

Product Change Notification - CYER-16KWYW724

Date: 17 Dec 2013

Notification subject: CCB 1328.01 Final Notice: Qualification of 3L SC70 and 5L SC70 packages with 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-16KWYW724_Affected_CPN.xls

PCN_CYER-16KWYW724_Affected_CPN.pdf

Description of Change:

Qualification of 3L SC70 and 5L SC70 packages with 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:

January 30, 2014 (date code: 1405)

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.

December 17, 2013: Issued final notification. Attached the qualification report. Revised the estimated first ship date from November 10, 2013 to January 30, 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-16KWYW724_Affected CPN.pdf](#)
[PCN_CYER-16KWYW724_Qual Report.pdf](#)
[PCN_CYER-16KWYW724_Affected CPN.xls](#)

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PCN_CYER-16KWYW724
CATALOG_PART_NBR
24AA01HT-I/LT
24AA01T-I/LT
24AA02HT-I/LT
24AA02T-I/LT
24LC01BHT-E/LT
24LC01BHT-I/LT
24LC01BT-E/LT
24LC01BT-E/LT16KV03
24LC01BT-I/LT
24LC02BHT-E/LT
24LC02BHT-I/LT
24LC02BT-E/LT
24LC02BT-I/LT
MCP102T-195I/LB
MCP102T-240E/LB
MCP102T-270E/LB
MCP102T-300E/LB
MCP102T-315E/LB
MCP102T-450E/LB
MCP102T-475E/LB
MCP121T-195I/LB
MCP121T-240E/LB
MCP121T-270E/LB
MCP121T-300E/LB
MCP121T-300E/LBV02
MCP121T-300E/LBV03
MCP121T-315E/LB
MCP121T-450E/LB
MCP121T-475E/LB
MCP131T-195I/LB
MCP131T-240E/LB
MCP131T-240E/LBVAO
MCP131T-270E/LB
MCP131T-270E/LBV04
MCP131T-270E/LBVAO
MCP131T-300E/LB
MCP131T-315E/LB
MCP131T-315E/LBV02
MCP131T-450E/LB
MCP131T-475E/LB
MCP131T-475E/LBV01
MCP131T-475E/LBV03
MCP4019T-103E/LT
MCP4019T-104E/LT
MCP4019T-502E/LT

MCP4019T-503E/LT
MCP40D19T-103E/LT
MCP40D19T-104E/LT
MCP40D19T-502E/LT
MCP40D19T-503E/LT
MCP6001T-E/LT
MCP6001T-E/LTV05
MCP6001T-E/LTVAO
MCP6001T-I/LT
MCP6231UT-E/LT
MCP6231UT-E/LTAPL
MCP6231UT-E/LTVAO
MCP6241UT-E/LT
MCP6401T-E/LT
MCP6401T-H/LTVAO
MCP6441T-E/LT
MCP6541UT-I/LT
MCP6546UT-I/LT
MCP6561T-E/LT
MCP6561T-E/LTVAO
MCP6566T-E/LT
MCP6L01T-E/LT
MCP9700AT-E/LT
MCP9700AT-E/LTV03
MCP9700AT-E/LTV04
MCP9700AT-E/LTV05
MCP9700AT-E/LTVAO
MCP9700T-E/LT
MCP9700T-E/LTAAA
MCP9700T-E/LTV01
MCP9700T-E/LTV02
MCP9700T-E/LTVAO
MCP9700T-H/LT
MCP9700T-H/LTVAO
MCP9701AT-E/LT
MCP9701AT-E/LTVAO
MCP9701T-E/LT
TC1016-1.85VLTTR
TC1016-1.8VLTTR
TC1016-2.6VLTTR
TC1016-2.7VLTTR
TC1016-2.85VLTTR
TC1016-2.8VLTTR
TC1016-2.8VLTTRAAA
TC1016-2.8VLTTRAAAB
TC1016-2.9VLTTR
TC1016-3.0VLTTR

TC1016-3.0VLTTR-VAO
TC1016-3.3VLTTR
TC1016-4.0VLTTR
TC1017-1.85VLTTR
TC1017-1.8VLTTR
TC1017-1.9VLTTR
TC1017-2.5VLTTR
TC1017-2.6VLTTR
TC1017-2.7VLTTR
TC1017-2.85VLTTR
TC1017-2.8VLTTR
TC1017-2.8VLTTRAAD
TC1017-2.9VLTTR
TC1017-2.9VLTTRAAC
TC1017-3.0VLTTR
TC1017-3.0VLTTRA AF
TC1017-3.2VLTTR
TC1017-3.3VLTTR
TC1017-3.3VLTTRA AE
TC1017-4.0VLTTR
TC1017R-1.85VLTTR
TC1017R-1.8VLTTR
TC1017R-2.5VLTTR
TC1017R-2.6VLTTR
TC1017R-2.7VLTTR
TC1017R-2.85VLTTR
TC1017R-2.8VLTTR
TC1017R-2.9VLTTR
TC1017R-3.0VLTTR
TC1017R-3.2VLTTR
TC1017R-3.3VLTTR
TC1017R-4.0VLTTR



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QUALIFICATION REPORT
RELIABILITY LABORATORY

PCN#: CYER-16KWYW724

Date:
December 11, 2013

Qualification of 5L SC70 package with 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 conductive die attach at ANAP (ATP) assembly site. The 3L SC70 package will qualify by similarity at ANAP (ATP) assembly site.
CN	BC131333
QUAL ID	Q13108
MP CODE	ABBR1YB4XA00
Part No.	MCP6401T-E/LT
Bonding No.	BDM-000368 Rev. A
CCB No.	1328.01
<u>Package</u>	
Type	5L SC70
Die thickness	8 mils
Die size	27.30 x 28.40 mils
<u>Lead Frame</u>	
Paddle size	34.00 x 35.00 mils
Material	C194
Surface	Ag spot plated
Process	Stamped
Lead Lock	No
Part Number	101378719
Treatment	None
<u>Die attach material</u>	
Epoxy	8290
Wire	Au wire
Mold Compound	G700LS
Plating Composition	Matte Tin



MICROCHIP PACKAGE QUALIFICATION REPORT

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
ANAP142200191	TMPE214088124.700	1335A4J
ANAP142200192	TMPE214088124.700	1335A4K
ANAP142200193	TMPE214088124.700	1335A4M

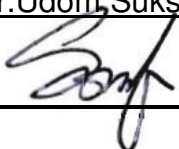
Result

☒ 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: December 11, 2013 (Sr. Reliability Engineer)

(Mr. Udom Suksansakul)

Approved By:  Date: December 11, 2013 (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 MR 1243 (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: ETS300 Bake 150°C, 24 hrs System: CHINEE 85°C/85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH 3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243 Electrical Test :+25°C System: ETS300	JESD22- A113	693(0)	693 693 693 693 0/693	 Pass	Good Devices
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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: ETS300	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: ETS300	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: 5.5 Volts System: HAST 6000X Electrical Test: +25°C System: ETS300	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: ETS300	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	