Product Change Notification - JAON-03UKDR210

Date: 17 Jul 2014

Product Category: Analog (Thermal, Power Management & Safety); Analog (Linear & Mixed Signal) AND Interface

Notification subject: CCB 1436 Initial Notice: Qualification of CDA194 lead-frame at ANAP for 20L TSSOP 4.4mm width package, with 118x165mils lead-frame paddle.

Notification text:

PCN Status:

Initial notification

Microchip Parts Affected:

See attachments of affected catalog part numbers (CPN) labeled as…
PCN_JAON-03UKDR210_Affected_CPN.xls
PCN_JAON-03UKDR210_Affected_CPN.pdf

Description of Change:

Qualification of CDA194 lead-frame at ANAP for 20L TSSOP 4.4mm width package, with 118x165mils lead-frame paddle.

Pre Change:

Lead-frame CDA7025 material, spot Ag plating

Post Change:
Lead-frame CDA194 material, Ag ring plating

Impacts to Data Sheet:
None

Reason for Change:
To improve productivity because current supplier is closing their lead frame business.

Change Implementation Status:
In Progress

Estimated First Ship Date:
November 15, 2014 (date code: 1446)

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:
July 17, 2014: 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-03UKDR210_Qual Plan.pdf PCN_JAON-03UKDR210_Affected_CPN.pdf PCN_JAON-03UKDR210_Affected_CPN.xls

Please contact your local Microchip sales office with questions or concerns regarding this notification.

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PCN_JAON-03UKDR210
CATALOG_PART_NBR
MCP1631-E/ST
MCP1631T-E/ST
MCP1631T-E/STV02
MCP1631T-E/STVAO
MCP1631V-E/ST
MCP1631VT-E/ST
MCP2510-I/ST
MCP2510T-I/ST
MCP2515-E/ST
MCP2515-E/STRB2
MCP2515-E/STRB4
MCP2515-E/STVAO
MCP2515-I/ST
MCP2515-I/STRB2
MCP2515-I/STRB4
MCP2515-I/STVAO
MCP2515T-E/ST
MCP2515T-E/STRB2
MCP2515T-E/STRB4
MCP2515T-E/STV03
MCP2515T-E/STV04
MCP2515T-E/STV07
MCP2515T-I/ST
MCP2515T-I/STG
MCP2515T-I/STRB2
MCP2515T-I/STRB4

QUALIFICATION PLAN

PCN #: JAON-03UKDR210

Date:
July 2, 2014

Qualification of CDA194 lead-frame at ANAP for 20L TSSOP 4.4mm width package, with 118x165mils lead-frame paddle

Distribution

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Purpose: _____ Qualification of CDA194 lead-frame at ANAP for 20L TSSOP 4.4mm width package, with 118x165mils lead-frame paddle

MP code:_____ A30067G2X000

Part No.: _____ MCP2510

BD No:_____ BDE-002697

Sub-con suggestion:_____MSL3

CCB No.: _____1436

Package:

Type _____20 TSSOP

Width or Size _____4.4 mm

Die thickness: _____11mils

Die size: _____110.4x131.4

Lead frame:

Paddle size: _____118x165

Material_____C194

Surface_____Ag ring

Process _____Stamped

Lead Lock _____yes

Part Number_____101385572

Treatment_____none

Wire:

Material_____Au

Die Attach Material:

Part Number_____8290

Conductive_____yes

Molding Compound: _____ G700LS

Reliability Test plan: _____See attached Reliability Test plan

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		5	30 bonds from a minimum of 5 devices.
Physical Dimensions	Measure per JESD22 B100 and B108	10	0	3	30	0		
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, 1lot to be tested at **125°C**	45	5	3	150	0	10	Must be in progress at time of package release to production, but completion is not required for release to production. For hot temp testing, pre/post test 1 lot at 85°C and 125°C (if applicable)
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
BHAST	+130°C/85% RH for 96 hours. Electrical test pre and post stress at +25°C and hot temp. 85°C, 1 lot to be tested at **125°C**	77	5	3	246	0	10	Spares should be properly identified. Use the parts which have gone through Pre-conditioning. Please decap/ inspect 5 units for anomalies. For hot temp testing, pre/post test 1 lot at 85°C and 125°C (if applicable)
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. Please decap/ inspect 5 units for anomalies.
Temp Cycle	-65°C to +150°C for 500 cycles. Electrical test pre and post stress at +25°C and hot temp85°C, 1lot to be tested at **125°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. For hot temp testing, pre/post test 1 lot at 85°C and 125°C (if applicable). Please decap/ inspect 5 units for anomalies.