

Date: 28 Feb 2013

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

Device Family:  

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

Notification text: PCN Status:
Initial 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 lead lock feature on lead-frame as MSL-3 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:

May 30, 2013 (date code: 1409)

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.

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_Affected_CPN.xls](#) [PCN_CYER-22JUMC972_Affected_CPN.pdf](#) [PCN_CYER-22JUMC972_Qual Plan.pdf](#)

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Product Change Notification - CYER-22JUMC972

Parts Affected

24AA1025
24AA1026
24AA128
24AA256
24AA32A
24AA512
24AA515
24AA65
24C65
24FC1025
24FC1026
24FC128
24FC256
24FC512
24FC515
24LC1025
24LC1026
24LC128
24LC256
24LC32A
24LC512
24LC515
24LC64
24LC65
25AA1024
25AA128
25AA256
25AA512
25LC1024
25LC128
25LC256
25LC512
93C46B
93LC46A
93LC46B
93LC56A
93LC56B
93LC66A
93LC66B
HCS365
PIC12C508
PIC12C508A
PIC12C509

PIC12C509A

PIC12C671

PIC12C672

PIC12CE518

PIC12CE519

PIC12CR509A

PIC12F509

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
24AA256-E/SM
24AA256-I/SM
24AA256T/SM
24AA256T-E/SM
24AA256T-I/SM
24AA32A/SM
24AA32A-I/SM
24AA32AT/SM
24AA32AT-I/SM
24AA512-I/SM
24AA512-I/SMRVE
24AA512T-I/SM
24AA512T-I/SMRVE
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PIC12LCE519T-04I/SM



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QUALIFICATION PLAN

PCN #: CYER-22JUMC972

**Date:
Feb 14, 2013**

**Qualification of 8L SOIJ package without silver plating
on the paddle at NSEB assembly site.**

Distribution

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Purpose: _____ Qualification of 8L SOIJ package without silver plating on the paddle at NSEB assembly site.

MP code: _____ 36002

Part No.: _____ 24FC515

BD No: _____ BDM-000297 rev. A (Engineering bonding)

CCB No: _____ 1214.02

Package:

Type _____ 8L SOIJ

Width or Size _____ .208in

Die thickness: _____ 8 mils, top and bottom die

Die size: _____ 105.6 x 78.3 (C5AC4, top die) and 119.2 x 143.1 mils (B5AE4, bottom die)

Lead frame:

Paddle size: _____ 140 x 160 mils

Material _____ C194

Surface _____ Ag on lead only

Process _____ Stamp

Lead Lock _____ No

Part Number _____ FD0379

Wire:

Material _____ Au wire

Die Attach Epoxy:

Part Number _____ Die attach film, HS-231W

Conductive _____ No

Mold Compound: _____ G600

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.
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	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.
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 85C.	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)
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 Jeduc-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.

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
HAST	+130°C/85% RH for 96 hours. Electrical test pre and post stress at +25°C and hot temp 85C.	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. 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.
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 pre and post stress at +25°C and hot temp 85C.	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).