

Product Change Notification - CYER-16IYYH654

Date: 22 Aug 2013

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

Notification subject: CCB 1328.02 Initial Notice: Qualification 3L SC70 and 5L SC70 packages with non-conductive die attach at ANAP (ATP) assembly site.

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

Microchip Parts Affected:

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

PCN_CYER-16IYYH654_Affected_CPN.xls

PCN_CYER-16IYYH654_Affected_CPN.pdf

Description of Change:

Qualification 3L SC70 and 5L SC70 packages with non-conductive die attach at ANAP (ATP) assembly site.

Impacts to Data Sheet:

None

Reason for Change:

To improve manufacturability

Change Implementation Status:

In Progress

Estimated First Ship Date:

November 10, 2013 (date code: 1345)

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:

August 22, 2013: 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-16IYYH654_Affected CPN.pdf](#) [PCN_CYER-16IYYH654_Qual Plan.pdf](#) [PCN_CYER-16IYYH654_Affected CPN.xlsx](#)

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

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PCN_CYER-16IYYH654
CATALOG_PART_NBR
MCP103T-195I/LB
MCP103T-240E/LB
MCP103T-240E/LBHH
MCP103T-270E/LB
MCP103T-300E/LB
MCP103T-300E/LBHH
MCP103T-315E/LB
MCP103T-450E/LB
MCP103T-475E/LB
MCP111T-195I/LB
MCP111T-240E/LB
MCP111T-270E/LB
MCP111T-270E/LBV01
MCP111T-290E/LB
MCP111T-300E/LB
MCP111T-315E/LB
MCP111T-315E/LBV02
MCP111T-315E/LBV04
MCP111T-315E/LBVAO
MCP111T-450E/LB
MCP111T-475E/LB
MCP111T-475E/LBV05
MCP112T-195I/LB
MCP112T-240E/LB
MCP112T-270E/LB
MCP112T-290E/LB
MCP112T-300E/LB
MCP112T-315E/LB
MCP112T-450E/LB
MCP112T-475E/LB
MCP6421T-E/LTY
MCP6471T-E/LTY
MCP6481T-E/LTY
MCP6491T-E/LTY
MCP6541T-I/LT
MCP6541T-I/LTAPL
MCP6541T-I/LTBAA
MCP6546T-I/LT
MCP6H01T-E/LT
MCP6V11UT-E/LT
MCP6V31UT-E/LT
TCM809JELB713
TCM809JVLB713
TCM809LELB713
TCM809LVLB713

TCM809MELB713
TCM809MVLB713
TCM809MVLB713-GV01
TCM809RELB713
TCM809RVLB713
TCM809SELB713
TCM809SVLB713
TCM809TELB713
TCM809TVLB713
TCM809ZELB713
TCM809ZVLB713
TCM810JVLB713
TCM810JVLB713HH
TCM810LVLB713
TCM810MVLB713
TCM810RVLB713
TCM810SVLB713
TCM810TVLB713
TCM810ZVLB713



QUALIFICATION PLAN

PCN #: CYER-16IYYH654

**Date:
Aug. 14, 2013**

Qualification 5L SC70 package with non-conductive die attach at ANAP (ATP) assembly site. The 3L SC70 package will qualify by similarity at ANAP (ATP) assembly site.

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Purpose: _____ Qualification 5L SC70 package with non-conductive die attach at ANAP (ATP) assembly site. The 3L SC70 package will qualify by similarity at ANAP (ATP) assembly site.

MP code: _____ A7BX1TB4XA00

Part No.: _____ MCP6541T-I/LT

BD No: _____ BDM-000369 rev. A (Engineering BD)

CCB No: _____ 1328.02

Package:

Type _____ 5L SC70

Die thickness: _____ 8 mils

Die size: _____ 26.0 x 27.0 mils

Lead frame:

Paddle size: _____ 34 x 35 (MHT Japan)

Material _____ C194

Surface _____ Ag Spot plated

Process _____ Stamped

Lead Lock _____ Yes

Part Number _____ 101378719

Wire:

Material _____ Au (Heesung-South Korea)

Die Attach Epoxy:

Part Number _____ QMI-536 (Ablestik-USA)

Conductive _____ No

Wafer Backside Coating _____ 8006NS (Henkel-South Korea)

Conductive _____ No

Mold Compound: _____ G700LS (Sumitomo-Singapore)

Lead finish _____ Matte tin

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.
Standard SnPb Solderability	JESD22B-102E; Perform 8 hour steam aging prior to testing. Standard SnPb: SnPb finish, SnPb solder, wetting temp 215°C for SMD & 245°C for through hole packages.	22	5	1	27	> 95% lead coverage	5	
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	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.
Physical Dimensions	Measure per JESD22 B100 and B108	10	0	3	30	0	5	
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 and hot temp. Electrical test @ 25C only	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. For hot temp testing, pre/post test 1 lot at 85°C and 125°C (if applicable)

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
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. 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 and hot temp. Electrical test @ 25C only	77	5	3	246	0	10	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)
Unbiased HAST	+130°C/85% RH for 96 hrs	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; 3 gram force WBP, on 5 devices from 1 lot, test following Temp Cycle stress. Electrical test @ 25C only	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).