Product Change Notification - JAON-03UKDR210

Date:	19 Dec 2014
Product Category:	Analog (Thermal, Power Management & Safety); Analog (Linear & Mixed Signal) AND Interface
Notification subject:	CCB 1436 Final Notice: Qualification of CDA194 lead-frame at ANAP for 20L TSSOP 4.4mm width package, with 118x165mils lead-frame paddle.

Notification text:

PCN Status:

Final 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.

Note: This is a change to the lead-frame material only for products at ANAP in the 20L TSSOP (4.4mm) package using the 118x165mil 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:

January 18, 2015 (date code: 1503)

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.

December 19, 2014: Issued final notification. Attached the qualification report. Revised the estimated first ship date from November 15, 2014 to January 18, 2015.

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_Report.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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QUALIFICATION REPORT

RELIABILITY LABORATORY

PCN #: JAON-03UKDR210

Date
December 11, 2014

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

Distribution

Somnuek T.
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Surasit P
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Atthapong W.
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PACKAGE QUALIFICATION REPORT

Purpose	Qualification of CDA194 lead-frame at ANAP for 20L TSSOP 4.4mm width package, with 118x165mils lead-frame paddle.
CN	BC141242
QUAL ID	Q14129
MP CODE	A30067G2X000
Part No.	MCP2510-I/ST
Bonding No.	BDE-002697 Rev. 01
CCB No.	1436
<u>Package</u>	
Type	20L TSSOP
Package size	4.4 mm
Die thickness	11 mils
Die size	107.9 x 128.9 mils
<u>Lead Frame</u>	
Paddle size	118 x 165 mils
Material	C194
Surface	Ag ring
Process	Stamped
Lead Lock	Yes
Part Number	101385572
Treatment	None
<u>Die attach material</u>	
Epoxy	8290
Wire	Au wire
Mold Compound	G700K
Plating Composition	Matte Tin

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PACKAGE QUALIFICATION REPORT

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
ANAP151800545.000	TMPE214479230.900	1431J8D
ANAP151900009.000	TMPE214479230.900	1432J69
ANAP151900010.000	TMPE214479230.900	1432J97

Result [X] Pass [ ] Fail [ ] ____________________

20L TSSOP (4.4mm) assembled by ATP (ANAP) pass reliability test per QCI-39000.This package was qualified the Moisture/Reflow Sensitivity Classification Level 1 at 260°C reflow temperature per IPC/JEDEC J-STD-020D standard.

Prepared By:____________________**Date:** December 11, 2014 **(Sr.Reliability Engineer)**

(Mr.Udom Suksansakul)

Approved By:____________________**Date:** December 11, 2014 **(Reliability Manager)**

(Mr. Somnuek Thongprasert)

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS	Result	Remarks
Moisture/Reflow Sensitivity Classification Test (At MSL Level 1)	85°C/ 85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH 3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243 (IPC/JEDEC J-STD-020D)	IPC/JEDEC J-STD-020D	135	0/135	Pass	
Precondition Prior Perform Reliability Tests (At MSL Level 1)	**Electrical Test :**+25°C and 85°C System: J750	JESD22-A113	693(0)	693		Good Devices
	Bake 150°C, 24 hrs System: CHINEE			693		
	85°C/85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH			693		
	3x Convection-Reflow 265°C max			693		
	System: Vitronics Soltec MR1243					
	Electrical Test :+25°C and 85°C System: J750			0/693	Pass	

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
Temp Cycle	**Stress Condition:** -65°C to +150°C, 500 Cycles System : TABAI ESPEC TSA-70H	JESD22-A104		231		Parts had been pre-conditioned at 260°C
	Electrical Test: + 85°C System: J750		231(0)	0/231	Pass	77 units / lot
	Bond Strength: Wire Pull (> 4.0 grams)		15 (0)	0/15	Pass	
	Bond Shear (>18.00 grams)		15 (0)	0/15	Pass	
UNBIASED-HAST	**Stress Condition:** +130°C/85%RH, 96 hrs. System: HAST 6000X	JESD22-A118		231		Parts had been pre-conditioned at 260°C
	Electrical Test: +25°C System: J750		231(0)	0/231	Pass	77 units / lot
HAST	**Stress Condition:** +130°C/85%RH, 96 hrs. **Bias Volt:** 5.5 Volts System: HAST 6000X	JESD22-A110		231		Parts had been pre-conditioned at 260°C
	Electrical Test:+25°C and 85°C System: J750		231(0)	0/231	Pass	77 units / lot
High Temperature Storage Life	Stress Condition: Bake 175°C, 504 hrs System: SHEL LAB	JESD22-A103		45		45 units
	Electrical Test :+25°C and 85°C System: J750		45(0)	0/45	Pass	

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
Solderability Temp 215°C	**Steam Aging:** Temp 93°C,8Hrs System: SAS-3000 Solder Dipping: Solder Temp.215°C Solder material: SnPb Sn63,Pb37 System: ERSA RA 2200D Visual Inspection: External Visual Inspection	JESD22B-102E	22 (0)	22 22 0/22	Pass	
Solderability Temp 245°C	**Steam Aging:** Temp 93°C,8Hrs System: SAS-3000 Solder Dipping:Solder Temp.245°C Solder material:Pb Free Sn 95.5Ag3.9 Cu0.6 System: ERSA RA 2200D Visual Inspection: External Visual Inspection	JESD22B-102E	22 (0)	22 22 0/22	Pass	
Physical Dimensions	Physical Dimension, 30 units from 1 lot	JESD22-B100/B108	30(0) Units	0/30	Pass	
Bond Strength Data Assembly	Wire Pull (> 4.0 grams)	M2011	30 (0) Wires	0/30	Pass	
	Bond Shear (>18.00 grams)	JESD22-B116	30 (0) bonds	0/30	Pass	

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