

## Product / Process Change Notification CYAR-7Q2VJD

The information below reflects a change that is being implemented.

Notice Date: 03/11/2009

Product Category: Mixed Signal Devices; PIC16xxx; PIC18xxx; dsPIC.

Notification Subject: CCB#882: QUALIFICATION OF NEW LEAD-FRAME SUPPLIER IN 40L PDIP AT CEI ASSEMBLY.

Notification Body:  
PCN Status:  
Final notification

Microchip Part#s Affected (please see the link for these files at the end of this PCN):

See attachment of Affected package/device in Qualification plan.  
CCB#882\_Microchip\_Catalog\_Part#s\_Affected.xls  
CCB#882\_Microchip\_Catalog\_Part#s\_Affected.pdf

Description of Change:  
New lead frame supplier

Impacts to Data Sheet:  
None

Reason for Change:  
On time delivery performance.

Change Implementation Status:  
In Progress

Estimated Change Implementation Date(s):  
March 20, 2009 (Date Code: 0911)

NOTE: Please be advised that the utilization of this assembly site (CEI) for the 40L PDIP package will depend on the backlog demand for products in this package.

Markings to Distinguish Revised from Unrevised Devices: (e.g.: Date Code, Device Marking, Ship Container Marking)  
Traceability code

Attachment(s):



**MICROCHIP**

**QUALIFICATION REPORT  
RELIABILITY LABORATORY**

**Q08195  
CCB#: 882  
PCN#: CYAR-7Q2VJD**

**Date  
February 12, 2009**

**Qualification of New Lead-Frame Supplier in 40L PDIP (Paddle Size 200x200 mil) at CEI Assembly**

**Distribution**

Surasit P.  
Wanphen L.  
Wichai K.  
Chalermpon P.

Rangsun K.  
C.K. Barlingay  
R. Sharma

Microchip Technology (Thailand) Co., Ltd.  
14 Moo 1 T.Wangtakien A. Muangchacherngsao,  
Chacherngsao, Thailand, 24000  
Tel. (+66 38) 857119-45, 857311-19 ext. 1231  
Fax (+66 38) 857149-50



## MICROCHIP PACKAGE QUALIFICATION REPORT

<b>Purpose</b>	To qualify new lead-frame supplier in 40L PDIP package with 200x200 mil paddle size at CEI assembly.
<b>CN</b>	BC082787
<b>QUAL ID</b>	Q08195
<b>MP CODE</b>	DEDB14S2XAXF
<b>Part No.</b>	PIC18F4680-E/P
<b>Bonding No.</b>	A-032752 Rev. B
<b><u>Package</u></b>	
<b>Type</b>	40L PDIP
<b>Package size</b>	600 mils
<b>Die thickness</b>	15 mils
<b>Die size</b>	178.00 x 185.80 mils
<b><u>Lead Frame</u></b>	
<b>Paddle size</b>	200 x 200 mils
<b>Material</b>	Poongsan A194 (Hong Kong)
<b>Surface</b>	Ag spot plate
<b>Process</b>	Stamped
<b>Lead Lock</b>	No
<b>Part Number</b>	P-204018
<b><u>Die attach material</u></b>	
<b>Epoxy</b>	Ablestik 84-1J (US)
<b><u>Wire</u></b>	Heraeus Au wire (Korea)
<b><u>Mold Compound</u></b>	Sumitomo G600 (Singapore)



# MICROCHIP PACKAGE QUALIFICATION REPORT

## Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Trace Code
CEI-093500001	GRSM409200115.100	0848A5A
CEI-093600001	GRSM409200115.100	0849A5B
CEI-093600002	GRSM409200115.100	0849A5C

**Result**       Pass       Fail       \_\_\_\_\_

40L PDIP assembled by CEI pass reliability test per QCI-39000.

**Prepared By:** Thinnapol N.      **Date:** February 12, 2009 **(Reliability Engineer)**

**Approved By:** Surasit P.      **Date:** February 12, 2009 **(Reliability Manager)**

# PACKAGE QUALIFICATION REPORT

Qual Report : Q08195

Test Number (Reference)	Test Condition	Microchip Spec	Qty. (Acc.)	Date in	Date Out	Def/SS.	Result	Remarks
<b>Electrical Test</b>	Electrical Test :+25°C and 85°C System: J750	S12/14/16  (PDC)	693(0)	12/23/08	12/25/08	693		Good Devices
<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	PI-91020B		01/09/09	01/20/09	231		
	<b>Electrical Test:</b> +85°C System: J750	QCI-33003  (PDC)	30(0)	01/20/09	01/20/09	0/30		
		S12/14/16	231(0)	01/20/09	01/21/09	0/231	Pass	77 units / lot
	<b>Bond Strength:</b> Bond Shear (21.10 grams)	QCI-91022	15 (0)	01/21/09	01/21/09	0/15	Pass	
	Wire Pull (> 3 grams)		15 (0)	01/21/09	01/21/09	0/15	Pass	
<b>Pressure Cooker</b>	<b>Stress Condition:</b> +121°C, 100% RH, 15 PSI, 96 hrs. System: TABAI ESPEC TPC-421	PI-92013B		01/12/09	01/17/09	231		
	<b>Electrical Test:</b> +25°C System: J750	S12/14/16  (PDC)	231(0)	01/17/09	01/19/09	0/231	Pass	77 units / lot

