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Product Change Notification - JAON-04UHBA740

Date: 16 Feb 2015
Notification subject: CCB 1474 Initial Notice: Qualification of C194 lead-frame for 8L DFN (2x3x0.9mm) and 8L DFN-S (6x5x0.9mm) packages at NSEB.

Notification text: **PCN Status:**
Initial notification

Microchip Parts Affected:

See attachments of affected catalog part numbers (CPN) labeled as...
 PCN_JAON-04UHBA740_Affected_CPN.xls
 PCN_JAON-04UHBA740_Affected_CPN.pdf

Description of Change:

Qualification of C194 lead-frame for 8L DFN (2x3x0.9mm) and 8L DFN-S (6x5x0.9mm) packages at NSEB.

Pre Change:

EFTEC-64T lead-frame

Post Change:

EFTEC-64T or C194 lead-frame

Impacts to Data Sheet:

None

Reason for Change:

To improve on-time delivery performance by qualifying an additional lead frame material

Change Implementation Status:

In Progress

Estimated First Ship Date:

April 30, 2015 (date code: 1518)

NOTE: Please be advised that after the estimated first ship date customers may receive pre and post change parts.

Markings to Distinguish Revised from Unrevised Devices:

Traceability code

Revision History:

February 16, 2015: Issued initial notification.

The change described in this PCN does not alter Microchip's current regulatory compliance regarding the material content of the applicable products.

Attachment(s): [PCN_JAON-04UHBA740_Qual_Plan.pdf](#)
[PCN_JAON-04UHBA740_Affected_CPN.pdf](#)
[PCN_JAON-04UHBA740_Affected_CPN.xls](#)

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Shanghai ICP Recordal No.09049794

| PCN_JAON-04UHBA740 |
|--------------------|
| CATALOG PART NBR |
| 11LC161T-E/MC |
| 24AA00T-I/MC |
| 24AA014-I/MC |
| 24AA014T-I/MC |
| 24AA01T-I/MC |
| 24AA024-I/MC |
| 24AA024T-I/MC |
| 24AA025-I/MC |
| 24AA025T-I/MC |
| 24AA02T-I/MC |
| 24AA04-I/MC |
| 24AA04T-E/MC |
| 24AA04T-I/MC |
| 24AA08-I/MC |
| 24AA08T-I/MC |
| 24AA128-I/MF |
| 24AA128T-I/MF |
| 24AA16-I/MC |
| 24AA16T-I/MC |
| 24AA256-E/MF |
| 24AA256-I/MF |
| 24AA256T-E/MF |
| 24AA256T-I/MF |
| 24AA32AT-I/MC |
| 24AA32AT-I/MCB27 |
| 24AA512-I/MF |
| 24AA512T-I/MF |
| 24AA52-I/MC |
| 24AA52T-I/MC |
| 24AA64T-I/MC |
| 24C00T-I/MC |
| 24C01C-E/MC |
| 24C01C-I/MC |
| 24C01CT-E/MC |
| 24C01CT-I/MC |
| 24C02C-E/MC |
| 24C02CT-E/MC |
| 24C02CT-I/MC |
| 24FC128-I/MF |
| 24FC128T-I/MF |
| 24FC256-I/MF |
| 24FC256T-I/MF |
| 24FC512-I/MF |
| 24FC512T-I/MF |
| 24FC64-I/MC |

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| 24FC64T-I/MC |
| 24LC00T-I/MC |
| 24LC014-E/MC |
| 24LC014-I/MC |
| 24LC014T-E/MC |
| 24LC014T-I/MC |
| 24LC01B-E/MC |
| 24LC01BT-E/MC |
| 24LC01BT-I/MC |
| 24LC024-E/MC |
| 24LC024-I/MC |
| 24LC024T-E/MC |
| 24LC024T-I/MC |
| 24LC025-E/MC |
| 24LC025-I/MC |
| 24LC025T-E/MC |
| 24LC025T-I/MC |
| 24LC02BT-E/MC |
| 24LC02BT-I/MC |
| 24LC04B-E/MC |
| 24LC04B-I/MC |
| 24LC04BT-E/MC |
| 24LC04BT-I/MC |
| 24LC08B-E/MC |
| 24LC08B-I/MC |
| 24LC08BT-E/MC |
| 24LC08BT-I/MC |
| 24LC128-E/MF |
| 24LC128-I/MF |
| 24LC128T-E/MF |
| 24LC128T-I/MF |
| 24LC16B-E/MC |
| 24LC16B-I/MC |
| 24LC16BT-E/MC |
| 24LC16BT-I/MC |
| 24LC256-E/MF |
| 24LC256-I/MF |
| 24LC256T-E/MF |
| 24LC256T-I/MF |
| 24LC32AT-E/MC |
| 24LC32AT-I/MC |
| 24LC32AT-I/MCA28 |
| 24LC512-E/MF |
| 24LC512-I/MF |
| 24LC512T-E/MF |
| 24LC512T-I/MF |
| 24LC64T-I/MC |

