A Leading Provider of Microcontrollers & Analog Semiconductors

Date: 28 Feb 2013

Product Category: Analog (Thermal, Power Management & Safety)

Device Family:

Notification subject: CCB 1178.01 Final Notice: Qualification of 3L SOT-223 with conductive die attach as MSL-3 at LPI assembly site.

Notification text:

PCN Status:
Final notification

Microchip Parts Affected:
See attachments of affected catalog part numbers (CPN) labeled as…
PCN_CYER-29INGL572_Affected_CPN.xls
PCN_CYER-29INGL572_Affected_CPN.pdf

Description of Change:
Qualification of 3L SOT-223 with conductive die attach as MSL-3 at LPI assembly site.

Pre Change:
Assembled at UNIS MSL-1

Post Change:
Assembled at LPI MSL-3

Impacts to Data Sheet:
None

Reason for Change:
To improve on time delivery performance

Change Implementation Status:
In Progress

Estimated First Ship Date:
March 1, 2013 (date code: 1348)

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:
October 31, 2012: Issued initial notification.

February 28, 2013: Issued final notification. Attached qualification report, added that MSL changing from 1 to 3, and revised estimated first ship date from 1/11/2013 to 3/1/2013.

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_CYER-29INGL572 _Qual Report.pdf PCN_CYER-29INGL572 parts list.xls PCN_CYER-29INGL572 parts list.pdf

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

Terms and Conditions:

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To opt out of future offer or information emails (other than product change notification emails), click here to go to microchipDIRECT and login, then click on the "My account" link, click on "Update profile" and un-check the box that states "Future offers or information about Microchip's products or services."

Product Change Notification - CYER-29INGL572

Parts Affected

MCP1703
MCP1703A
MCP1754
MCP1754S
MCP1790
MCP1824S
MCP1825S
MCP1826S
TC1108
TC1262
TC1264

PCN_CYER-29INGL572
CATALOG_PART_NBR
MCP1703-1202E/DB
MCP1703-1502E/DB
MCP1703-1802E/DB
MCP1703-2502E/DB
MCP1703-2802E/DB
MCP1703-3002E/DB
MCP1703-3302E/DB
MCP1703-4002E/DB
MCP1703-5002E/DB
MCP1703A-1202E/DB
MCP1703A-1502E/DB
MCP1703A-1802E/DB
MCP1703A-2502E/DB
MCP1703A-2802E/DB
MCP1703A-3002E/DB
MCP1703A-3302E/DB
MCP1703A-4002E/DB
MCP1703A-5002E/DB
MCP1703AT-1202E/DB
MCP1703AT-1502E/DB
MCP1703AT-1802E/DB
MCP1703AT-2502E/DB
MCP1703AT-2802E/DB
MCP1703AT-3002E/DB
MCP1703AT-3301E/DB
MCP1703AT-3302E/DB
MCP1703AT-3402E/DBV01
MCP1703AT-4002E/DB
MCP1703AT-5002E/DB
MCP1703T-1202E/DB
MCP1703T-1502E/DB
MCP1703T-1802E/DB
MCP1703T-2402E/DB
MCP1703T-2502E/DB
MCP1703T-2802E/DB
MCP1703T-3002E/DB
MCP1703T-3301E/DB
MCP1703T-3302E/DB
MCP1703T-4002E/DB
MCP1703T-5002E/DB
MCP1754S-3302E/DB
MCP1754S-5002E/DB
MCP1754ST-3302E/DB
MCP1754ST-5002E/DB
MCP1790-3002E/DB
MCP1790-3002E/DBVAO
MCP1790-3302E/DB
MCP1790-5002E/DB
MCP1790-5002E/DBVAO
MCP1790T-3002E/DB

