

# Product Change Notification - CYER-22JUMC972

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**Date:** 31 Jul 2013

**Product Category:** Memory; RF and Security; 8-bit Microcontrollers

**Notification subject:** CCB 1214.02 Final Notice: Qualification of 8L SOIJ package without silver plating on the paddle and without lead lock feature on lead-frame at NSEB assembly site.

**Notification text:**

## **PCN Status:**

Final notification

## **Microchip Parts Affected:**

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

PCN\_CYER-22JUMC972\_Affected\_CPN.xls

PCN\_CYER-22JUMC972\_Affected\_CPN.pdf

## **Description of Change:**

Qualification of 8L SOIJ package without silver plating on the paddle and without lead lock feature on lead-frame at NSEB

assembly site.

**Pre Change:**

Silver plated paddle and lead lock feature on lead-frame

**Post Change:**

Bare Cu paddle and no lead lock feature on lead-frame

**Impacts to Data Sheet:**

None

**Reason for Change:**

To improve manufacturability

**Change Implementation Status:**

In Progress

**Estimated First Ship Date:**

August 30, 2013 (date code: 1335)

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:**

**February 28, 2013:** Issued initial notification.

July 31, 2013: Issued final notice. Added qualification report.

Revised estimated first ship date from May 30, 2013 to

August 30, 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-22JUMC972\\_Qual Report.pdf](#) [PCN\\_CYER-22JUMC972\\_Affected\\_CPN.pdf](#) [PCN\\_CYER-22JUMC972\\_Affected\\_CPN.xls](#)

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PCN_CYER-22JUMC972
CATALOG_PART_NBR
24AA1025-I/SM
24AA1025T-I/SM
24AA1026-I/SM
24AA1026T-I/SM
24AA128-I/SM
24AA128T-I/SM
24AA256/SM
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24AA32A/SM
24AA32A-I/SM
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24AA32AT-I/SM
24AA512-I/SM
24AA512-I/SMRVE
24AA512T-I/SM
24AA512T-I/SMRVE
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PIC12LC671T-04I/SM
PIC12LC672-04/SM
PIC12LC672-04I/SM
PIC12LC672T-04/SM
PIC12LCE518-04/SM
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PIC12LCE518T-04/SM026
PIC12LCE519-04/SM
PIC12LCE519-04I/SM
PIC12LCE519T-04/SM
PIC12LCE519T-04I/SM



## QUALIFICATION REPORT RELIABILITY LABORATORY

**PCN #: CYER-22JUMC972**

Date  
July 17, 2013

: Qualification of 8L SOIJ package without silver plating on the paddle and without lead lock feature on lead-frame at NSEB assembly site.

### Distribution

Somnuek T.  
Wanphen L.  
Wichai K.  
Chalermpon P.

Rangsun K.  
A. Navarro  
J. Fernandez  
S. Kelsall  
S. Melby



## MICROCHIP PACKAGE QUALIFICATION REPORT

<b>Purpose</b>	Qualification of 8L SOIJ package without silver plating on the paddle and without lead lock feature on lead-frame at NSEB assembly site.
<b>CN</b>	BC130292
<b>QUAL ID</b>	Q13056
<b>MP CODE</b>	360027C3XA00
<b>Part No.</b>	24FC515-I/SM
<b>Bonding No.</b>	BDM-000297 Rev. A
<b>CCB No.</b>	1214.02
<b><u>Package</u></b>	
<b>Type</b>	8L SOIJ
<b>Package size</b>	208 mils
<b>Die thickness</b>	8 mils, both top and bottom die.
<b>Die size</b>	105.60 x 78.30 mils (Die 1)
<b>Die size</b>	119.20 x 143.10 mils (Die 2)
<b><u>Lead Frame</u></b>	
<b>Paddle size</b>	140 x 160 mils
<b>Material</b>	CDA194
<b>Surface</b>	Bare copper paddle
<b>Process</b>	Stamp
<b>Lead Lock</b>	No
<b>Part Number</b>	FD0379
<b><u>Die attach material</u></b>	
<b>Epoxy</b>	Die attach film, HS-231W
<b>Wire</b>	Au wire
<b>Mold Compound</b>	G600
<b>Plating Composition</b>	Matte Tin



# MICROCHIP PACKAGE QUALIFICATION REPORT

## Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Trace Code
NSEB134700750	TMPE212368158.400	1308DD5
NSEB134700751	TMPE212368158.400	1308DD8
NSEB134700752	TMPE212368158.400	1308DDA

### Result

Pass     Fail     \_\_\_\_\_

8L SOIJ (.208") assembled by UTL (NSEB) 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: July 17, 2013 (Reliability Engineer)

(Mr. Udom Suksansakul)

Approved By: \_\_\_\_\_ Date: July 17, 2013 (Reliability Manager)

(Mr. Somnuek Thongprasert)

# PACKAGE QUALIFICATION REPORT

Qual Report : Q13056

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS	Result	Remarks
<b>Moisture/Reflow Sensitivity Classification Test (At MSL Level 1)</b>	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 J-STD- 020D	135	0/135	Pass	

<b><u>Precondition Prior Perform Reliability Tests (At MSL Level 1)</u></b>	<b>Electrical Test</b> :+25°C and 85°C System: NEXTEST_PT	JESD22- A113	693(0)	693	Pass	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		
	<b>Electrical Test</b> :+25°C and 85°C System: NEXTEST_PT			0/693		

# PACKAGE QUALIFICATION REPORT

Qual Report : Q13056

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
<b>Temp Cycle</b>	<b>Stress Condition:</b> -65°C to +150°C, 500 Cycles System : TABAI ESPEC TSA-70H Inspection: External crack inspection all units under 40X Optical magnification <b>Electrical Test: + 85°C</b> System: NEXTEST_PT	JESD22-A104	231(0)	231 0/231	Pass	Parts had been pre-conditioned at 260°C  77 units / lot
<b>UNBIASED-HAST</b>	<b>Stress Condition:</b> +130°C/85%RH, 96 hrs. System: HAST 6000X <b>Electrical Test: +25°C</b> System: NEXTEST_PT	JESD22-A118	231(0)	231 0/231	Pass	Parts had been pre-conditioned at 260°C  77 units / lot
<b>HAST</b>	<b>Stress Condition:</b> +130°C/85%RH, 96 hrs. <b>Bias Volt: 5.5 Volts</b> System: HAST 6000X <b>Electrical Test: +25°C and 85°C</b> System: NEXTEST_PT	JESD22-A110	231(0)	231 0/231	Pass	Parts had been pre-conditioned at 260°C  77 units / lot
<b>High Temperature Storage Life</b>	<b>Stress Condition:</b> Bake 175°C, 504 hrs System: SHEL LAB <b>Electrical Test : +25°C and 85°C</b> System: NEXTEST_PT	JESD22-A103	45(0)	45 0/45	Pass	45 units

# PACKAGE QUALIFICATION REPORT

Qual Report : Q13056

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
<b>Solderability</b> <b>Temp 215°C</b>	<b>Steam Aging:</b> 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	
<b>Solderability</b> <b>Temp 245°C</b>	<b>Steam Aging:</b> 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	
<b>Bond Strength</b> <b>Data Assembly</b>	Wire Pull (> 4.0 grams)   Bond Shear (18.00 grams)	JESD22- B116	30 (0) Wires  30 (0) bonds	0/30   0/30	Pass   Pass	