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|-------------------|
| 24LCS52-I/MC |
| 24LCS52T-I/MC |
| 25A512-I/MF |
| 25A512T-I/MF |
| 25AA010AT-I/MC |
| 25AA020AT-I/MC |
| 25AA040AT-I/MC |
| 25AA1024-I/MF |
| 25AA1024T-I/MF |
| 25AA128-I/MF |
| 25AA128T-I/MF |
| 25AA256-E/MF |
| 25AA256-I/MF |
| 25AA256T-E/MF |
| 25AA256T-I/MF |
| 25AA512-I/MF |
| 25AA512T-I/MF |
| 25AA640A-E/MF |
| 25AA640A-I/MF |
| 25AA640A-I/MFB22 |
| 25AA640AT-E/MF |
| 25AA640AT-I/MFB22 |
| 25LC010AT-E/MC |
| 25LC010AT-I/MC |
| 25LC020AT-E/MC |
| 25LC020AT-I/MC |
| 25LC040AT-E/MC |
| 25LC040AT-I/MC |
| 25LC1024-E/MF |
| 25LC1024-I/MF |
| 25LC1024T-E/MF |
| 25LC1024T-I/MF |
| 25LC128-E/MF |
| 25LC128-I/MF |
| 25LC128T-E/MF |
| 25LC128T-I/MF |
| 25LC256-E/MF |
| 25LC256-I/MF |
| 25LC256-I/MF16K |
| 25LC256-M/MF |
| 25LC256T-E/MF |
| 25LC256T-I/MF |
| 25LC256T-I/MF16K |
| 25LC256T-M/MF |
| 25LC512-E/MF |
| 25LC512-I/MF |
| 25LC512T-E/MF |

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|------------------|
| 25LC512T-I/MF |
| 25LC640A-E/MF |
| 25LC640A-I/MF |
| 93AA46AT-I/MC |
| 93AA46BT-I/MC |
| 93AA46CT-I/MC |
| 93AA56AT-I/MC |
| 93AA56BT-I/MC |
| 93AA56CT-I/MC |
| 93AA66AT-I/MC |
| 93AA66BT-I/MC |
| 93AA66CT-I/MC |
| 93AA76CT-I/MC |
| 93AA86CT-I/MC |
| 93C46AT-I/MC |
| 93C46BT-I/MC |
| 93C46CT-I/MC |
| 93C56AT-I/MC |
| 93C56BT-I/MC |
| 93C56CT-I/MC |
| 93C66AT-I/MC |
| 93C66BT-I/MC |
| 93C66CT-I/MC |
| 93C76CT-I/MC |
| 93C86CT-I/MC |
| 93LC46AT-I/MC |
| 93LC46BT-I/MC |
| 93LC46CT-I/MC |
| 93LC56AT-I/MC |
| 93LC56BT-I/MC |
| 93LC56CT-E/MC |
| 93LC56CT-I/MC |
| 93LC66AT-I/MC |
| 93LC66BT-I/MC |
| 93LC66CT-I/MC |
| 93LC76CT-I/MC |
| 93LC86CT-I/MC |
| MCP1632-AAE/MC |
| MCP1632-BAE/MC |
| MCP1632T-AAE/MC |
| MCP1632T-BAE/MC |
| MCP1642B-18I/MC |
| MCP1642B-30I/MC |
| MCP1642B-33I/MC |
| MCP1642B-50I/MC |
| MCP1642B-ADJI/MC |
| MCP1642BT-18I/MC |

