

Product Change Notification - CYER-16IYYH654

Date: 28 Jan 2014

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

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

Notification text: **PCN Status:**
Final 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 of 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:
March 3, 2014 (date code: 1410)

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.

January 28, 2014: Issued final notification. Attached the qualification report. Revised the estimated first ship date from November 10, 2013 to March 3, 2014.

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 Report.pdf](#) [PCN_CYER-16IYYH654_Affected CPN.xls](#)

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



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QUALIFICATION REPORT
RELIABILITY LABORATORY

PCN #: CYER-16IYYH654

Date:
Jan 13, 2014

**Qualification of 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.**

Distribution

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PACKAGE QUALIFICATION REPORT

Purpose	Qualification of 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.
CN	BC131334
QUAL ID	Q13113
MP CODE	A7BX1TB4XA00
Part No.	MCP6541T-I/LT
Bonding No.	BDM-000369 Rev. A
CCB No.	1328.02

Package

Type	5L SC70
Die thickness	8 mils
Die size	26.00 x 27.00 mils

Lead Frame

Paddle size	34.00 x 35.00 mils
Material	C194
Surface	Ag spot plated
Process	Stamped
Lead Lock	No
Part Number	101378719
Treatment	None

Die attach material

Epoxy	QMI-536 / 8006NS
Wire	Au wire
Mold Compound	G700LS
Plating Composition	Matte Tin



MICROCHIP PACKAGE QUALIFICATION REPORT

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
ANAP142200188	TMPE214159408.110	1335A3C
ANAP142200189	TMPE214159408.110	1335A46
ANAP142200190	TMPE214159408.110	1335A4E

Result

☒ Pass ☐ Fail ☐ _____

5L SC70 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: January 13, 2014 (Sr. Reliability Engineer)

(Mr. Udom Suksansakul)

Approved By:  Date: January 13, 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 C J-STD- 020D	135	0/135	Pass	

<u>Precondition Prior Perform Reliability Tests</u> (At MSL Level 1)	Electrical Test :+25°C System: ETS88	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 System: Vitronics Soltec MR1243			693		
	Electrical Test :+25°C System: ETS88			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 Inspection: External crack inspection all units under 40X Optical magnification Electrical Test :+25°C System: ETS88	JESD22-A104		231		Parts had been pre-conditioned at 260°C
				231	Pass	77 units / lot
UNBIASED-HAST	Stress Condition: +130°C/85%RH, 96 hrs. System: HAST 6000X Electrical Test :+25°C System: ETS88	JESD22-A118		231		Parts had been pre-conditioned at 260°C
			231(0)	0/231	Pass	77 units / lot
HAST	Stress Condition: +130°C/85%RH, 96 hrs. Bias Volt: 5.0 Volts System: HAST 6000X Electrical Test :+25°C System: ETS88	JESD22-A110		231		Parts had been pre-conditioned at 260°C
			231(0)	0/231	Pass	77 units / lot
High Temperature Storage Life	Stress Condition: Bake 175°C, 504 hrs System: SHEL LAB Electrical Test :+25°C System: ETS88	JESD22-A103		45		45 units
			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	JESD22-B102	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	JESD22-B102	22 (0)	22 22 0/22	Pass	
Bond Line Thickness	Bond Line Thickness	SPI-45528	15(0)	15(0)	Pass	5 units / lot
Physical Dimensions	Physical Dimension, 30 units from 1 lot	JESD22-B100/B108	30(0) Units	0/30	Pass	
Bond Strength Data Assembly	Die Shear (1.0 kgf.)	QCI-91021B	30 (0) Wires	0/30	Pass	
	Wire Pull (> 2.5 grams)	M2011	30 (0) bonds	0/30	Pass	
	Bond Shear (15.00 grams)	JESD22-B116	30 (0) bonds	0/30	Pass	