


Date: 11 Apr 2012

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

Device Family:  

Notification subject: CCB 1147.01 Initial Notice: Qualification of 3L SOT-23A package with selective Ag plating on the lead-frame at LPI assembly site.

Notification text: PCN Status:
Initial notification

Microchip Parts Affected:

See attachments of affected catalog part numbers (CPN) labeled as...

PCN_CYER-05QTRT639_Affected_CPN.xls

PCN_CYER-05QTRT639_Affected_CPN.pdf

Description of Change:

Qualification of 3L SOT-23A package with selective Ag plating on the lead-frame at LPI assembly site.

Pre Change:

Ag plating on entire lead-frame.

Post Change:

Ag plating on selected areas of lead-frame (die not in direct contact with Ag plating).

Impacts to Data Sheet:

None

Reason for Change:

To improve manufacturability

Change Implementation Status:

In Progress

Estimated First Ship Date:

June 30, 2012 (date code: 1226)

NOTE: Please be advised that during the transition period customers may receive pre and post change parts, due to existing inventory of the pre changed parts.

Markings to Distinguish Revised from Unrevised Devices:
Traceability code

Revision History:

April 11, 2012: 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_CYER-05QTRT639_Affected_CPN.xls](#) [PCN_CYER-05QTRT639_Affected_CPN.pdf](#) [PCN_CYER-05QTRT639_Qual Plan.pdf](#)

Please contact your local [Microchip sales office](#) with questions or concerns regarding this notification.

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Product Change Notification - CYER-05QTRT639

Parts Affected

MCP1702

MCP1703A

MCP1703

MCP1754S

PCN_CYER-05QTRT639
CATALOG_PART_NBR
MCP1702T-1202E/CB
MCP1702T-1502E/CB
MCP1702T-1802E/CB
MCP1702T-2102E/CB
MCP1702T-2202E/CB
MCP1702T-2302E/CB
MCP1702T-2502E/CB
MCP1702T-2702E/CB
MCP1702T-2802E/CB
MCP1702T-3002E/CB
MCP1702T-3302E/CB
MCP1702T-3602E/CB
MCP1702T-4002E/CB
MCP1702T-4101E/CB
MCP1702T-4502E/CB
MCP1702T-4702E/CB
MCP1702T-5002E/CB
MCP1702T-5102E/CB
MCP1703AT-1202E/CB
MCP1703AT-1502E/CB
MCP1703AT-1802E/CB
MCP1703AT-2502E/CB
MCP1703AT-2802E/CB
MCP1703AT-3002E/CB
MCP1703AT-3302E/CB
MCP1703AT-4002E/CB
MCP1703AT-5002E/CB
MCP1703T-1202E/CB
MCP1703T-1502E/CB
MCP1703T-1802E/CB
MCP1703T-2402E/CB
MCP1703T-2502E/CB
MCP1703T-2502E/CBV04
MCP1703T-2802E/CB
MCP1703T-3002E/CB
MCP1703T-3002E/CBVAO
MCP1703T-3302E/CB
MCP1703T-3302E/CBV05
MCP1703T-3602E/CB
MCP1703T-4002E/CB
MCP1703T-4502E/CB
MCP1703T-5002E/CB
MCP1703T-5002E/CBV01
MCP1703T-5002E/CBV06
MCP1754ST-1802E/CB
MCP1754ST-3302E/CB
MCP1754ST-5002E/CB



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QUALIFICATION PLAN

PCN #: CYER-05QTRT639

**Date:
April 5, 2012**

Qualification of 3L SOT-23A package with selective Ag plating on the lead-frame at LPI assembly site.

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Purpose: _____ Qualification of 3L SOT-23A package with selective Ag plating on the lead-frame at LPI assembly site.

MP code: _____ HBAA1YM7XA30

Part No.: _____ MCP1702T-3002E/CB

BD No: _____ BDM-000119 rev. A (Engineering BD)

CCB No: _____ 1147.01

Package:

Type _____ 3L SOT-23A

Width or Size _____ N/A

Die thickness: _____ 8 mils

Die size: _____ 46.5 x 41.5 mils

Lead frame:

Paddle size: _____ 59 x47 mils / ASM (Hongkong)

Material _____ EFTEC64T

Surface _____ Selective Ag plating

Process _____ Stamped

Lead Lock _____ No

Wire:

Material _____ Au / MEM (Malaysia)

Die Attach Epoxy:

Part Number _____ 8006NS + 84-3J, Ablestik (Henkel)

Note: 8006NS backside coating applied by MTAI

Conductive _____ No

Mold Compound: _____ G600 / Sumitomo (Taiwan)

Reliability Test plan: _____ See attached, STD Package Reliability Test plan on each package.

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.
Wire Bond Pull - WBP	Mil. Std. 883-2011	5	0	1	5	0 fails after TC	5	30 bonds from a minimum of 5 devices.
Wire Bond Shear - WBS	CDF-AEC-Q100-001	5	0	1	5	0	5	30 bonds from a minimum of 5 devices.
Wire Sweep								Required for any reduction in wire bond thickness.
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 +25C.	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-020 for package type; Electrical test pre and post stress at +25°C. Perform SAM analysis using the standard sample size. MSL-1 @ 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.
HAST	+130°C/85% RH for 96 hours. 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.

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