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| MCP1642BT-30I/MC |
| MCP1642BT-33I/MC |
| MCP1642BT-50I/MC |
| MCP1642BT-ADJI/MC |
| MCP1642D-18I/MC |
| MCP1642D-30I/MC |
| MCP1642D-33I/MC |
| MCP1642D-50I/MC |
| MCP1642D-ADJI/MC |
| MCP1642DT-18I/MC |
| MCP1642DT-30I/MC |
| MCP1642DT-33I/MC |
| MCP1642DT-50I/MC |
| MCP1642DT-ADJI/MC |
| MCP1643-I/MC |
| MCP1643T-I/MC |
| MCP1703A-1202E/MC |
| MCP1703A-1502E/MC |
| MCP1703A-1802E/MC |
| MCP1703A-2502E/MC |
| MCP1703A-2802E/MC |
| MCP1703A-3002E/MC |
| MCP1703A-3302E/MC |
| MCP1703A-4002E/MC |
| MCP1703A-5002E/MC |
| MCP1703AT-1202E/MC |
| MCP1703AT-1502E/MC |
| MCP1703AT-1802E/MC |
| MCP1703AT-1852E/MC |
| MCP1703AT-2502E/MC |
| MCP1703AT-2802E/MC |
| MCP1703AT-3002E/MC |
| MCP1703AT-3302E/MC |
| MCP1703AT-4002E/MC |
| MCP1703AT-5002E/MC |
| MCP1754-1802E/MC |
| MCP1754-3302E/MC |
| MCP1754-5002E/MC |
| MCP1754S-1802E/MC |
| MCP1754S-3302E/MC |
| MCP1754S-5002E/MC |
| MCP1754ST-1802E/MC |
| MCP1754ST-3302E/MC |
| MCP1754ST-5002E/MC |
| MCP1754T-1802E/MC |
| MCP1754T-3302E/MC |
| MCP1754T-5002E/MC |

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| MCP1755-1802E/MC |
| MCP1755-3302E/MC |
| MCP1755-5002E/MC |
| MCP1755S-1802E/MC |
| MCP1755S-3302E/MC |
| MCP1755S-5002E/MC |
| MCP1755ST-1802E/MC |
| MCP1755ST-3302E/MC |
| MCP1755ST-5002E/MC |
| MCP1755T-1802E/MC |
| MCP1755T-3302E/MC |
| MCP1755T-5002E/MC |
| MCP3422A0-E/MC |
| MCP3422A0T-E/MC |
| MCP3422A1-E/MC |
| MCP3422A1T-E/MC |
| MCP3422A2-E/MC |
| MCP3422A2T-E/MC |
| MCP3422A3-E/MC |
| MCP3422A3T-E/MC |
| MCP3422A4-E/MC |
| MCP3422A4T-E/MC |
| MCP3422A5-E/MC |
| MCP3422A5T-E/MC |
| MCP3422A6-E/MC |
| MCP3422A6T-E/MC |
| MCP3422A7-E/MC |
| MCP3422A7T-E/MC |
| MCP3426A0-E/MC |
| MCP3426A0T-E/MC |
| MCP3426A1-E/MC |
| MCP3426A1T-E/MC |
| MCP3426A2-E/MC |
| MCP3426A2T-E/MC |
| MCP3426A3-E/MC |
| MCP3426A3T-E/MC |
| MCP3426A4-E/MC |
| MCP3426A4T-E/MC |
| MCP3426A5-E/MC |
| MCP3426A5T-E/MC |
| MCP3426A6-E/MC |
| MCP3426A6T-E/MC |
| MCP3426A7-E/MC |
| MCP3426A7T-E/MC |
| MCP4011T-103E/MC |
| MCP4011T-202E/MC |
| MCP4011T-502E/MC |

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| MCP4011T-503E/MC |
| MCP4021T-103E/MC |
| MCP4021T-202E/MC |
| MCP4021T-502E/MC |
| MCP4021T-503E/MC |
| MCP4801-E/MC |
| MCP4801T-E/MC |
| MCP4811-E/MC |
| MCP4811T-E/MC |
| MCP4821-E/MC |
| MCP4821T-E/MC |
| MCP4901-E/MC |
| MCP4901T-E/MC |
| MCP4911-E/MC |
| MCP4911T-E/MC |
| MCP4921-E/MC |
| MCP4921T-E/MC |
| MCP6002-E/MC |
| MCP6002T-E/MC |
| MCP6031-E/MC |
| MCP6031T-E/MC |
| MCP6033-E/MC |
| MCP6033T-E/MC |
| MCP9804-E/MC |
| MCP9804-E/MCBBB |
| MCP9804T-E/MC |
| MCP9804T-E/MCBBB |
| MCP9805-BE/MC |
| MCP9805T-BE/MC |
| MCP9808T-E/MC |
| MCP98242-BE/MC |
| MCP98242-BE/MCBA2 |
| MCP98242-CE/MC |
| MCP98242T-BE/MC |
| MCP98242T-BE/MCBA2 |
| MCP98242T-BE/MCBA3 |
| MCP98242T-BE/MCBAA |
| MCP98242T-BE/MCBAB |
| MCP98242T-BE/MCBAC |
| MCP98242T-CE/MC |
| MCP98243-BE/MC |
| MCP98243T-BE/MC |
| MCP98243T-BE/MCAA |
| MCP98243T-BE/MCAB |
| MCP9843-BE/MC |
| MCP9843T-BE/MC |
| PIC10F200-E/MC |

