154 WAY CMC HEADER

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**PRODUCT INTRODUCTION**

154 Way CMC Header

- Terminal Header Blades
  - The three-bay CMC Header assembly consisting of 154 blade contacts.
  - The blade contact interfaces are 0.6 mm, 1.50 mm and 2.80 mm.
  - This header assembly is intended to be attached to a printed circuit board by a press-fit compliant contact.

Molex 53 / 48-way CMC Connector System:

- This is a sealed connection system.
- 53 Way CMC Harness Connector – 64321xxxx / 98995xxxx
- 48 Way CMC Harness Connector – 64320xxxx / 98993xxxx

- Terminals used in the CMC connector system:
  - CP0.6 Sn Receptacle Terminal – 6432210x9 – 0.35mm² - 0.75mm² wire
  - CP0.6 Au Receptacle Terminal – 6432212x9 – 0.35mm² - 0.75mm² wire
  - CP1.5 Sn Receptacle Terminal – 6432310x9 – 0.5mm² - 2.0mm² wire
  - CP1.5 Au Receptacle Terminal – 643231x19 – 0.5mm² - 2.0mm² wire
  - CP2.8 Sn Receptacle Terminal – 6432410x9 – 2.5mm² - 5.0mm² wire

**Applicable Documents and Specifications**

- 154way CMC Header Assembly – SD-34763-001
- 53way CMC Harness Connector – SD-64321-001
- 48way CMC Harness Connector – SD-64320-001
- CP0.6 Sn Receptacle Terminal – SD-64322-001
- CP1.5 Sn Receptacle Terminal – SD-64323-001
- CP2.8 Sn Receptacle Terminal – SD-64324-001
- EON 0.64 – SD-34481-012
- EON 1.5 / 2.8 – SD-78007-012
- 32 and 48 CMC connector User Manual – AS-64319-001
- 53 way CMC connector User Manual –AS-64321-001
154 WAY CMC HEADER

154 WAY CMC HEADER PRODUCT SUMMARY

HIGHLIGHTS:
- Connector is sealed.
- Connector provides temporary retention to the header before the Lever Arm is activated.
- Lever Arm remains in locked position until the harness connector is in pre-lock position on the header/controller.

Compliant Interface
- EON on 0.64 blades per SD-34481-012
- EON on 1.50 & 2.80 blades per SD-78007-012
- PCB specification
  - PCB in accordance with IEC 60352-5
  - Material FR4 min. TG 130
  - Single layer thickness larger than 0.8 mm
  - Total thickness of PCB from 1.5 to 2.4 mm in accordance with the IEC 60326-3. If other
  - PCB thickness required, Molex Engineering to approve.

Temperature
Operating: -40°C to +105°C

Current
- The maximum test current capability per USCAR-2 rev5:
  - 0.6 blade mated to a CP0.6 Sn or Au plated receptacle crimped to 0.75mm² wire – 8.0 A
  - 1.50 blade mated to a CP1.5 Sn or Au plated receptacle crimped to 2.0mm² wire – 10.5 A
  - 2.80 blade (single strap) mated to a CP2.8 Sn plated receptacle crimped to 5.0mm² wire – 13.5 A
  - 2.80 blade (dual strap) mated to a CP2.8 Sn plated receptacle crimped to 5.0mm² wire – 17.0 A

Voltage
250V_AC per PS-64321-001 and PS-64319-001

For product ordering information, please contact your Molex Inside Sales Representative at (800)786-6539.
# APPLICATION SPECIFICATION

## 154 WAY CMC HEADER

THIS PROCEDURE APPLIES TO ALL PART NUMBERS IN THE 34763-00xxSERIES

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<td>AS-34763-001</td>
<td>Brian Zelinski</td>
<td>Dave Krawczyk</td>
<td>Ron Bauman</td>
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EC No: UAU2012-1574
DATE: 06/15/2012

TEMPLATE FILENAME: APPLICATION_SPEC[SIZE_A](V.1).DOC
154 WAY CMC HEADER

HEADER OVERVIEW

- 53 Way Pocket
- 53 Way Pocket
- 48 Way Pocket
- 2.8 Blade
- 1.5 Blade
- 0.6 Blade

PAP – “Pin Alignment Plate”

