

**Date:** 12 Apr 2012

**Product Category:** Memory; RF and Security; Analog (Linear & Mixed Signal) AND Interface; 8-bit Microcontrollers; 16-bit Microcontrollers and Digital Signal Controllers

**Device Family:**  

**Notification subject:** CCB 1146.02 Initial Notice: Qualification of 14L TSSOP package at MMT (ALPH) assembly site.

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

Microchip Parts Affected:  
See attachments of affected catalog part numbers (CPN) labeled as...  
PCN\_CYER-05DBLC684\_Affected\_CPN.xls  
PCN\_CYER-05DBLC684\_Affected\_CPN.pdf

Description of Change:  
Qualification of 14L TSSOP package at MMT (ALPH) assembly site.

Impacts to Data Sheet:  
None

Reason for Change:  
To improve on time delivery performance

Change Implementation Status:  
In Progress

Estimated First Ship Date:  
August 18, 2012 (date code: 1233)

NOTE: Please be advised that during the transition period customers may receive pre and post change parts, due to existing inventory of the pre changed parts.

Markings to Distinguish Revised from Unrevised Devices:  
Traceability code

Revision History:  
April 11, 2012: Issued initial notification.  
April 12, 2012: Added CPN affected lists and qualification plan to initial notification. Corrected typo in subject.

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-DBLC684\\_Affected\\_CPN.xls](#) [PCN\\_CYER-DBLC684\\_Affected\\_CPN.pdf](#) [PCN\\_CYER-05DBLC684\\_Qual Plan.pdf](#)

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

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## Product Change Notification - CYER-05DBLC684

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Parts Affected

24AA512  
24FC512  
24LC512  
HCS370  
MCP2022  
MCP2022A  
MCP2030  
MCP3004  
MCP3204  
MCP3302  
MCP3424  
MCP3428  
MCP42010  
MCP42050  
MCP42100  
MCP4231  
MCP4241  
MCP4251  
MCP4261  
MCP4332  
MCP4342  
MCP4352  
MCP4362  
MCP4432  
MCP4442  
MCP4452  
MCP4462  
MCP4631  
MCP4641  
MCP4651  
MCP4661  
MCP4902  
MCP4912  
MCP4922  
MCP6004  
MCP6024  
MCP6034  
MCP604  
MCP6044  
MCP6054  
MCP6064  
MCP6074  
MCP609  
MCP6144

MCP619  
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MCP6244  
MCP6274  
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MCP6294  
MCP634  
MCP6404  
MCP6444  
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MCP660  
MCP664  
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MCP6H04  
MCP6L04  
MCP6L4  
MCP6L74  
MCP6L94  
MCP6S26  
PIC12LF1840T48A  
PIC16C505  
PIC16F1503  
PIC16F1823  
PIC16F1824  
PIC16F1825  
PIC16F505  
PIC16F506  
PIC16F526  
PIC16F610  
PIC16F616  
PIC16F630  
PIC16F636  
PIC16F676  
PIC16F684  
PIC16F688  
PIC24F04KA200  
PIC24F04KL100  
PIC24F08KL200

PCN_CYER-DBLC684
CATALOG_PART_NBR
24AA512-I/ST14
24AA512-I/ST14G
24AA512T-I/ST14
24FC512-I/ST14
24FC512T-I/ST14
24LC512-E/ST14
24LC512-I/ST14
24LC512-I/ST14G
24LC512T-E/ST14
24LC512T-I/ST14
HCS1370T-I/ST063
HCS1370T-I/ST064
HCS1370T-I/ST070
HCS1370T-I/ST071
HCS370/ST
HCS370-I/ST
HCS370T/ST
HCS370T-I/ST
MCP2022-330E/ST
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MCP2022PT-500E/ST
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PIC16F636-I/ST041
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PIC16LF1824T-I/ST
PIC16LF1824T-I/STV01
PIC16LF1825-E/ST
PIC16LF1825-I/ST
PIC16LF1825T-I/ST
PIC24F04KA200-I/ST
PIC24F04KA200T-I/ST
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PIC24F04KL100T-I/ST
PIC24F08KL200-I/ST
PIC24F08KL200T-I/ST
X0120A1TT-I/STV06



**MICROCHIP**

## **QUALIFICATION PLAN**

**PCN #: CYER-05DBLC684**

**Date:  
April 5, 2012**

**Qualification of 14L TSSOP package at MMT (ALPH)  
assembly site.**

Distribution

Surasit P.  
Wanphen L.  
Wichai K.  
Chaweng W.

Rangsun K.  
A. Navarro  
R. Sharma

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**Purpose:** \_\_\_\_\_ Qualification of 14L TSSOP package at MMT (ALPH) assembly site.  
**MP code:** \_\_\_\_\_ A5AJ17D4XXXX  
**Part No.:** \_\_\_\_\_ HCS1370-I/STXXX  
**BD No:** \_\_\_\_\_ BDM-000117 Rev. A (engineering BD)  
**CCB No:** \_\_\_\_\_ 1146.02

**Package:**

**Type** \_\_\_\_\_ 14L TSSOP  
**Width or Size** \_\_\_\_\_ 4.4 mm  
**Die thickness:** \_\_\_\_\_ 11 mils  
**Die size:** \_\_\_\_\_ 90.90 x 143.00 mils

**Lead frame:**

**Paddle size:** \_\_\_\_\_ 118x153 mils  
**Material** \_\_\_\_\_ C7025 / ASM  
**Surface** \_\_\_\_\_ Ag ring plate with BOT  
**Process** \_\_\_\_\_ Stamped  
**Lead Lock** \_\_\_\_\_ No

**Wire:**

**Material** \_\_\_\_\_ Au / Tanaka

**Die Attach Film (DAF):**

**Part Number** \_\_\_\_\_ 2200D / Ablestik  
**Conductive** \_\_\_\_\_ Yes

**Mold Compound:** \_\_\_\_\_ G600V / Sumitomo

**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, Mil. Std. 883-2011	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.
Wire Bond Pull - WBP		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.
Wire Sweep		3	15 wires					Required for any reduction in wire bond thickness.
Physical Dimensions	Measure per JESD22 B100 and B108	10	0	3	30	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. 1 lot to be tested at 85C & 125C.	45	5	1	50	0	10	
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-020 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. 1 lot to be tested at 85°C and 125°C	77	5	3	246	0	10	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
Unbiased HAST	+130°C/85% RH for 96 hrs or +110°C/85% RH for 264 hrs	77	5	3	246	0	10	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.

Test Name	Conditions	Sample Size	Min. Qty of Spares per Lot (should be properly marked)	Qty of Lots	Total Units	Fall Accept Qty	Est. Dur. Days	Special Instructions
Temp Cycle	<p>-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.            1 lot to be tested at 85°C and 125°C</p>	77	5	3	246	0	15	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.