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| PIC10F200-I/MC |
| PIC10F200T-E/MC |
| PIC10F200T-I/MC |
| PIC10F202-E/MC |
| PIC10F202-I/MC |
| PIC10F202T-E/MC |
| PIC10F202T-I/MC |
| PIC10F202T-I/MC071 |
| PIC10F202T-I/MC078 |
| PIC10F202T-I/MC083 |
| PIC10F204-E/MC |
| PIC10F204-I/MC |
| PIC10F204T-E/MC |
| PIC10F204T-I/MC |
| PIC10F206-E/MC |
| PIC10F206-I/MC |
| PIC10F206T-E/MC |
| PIC10F206T-I/MC |
| PIC10F220-E/MC |
| PIC10F220-I/MC |
| PIC10F220T-E/MC |
| PIC10F220T-I/MC |
| PIC10F222-E/MC |
| PIC10F222-I/MC |
| PIC10F222T-E/MC |
| PIC10F222T-I/MC |
| PIC10F222T-I/MC051 |
| PIC10F320-E/MC |
| PIC10F320-I/MC |
| PIC10F320T-E/MC |
| PIC10F320T-I/MC |
| PIC10F322-E/MC |
| PIC10F322-I/MC |
| PIC10F322T-I/MC |
| PIC10LF320-E/MC |
| PIC10LF320-I/MC |
| PIC10LF320T-I/MC |
| PIC10LF322-E/MC |
| PIC10LF322-I/MC |
| PIC10LF322T-I/MC |
| PIC12C508A-04I/MF |
| PIC12F1501-E/MC |
| PIC12F1501-I/MC |
| PIC12F1501-I/MC029 |
| PIC12F1501T-E/MC |
| PIC12F1501T-I/MC |
| PIC12F1501T-I/MC020 |

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| PIC12F1501T-I/MC023 |
| PIC12F1501T-I/MC025 |
| PIC12F1501T-I/MC029 |
| PIC12F1501T-I/MC030 |
| PIC12F508-E/MC |
| PIC12F508-I/MC |
| PIC12F508-I/MC075 |
| PIC12F508T-I/MC |
| PIC12F508T-I/MC075 |
| PIC12F508T-I/MCT46 |
| PIC12F509-E/MC |
| PIC12F509-I/MC |
| PIC12F509T-I/MC |
| PIC12F510-E/MC |
| PIC12F510-I/MC |
| PIC12F510T-E/MC |
| PIC12F510T-I/MC |
| PIC12F519-E/MC |
| PIC12F519-I/MC |
| PIC12F519T-E/MC |
| PIC12F519T-I/MC |
| PIC12F519T-I/MC021 |
| PIC12F519T-I/MC024 |
| PIC12F519T-I/MC034 |
| PIC12F519T-I/MC045 |
| PIC12F529-I/MC |
| PIC12F629-E/MF |
| PIC12F629-I/MF |
| PIC12F629T-E/MF |
| PIC12F629T-I/MF |
| PIC12F635-E/MF |
| PIC12F635-I/MF |
| PIC12F635T-I/MF |
| PIC12F675-E/MF |
| PIC12F675-I/MF |
| PIC12F675T-E/MF |
| PIC12F675T-I/MF |
| PIC12F683-E/MF |
| PIC12F683-I/MF |
| PIC12F683T-E/MF |
| PIC12F683T-I/MF |
| PIC12LF1501-E/MC |
| PIC12LF1501-I/MC |
| PIC12LF1501-I/MC020 |
| PIC12LF1501T-E/MC |
| PIC12LF1501T-I/MC |
| PIC12LF1501T-I/MC020 |

PIC12LF1501T-I/MC021



MICROCHIP

QUALIFICATION PLAN

PCN #: JAON-04UHBA740

**Date:
January 28, 2015**

Qualification of C194 lead-frame for 8L DFN-S (6x5x0.9mm) packages at NSEB. The 8L DFN (2x3x0.9mm) will qualify by similarity.

Distribution

| | |
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Purpose: _____ Qualification of C194 lead-frame for 8L DFN-S (6x5x0.9mm) packages at NSEB. The 8L DFN (2x3x0.9mm) will qualify by similarity.