REVISION: C
ECR/ECN INFORMATION: UAU2012-1574
DATE: 06/15/2012

TITLE: 154 WAY CMC HEADER

DOCUMENT NUMBER: AS-34763-001
CREATED / REVISED BY: Brian Zelinski
CHECKED BY: Dave Krawczyk
APPROVED BY: Ron Bauman

SHEET No. 6 of 16

TEMPLATE FILENAME: APPLICATION_SPEC[SIZE_A](V.1).DOC
154 way CMC CAD MODEL REFERENCE

CMC CADmodel reference for 154 way CMC header Top Plate, PCB and Casting. All CADmodels are to be used as **REFERENCE ONLY**. ALL FINAL DESIGNS FROM ALL CAD MODELS ARE THE RESPONSIBILITY OF THE CUSTOMER.
154 WAY CMC HEADER

154 WAY CMC HEADER PRODUCT IDENTIFICATION

- All parts are laser marked with:
  - **Area (A)**
    - Marking and Reading Standard: Data Matrix (ECC200)
    - Information Encoded:
      - CC – Configuration Number Per Configuration / BOM Table
      - YY – Year
      - DDD – Day of year
      - SSSS – Incremental Serial Number
      - MXN – Supplier Designation/Manufacturing Location
  - **Area (B)**
    - Human readable code (HRC)
    - Information Encoded:
      - 9 Digit Molex Material Number
      - 4 Digit Julian Manufacturing Date Stamp DDDY
      - 4 Digit Incremental Serial Number
      - 1 Digit Molex Manufacturing Code
154 WAY CMC HEADER PACKAGING

Molex recommends moving the cell pack box directly to the assembly line, this will insure against damage. Headers should remain in the Molex cell pack until assembled.

Parts as received in cell pack

PAP is shipped in pre-lock position

PAP is not in pre-lock position scrap header

All headers shipped in cell packed boxes
154 WAY CMC HEADER

154 WAY CMC HEADER-TO-PCB ASSEMBLY INSTRUCTIONS
(Recommended header mounting strategies and mounting steps: areas where
to apply force to seat header to the PCB)

Step 1 - Line up CMC to Fixture
Step 2 – Slide CMC Header on Fixture
Step 3 – Place PCB on CMC Header

Header Fixture CM-34763-904

PCB
NOTE: DO NOT APPLY ANY PRESSURE TO PINS. PRESSURE PLACED ON THE HEADER PINS MAY DAMAGE THE ASSEMBLY.

Step 4 – Press down on the PCB in these locations ONLY to mate the PCB to the CMC header.

DIM (A) – see EON Sales Drawings
Molex also offers a low volume PCB to header assembly tool for the 154way CMC Header.

For product ordering information, please contact your Molex Inside Sales Representative at (800)786-6539.

Reference- 154 Way PCB Insertion Tool Operation Manual Order No. 62203-0500
154 WAY HEADER PCB SIDE PROBING

Electrical continuity check list

Probe pin recommendations:
1. When testing the header for continuity it is imperative that you do not damage the pins.
2. Pogo pins should be checked for damage or sticking several times a shift. This should assure containment if an issue is found.
3. First a visual inspection of all the pins for damage should be performed.
4. Next a testing block should be used to depress all the pogo pins up into the barrel. If there is a bent or sticking pin, it should remain stuck in the barrel of the pogo pin. A damaged or stuck pin should be replaced before any additional testing is performed.

Probing damage can occur:
1. If a sharp ended probe is used to contact the end terminal it may damage the pin tip and plating and increase contact resistance and mate force.
2. If a probe is inserted into the header on an angle or off center it may damage the pins, and or the connector.
Electrical continuity check list

Probe pin recommendations:
5. When testing the header for continuity it is imperative that you do not damage the pins.
6. Pogo pins should be checked for damage or sticking several times a shift. This should assure containment if an issue is found.
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Probing damage can occur:
3. If a sharp ended probe is used to contact the end terminal it may damage the pin tip and plating and increase contact resistance and mate force.
4. If a probe is inserted into the header on an angle or off center it may damage the pins, and or the connector.
The color marking on the cam Posts on the CMC header corresponds to the color of the front face of the connector that is to be mated to the correct bay.

**Mating the connector:**

1. The lever must be in open (delivery) position before mating operation.
2. Insert the connector till it stops in the header pocket.
3. Rotate the lever and lock it on the wire cap.
Unmating the connector:

1. Press on the locking located on the wire cap and rotate the lever until it locks on the female housing.

2. Remove the female connector from the header.