MCP1790T-3002E/DBVAO
MCP1790T-3302E/DB
MCP1790T-5002E/DB
MCP1790T-5002E/DBV01
MCP1790T-5002E/DBV02
MCP1790T-5002E/DBVAO
MCP1824ST-0802E/DB
MCP1824ST-1202E/DB
MCP1824ST-1802E/DB
MCP1824ST-2502E/DB
MCP1824ST-3002E/DB
MCP1824ST-3302E/DB
MCP1824ST-5002E/DB
MCP1825S-0802E/DB
MCP1825S-1202E/DB
MCP1825S-1802E/DB
MCP1825S-2502E/DB
MCP1825S-3002E/DB
MCP1825S-3302E/DB
MCP1825S-5002E/DB
MCP1825ST-0802E/DB
MCP1825ST-1202E/DB
MCP1825ST-1802E/DB
MCP1825ST-2502E/DB
MCP1825ST-3002E/DB
MCP1825ST-3302E/DB
MCP1825ST-5002E/DB
MCP1826S-0802E/DB
MCP1826S-1002E/DB
MCP1826S-1202E/DB
MCP1826S-1802E/DB
MCP1826S-2502E/DB
MCP1826S-3002E/DB
MCP1826S-3302E/DB
MCP1826S-5002E/DB
MCP1826ST-0802E/DB
MCP1826ST-1002E/DB
MCP1826ST-1202E/DB
MCP1826ST-1802E/DB
MCP1826ST-2502E/DB
MCP1826ST-3002E/DB
MCP1826ST-3302E/DB
MCP1826ST-5002E/DB
TC1108-2.5VDB
TC1108-2.5VDBTR
TC1108-2.7VDB
TC1108-2.7VDBTR
TC1108-2.8VDB
TC1108-2.8VDBTR
TC1108-3.0VDB
TC1108-3.0VDBTR
TC1108-3.3VDB

TC1108-3.3VDBTR
TC1108-5.0VDB
TC1108-5.0VDBTR
TC1262-2.5VDB
TC1262-2.5VDBTR
TC1262-2.8VDB
TC1262-2.8VDBTR
TC1262-3.0VDB
TC1262-3.0VDBTR
TC1262-3.3VDB
TC1262-3.3VDBMR
TC1262-3.3VDBTR
TC1262-3.3VDBTR-V01
TC1262-5.0VDB
TC1262-5.0VDBTR
TC1264-1.8VDB
TC1264-1.8VDBTR
TC1264-2.5VDB
TC1264-2.5VDBTR
TC1264-3.0VDB
TC1264-3.0VDBTR
TC1264-3.3VDB
TC1264-3.3VDBTR

QUALIFICATION REPORT
RELIABILITY LABORATORY

PCN #: CYER-29INGL572

Date
February 07, 2013

Qualification of 3L SOT-223 with conductive die attach at LPI assembly site.

Distribution

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PACKAGE QUALIFICATION REPORT

Purpose	Qualification of 3L SOT-223 with conductive die attach at LPI assembly site.
CN	BC122441
QUAL ID	Q12135
MP CODE	VKAB1YF6XA50
Part No.	MCP1790T-5002E/DB
Bonding No.	BDM-000259 Rev. A
CCB No.	1178.01
Package	
Type	3L SOT-223
Die thickness	11 mils
Die size	62.50 x 63.40 mils
Lead Frame	
Paddle size	118 x 97 mils (PSJ China)
Material	PMC-90
Surface	Ag ring
Process	Stamped
Lead Lock	Yes
Part Number	092500308
Die attach material	
Epoxy	CRM-1064L (Sumitomo Singapore)
Wire	Au wire
Mold Compound	G600 (Sumitomo Taiwan)
Plating Composition	Matte Tin

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PACKAGE QUALIFICATION REPORT

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Trace Code
LPI-132900048	XFGM913240953.100	12429E3
LPI-132900049	XFGM913240953.100	12429EA
LPI-132900050	XFGM913240953.100	12429EE

Result [X] Pass [ ] Fail [ ] ____________________

3L SOT-223 assembled by LPI pass reliability test per QCI-39000. This package was qualified the Moisture/Reflow Sensitivity Classification Level 3 at 260°C reflow temperature per IPC/JEDEC J-STD-020D standard.

