | 1     | 25.18                  | 24.24 | 26.82 | 4.18                     | 4.05 | 4.49 |
|          | New                              | 43025<br>6 circuit<br>(43030 Au) | New            | 1     | 21.93                  | 18.86 | 24.51 | 3.65                     | 3.16 | 4.09 |
|          |                                  |                                  |                | 1     | 18.33                  | 17.88 | 18.64 | 3.07                     | 2.98 | 3.11 |
|          |                                  |                                  |                | 1     | 17.94                  | 16.17 | 19.17 | 2.99                     | 2.70 | 3.20 |
| Existing | 43025<br>6 circuit<br>(43030 Au) | Existing                         | 5              | 18.57 | 17.22                  | 20.25 | 3.09  | 2.87                     | 3.38 |      |
|          |                                  |                                  | 10             | 19.54 | 17.95                  | 21.85 | 3.26  | 2.99                     | 3.64 |      |
|          |                                  |                                  | 1              | 17.02 | 16.14                  | 18.26 | 2.84  | 2.69                     | 3.04 |      |
| New      | 43025<br>6 circuit<br>(43030 Au) | New                              | 5              | 19.73 | 18.00                  | 21.00 | 3.29  | 3.00                     | 3.50 |      |
|          |                                  |                                  | 10             | 22.87 | 20.39                  | 25.03 | 3.81  | 3.40                     | 4.17 |      |

|   |   |   |                               |
|---|---|---|-------------------------------|
| REVISION:<br><b>C</b>                   | ECR/ECN INFORMATION:<br>EC No: <b>618434</b><br>DATE: <b>2019/06/12</b> | TITLE:<br><b>TEST SUMMARY<br/>MICRO-FIT (3.0) CONNECTOR SERIES<br/>MULTIPLE PLANT LOCATIONS</b> | SHEET No.<br><b>6 of 8</b>    |
| DOCUMENT NUMBER:<br><b>430450005-TS</b> | CREATED / REVISED BY:<br><b>AFAVAZZA</b>                                | CHECKED BY:<br><b>SSOUSEK</b>   | APPROVED BY:<br><b>FSMITH</b> |



# TEST SUMMARY

## 6.4 THUMB LATCH TO RAMP YIELD STRENGTH

All values in lbf. Specification: 13 lbf MINIMUM

| <i>Housing</i> | <i>Existing / New</i> | <i>Mating Housing</i> | <i>Existing / New</i> | <i>mean</i> | <i>min</i> | <i>max</i> |
|----------------|-----------------------|-----------------------|-----------------------|-------------|------------|------------|
| 43025-0800     | Existing              | 43045                 | Existing              | 18.54       | 17.39      | 19.85      |
|                | New                   |                       |                       | 15.90       | 15.35      | 16.63      |
| 43645-0200     | Existing              | 43650                 | Existing              | 27.91       | 27.13      | 28.91      |
|                | New                   |                       |                       | 19.54       | 18.86      | 20.58      |
| 43025-0400     | Existing              | 43045                 | Existing              | 17.98       | 17.57      | 18.64      |
|                |                       |                       | New                   | 16.65       | 15.62      | 17.74      |

## 6.5 PANEL MOUNT RETENTION

All values in lbf. Specification: 35 lbf MINIMUM

| <i>Housing</i> | <i>Panel Thickness</i> | <i>Existing / New</i> | <i>min</i> | <i>max</i> |
|----------------|------------------------|-----------------------|------------|------------|
| 43020-1800     | .055 inch              | Existing              | > 50       | > 50       |
|                |                        | New                   | > 50       | > 50       |
|                | .100 inch              | Existing              | 43.12      | > 50       |
|                |                        | New                   | > 50       | > 50       |
| 43020-2400     | .055 inch              | Existing              | 46.36      | 49.71      |
|                |                        | New                   | > 50       | > 50       |
|                | .100 inch              | Existing              | 42.64      | > 50       |
|                |                        | New                   | > 50       | > 50       |

|  |  |  |                                      |
|--|--|--|--------------------------------------|
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| <u>DOCUMENT NUMBER:</u><br><b>430450005-TS</b> | <u>CREATED / REVISED BY:</u><br><b>AFAVAZZA</b>                  | <u>CHECKED BY:</u><br><b>SSOUSEK</b>   | <u>APPROVED BY:</u><br><b>FSMITH</b> |



# TEST SUMMARY

## 6.6 TEMPERATURE RISE / TEMPERATURE RISE STABILITY

### 6.6.1 Wire-to-Wire

| 6-circuit parts with 20 Awg wire tested.                   |       |             |       |          |       |
|--|-------|-------------|-------|----------|-------|
| Temp Rise Specification: Not exceed +30°C at Rated Current |       |             |       |          |       |
| Terminal   | 43030 | Existing    | New   | Existing | New   |
|  | 43031 | Existing    | New   | Existing | New   |
| Plating Finish   |       | Hot Tin Dip |       | Gold     |       |
| Rated Current (Amps)                                       |       | 5.0         |       |          |       |
| Temp Rise at Rated Current (°C)                            | Mean  | 22.34       | 22.63 | 21.38    | 22.76 |
|  | Min   | 19.79       | 20.83 | 19.53    | 21.01 |
|  | Max   | 24.61       | 26.57 | 24.18    | 24.95 |
| 18-Day Stability   |       | Pass        | Pass  | Pass     | Pass  |

### 6.6.2 Wire-to-Board

| 6-circuit parts with 20 Awg wire tested.                   |       |             |       |           |       |          |       |
|--|-------|-------------|-------|-----------|-------|----------|-------|
| Temp Rise Specification: Not exceed +30°C at Rated Current |       |             |       |           |       |          |       |
| Crimp Terminal   | 43030 | Existing    | New   | Existing  | New   | Existing | New   |
| Header   | 43045 | Existing    | New   | Existing  | New   | Existing | New   |
| Plating Finish   | 43030 | Hot Tin Dip |       |           |       | Gold     |       |
|  | 43045 | Reflow Tin  |       | Matte Tin |       | Gold     |       |
| Rated Current (Amps)                                       |       | 5.5         |       |           |       |          |       |
| Temp Rise at Rated Current (°C)                            | Mean  | 22.16       | 22.81 | 22.84     | 21.75 | 23.05    | 23.30 |
|  | Min   | 20.62       | 20.10 | 20.56     | 19.72 | 20.46    | 20.85 |
|  | Max   | 24.22       | 24.68 | 24.72     | 25.49 | 25.58    | 25.28 |
| 18-Day Stability   |       | PASS        | PASS  | PASS      | PASS  | PASS     | PASS  |

|   |   |   |                               |
|---|---|---|-------------------------------|
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| DOCUMENT NUMBER:<br><b>430450005-TS</b> | CREATED / REVISED BY:<br><b>AFAVAZZA</b>                  | CHECKED BY:<br><b>SSOUSEK</b>   | APPROVED BY:<br><b>FSMITH</b> |