MP code: _____ DECR27A6XA00

Part No.: _____ 25LC1024-I/MF

BD No: _____ BDM-000709 Rev.A

CCB No.: _____ 1474

Package:

Type _____ 8L DFN-S

Width or Size _____ 6x5x0.9 mm

Die thickness: _____ 11 mils

Die size: _____ 149.9 x 122.1 mils

MSL: _____ MSL1 @260C

Lead frame:

Paddle size: _____ 173 x 173 mils

Material _____ C194

Surface _____ Copper (Ag ring)

Treatment _____ Roughness

Process _____ Etched

Leadlock _____ Yes

Part Number _____ FR0956

Wire:

Material _____ Au

Manufacturer _____ TANAKA

Die Attach Epoxy:

Part Number _____ 8600

Conductive _____ Yes

Manufacturer _____ Ablestik (USA)

Mold Compound:

Part Number _____ G700LTD

Manufacturer _____ Sumitomo (Singapore)

Lead finish: _____ Matte Tin

| Test Name | Conditions | Sample Size | Min. Qty of Spares per Lot (should be properly marked) | Qty of Lots | Total Units | Fail Accept Qty | Est. Dur. Days | Special Instructions |
|--|---|---|--|-------------|-------------|---------------------|----------------|--|
| Standard Pb-free Solderability | JESD22B-102E; Perform 8 hour steam aging for Matte tin finish and 1 hour steam aging for NiPdAu finish prior to testing. Standard Pb-free: Matte tin/ NiPdAu finish, SAC solder, wetting temp 245°C for both SMD & through hole packages. | 22 | 5 | 1 | 27 | > 95% lead coverage | 5 | Standard Pb-free solderability is the requirement. SnPb solderability (backward solderability- SMD reflow soldering) is required for any plating related changes and highly recommended for other package BOM changes. |
| Backward Solderability | JESD22B-102E; Perform 8 hours steam aging for Matte tin finish and 1 hour steam aging for NiPdAu finish prior to testing. Backward: Matte tin/ NiPdAu finish, SnPb solder, wetting temp 215°C for SMD. | 22 | 5 | 1 | 27 | > 95% lead coverage | 5 | |
| Wire Bond Pull - WBP | Mil. Std. 883-2011 | 5 | 0 | 3 | 24 | 0 fails after TC | 5 | 30 bonds from a minimum of 5 devices. |
| Wire Bond Shear - WBS | CDF-AEC-Q100-001 | 5 | 0 | 3 | 24 | 0 | 5 | 30 bonds from a minimum of 5 devices. |
| External Visual | Mil. Std. 883-2009/2010 | All devices prior to submission for qualification testing | 0 | 3 | ALL | 0 | 5 | |
| HTSL (High Temp Storage Life) | +175 C for 504 hours or 150°C for 1008 hrs. Electrical test pre and post stress at +25°C and hot temp (85°C) | 45 | 5 | 1 | 50 | 0 | 10 | Must be in progress at time of package release to production, but completion is not required for release to production. |
| Preconditioning - Required for surface mount devices | +150°C Bake for 24 hours, moisture loading requirements per MSL level + 3X reflow at peak reflow temperature per Jedec-STD-020D for package type; Electrical test pre and post stress at +25°C. Perform SAM analysis using the standard sample size. MSL1 @ 260°C | 231 | 15 | 3 | 738 | 0 | 15 | Spares should be properly identified. 77 parts from each lot to be used for HAST, Autoclave, Temp Cycle test. |

| Test Name | Conditions | Sample Size | Min. Qty of Spares per Lot (should be properly marked) | Qty of Lots | Total Units | Fail Accept Qty | Est. Dur. Days | Special Instructions |
|---------------|--|-------------|--|-------------|-------------|-----------------|----------------|---|
| HAST | +130°C/85% RH for 96 hours or 110°C/85%RH for 264 hours. Electrical test pre and post stress at +25°C and hot temp (85°C) | 77 | 5 | 3 | 246 | 0 | 10 | Spares should be properly identified. Use the parts which have gone through Pre-conditioning. |
| Unbiased HAST | +130°C/85% RH for 96 hrs or +110°C/85% RH for 264 hrs. Electrical test pre and post stress at +25°C | 77 | 5 | 3 | 246 | 0 | 10 | Spares should be properly identified. Use the parts which have gone through Pre-conditioning. |
| Temp Cycle | -65°C to +150°C for 500 cycles. Electrical test pre and post stress at hot temp (85°C); 3 gram force WBP, on 5 devices from 1 lot, test following Temp Cycle stress. | 77 | 5 | 3 | 246 | 0 | 15 | Spares should be properly identified. Use the parts which have gone through Pre-conditioning. |