Prepared By: ____________________ **Date:** February 07, 2013 **(Reliability Engineer)**

(Mr.Udom Suksansakul)

Approved By: ____________________ **Date:** February 07, 2013 **(Reliability Manager)**

(Mr. Somnuek Thongprasert)

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Date in	Date Out	Def/SS.	Result	Remarks
Moisture/Reflow Sensitivity Classification Test (At MSL Level 3)	Bake 150°C, 24 hrs	IPC/JEDEC J-STD-020D						
	30°C/ 60%RH Moisture Soak 192 hrs. System: TABAI ESPEC Model PR-3SPH 3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243		135	12/03/12	12/13/12	0/135	Pass	

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Date in	Date Out	Def/SS.	Result	Remarks
Precondition Prior Perform Reliability Tests **(At MSL Level 3)**	Electrical Test :+25°C System: TTS	JESD22-A113	693(0)	11/30/12	12/03/12	693		Good Devices
	Bake 150°C, 24 hrs System: CHINEE			12/03/12	12/04/12	693		
	30°C/60%RH Moisture Soak 192 hrs. System: TABAI ESPEC Model PR-3SPH			12/04/12	12/12/12	693		
	3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243			12/12/12	12/13/12	693		
	Electrical Test :+25°C System: TTS			12/13/12	12/13/12	0/693	Pass	

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Date in	Date Out	Def/SS.	Result	Remarks
Temp Cycle	**Stress Condition:** -65°C to +150°C, 500 Cycles System : TABAI ESPEC TSA-70H Inspection: External crack inspection all units under 40X Optical magnification	JESD22-A104	 30(0)	12/14/12 12/25/12	12/25/12 12/25/12	231 0/30		Parts had been pre-conditioned
	Electrical Test: +25°C System: TTS		231(0)	12/25/12	12/25/12	0/231	Pass	77 units / lot
	Bond Strength: Wire Pull (> 4 grams) Bond Shear (18.00 grams)		15 (0) 15 (0)	12/25/12 12/25/12	12/27/12 12/27/12	0/15 0/15	Pass Pass	
UNBIASED-HAST	**Stress Condition:** +130°C/85%RH, 96 hrs. System: HAST 6000X	JESD22-A118		12/15/12	12/19/12	231		Parts had been pre-conditioned
	Electrical Test: +25°C System: TTS		231(0)	12/19/12	12/20/12	0/231	Pass	77 units / lot

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Date in	Date Out	Def/SS.	Result	Remarks
HAST	**Stress Condition:** +130°C/85%RH, 96 hrs. **Bias Volt:** 30 Volts System: HAST 6000X	JESD22-A110		12/17/12	12/22/12	231		Parts had been pre-conditioned
	Electrical Test: +25°C System: TTS		231(0)	12/22/12	12/22/12	0/231	Pass	77 units / lot
High Temperature Storage Life	**Stress Condition:** Bake 175°C, 504 hrs System: SHEL LAB	JESD22-A103		11/01/12	11/24/12	45		45 units
	Electrical Test: +25°C System: TTS		45(0)	11/24/12	11/24/12	0/45	Pass	
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)	11/01/12 11/02/12 11/02/12	11/02/12 11/02/12 11/02/12	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)	11/01/12 11/02/12 11/02/12	11/02/12 11/02/12 11/02/12	22 22 0/22	Pass	

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Date in	Date Out	Def/SS.	Result	Remarks
Lead Integrity	45 Leads from a minimum of 5 units, 1 lot. System: Strain	PI-91129B	45(0) Leads	11/01/12	11/01/12	0/45	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 grams)	JESD22-B116	30 (0) wires	-	-	0/30	Pass	
	Bond Shear (18.00 grams)		30 (0) bonds	-	-	0/30	Pass	