# PACKAGE QUALIFICATION REPORT

Qual Report : Q08195

Test Number (Reference)	Test Condition	Microchip Spec	Qty. (Acc.)	Date in	Date Out	Def/SS.	Result	Remarks
<b>HAST</b>	<b>Stress Condition:</b> +130°C/85%RH, 96 hrs. System: HAST 6000X	PI-92010B		01/14/09	01/19/09	231		77 units / lot
	<b>Electrical Test:</b> +25°C and 85°C System: J750	S12/14/16  (PDC)	231(0)	01/19/09	01/20/09	0/231	Pass	
<b>Solderability</b>	<b>Steam Aging:</b> Temp 93°C, 8Hrs System: SAS-3000 Solder Dipping: Solder Temp. 245°C  System: ERSA RA 2200D Visual Inspection: External Visual Inspection	QCI-31003	22 (0)	01/08/09	01/09/09	22	Pass	
				01/09/09	01/09/09	22		
				01/09/09	01/09/09	0/22		
<b>Lead Integrity</b>	45 Leads from a minimum of 5 units, 1 lot. System: Strain	QCI-31004	45(0)  Leads	02/05/08	02/05/08	0/45	Pass	
<b>Bond Strength</b>	Bond Shear (21.10 grams)	QCI-91022	30 (0) bonds	-	-	0/30	Pass	
<b>Data Assembly</b>	Wire Pull (> 4 grams)		30 (0) wires	-	-	0/30	Pass	

Active MCHP Catalog Part#s

DSPIC30F2022-20E/P
DSPIC30F2022-30I/P
PIC16CR74-I/P001
PIC16CR74-I/P002
PIC16CR74-I/P003
PIC16CR74-I/P004
PIC16CR74-I/P005
PIC16CR74-I/P006
PIC16CR74-I/P007
PIC16CR74-I/P008
PIC16CR74-I/P009
PIC16CR74-I/P010
PIC16CR74-I/P011
PIC16CR74-I/P014
PIC16CR74-I/P015
PIC16CR77-I/P001
PIC16CR77-I/P003
PIC16CR77-I/PMRC
PIC16F1934-E/P
PIC16F1934-I/P
PIC16F1937-E/P
PIC16F1937-I/P
PIC16F724-E/P
PIC16F724-I/P
PIC16F727-E/P
PIC16F727-I/P
PIC16F884-E/P
PIC16F884-I/P
PIC16F887-E/P
PIC16F887-I/P
PIC16LF1934-E/P
PIC16LF1934-I/P
PIC16LF1937-E/P
PIC16LF1937-I/P
PIC16LF724-E/P
PIC16LF724-I/P
PIC16LF727-E/P
PIC16LF727-I/P
PIC18F4220-E/P
PIC18F4220-I/P
PIC18F4221-E/P
PIC18F4221-I/P
PIC18F4320-E/P
PIC18F4320-I/P
PIC18F4320-I/PC05

PIC18F4321-E/P
PIC18F4321-I/P
PIC18F43K20-E/P
PIC18F43K20-I/P
PIC18F4410-I/P
PIC18F4420-E/P
PIC18F4420-I/P
PIC18F4423-E/P
PIC18F4423-I/P
PIC18F4450-I/P
PIC18F4480-E/P
PIC18F4480-I/P
PIC18F44J10-I/P
PIC18F44K20-E/P
PIC18F44K20-I/P
PIC18F4510-E/P
PIC18F4510-I/P
PIC18F4520-E/P
PIC18F4520-I/P
PIC18F4523-E/P
PIC18F4523-I/P
PIC18F4580-E/P
PIC18F4580-I/P
PIC18F4585-E/P
PIC18F4585-I/P
PIC18F45J10-E/P
PIC18F45J10-I/P
PIC18F45K20-E/P
PIC18F45K20-I/P
PIC18F4680-E/P
PIC18F4680-I/P
PIC18F46J11-I/PAQL
PIC18F46J50-I/PAQL
PIC18F46K20-E/P
PIC18F46K20-I/P
PIC18F46K20T-I/P
PIC18LF4220-I/P
PIC18LF4221-I/P
PIC18LF4320-I/P
PIC18LF4321-I/P
PIC18LF4410-I/P
PIC18LF4420-I/P
PIC18LF4423-I/P
PIC18LF4450-I/P
PIC18LF4480-I/P
PIC18LF44J10-I/P



PIC18LF4510-I/P
PIC18LF4520-I/P
PIC18LF4523-I/P
PIC18LF4580-I/P
PIC18LF4585-I/P
PIC18LF45J10-I/P
PIC18LF4680-I/P
PIC18LF46J50-I/PAQQ
TC7106ACPL
TC7106AIPL
TC7106ARCPL
TC7106CPL
TC7106IPL
TC7106RCPL
TC7107ACPL
TC7107AIPL
TC7107ARCPL
TC7107CPL
TC7107IPL
TC7107RCPL
TC7116ACPL
TC7116CPL
TC7117ACPL
TC7117CPL
TC7117RCPL