

Product Change Notification - CYER-09EMYS877

Date: 05 Sep 2013

Product Category: 16-bit Microcontrollers and Digital Signal Controllers; 8-bit Microcontrollers

Notification subject: CCB 1155.09 Final Notification: Qualification of selected products available in the 40L PDIP and 28L PDIP packages with palladium coated copper (PdCu) bond wire at MTAI assembly site.

Notification text: **PCN Status:**
Final notification

Microchip Parts Affected:

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

PCN_CYER-09EMYS877_Affected_CPN.xls

PCN_CYER-09EMYS877_Affected_CPN.pdf

Description of Change:

Qualification of selected products available in the 40L PDIP and 28L PDIP packages with palladium coated copper (PdCu) bond wire at MTAI assembly site.

NOTE: Selected products are non-automotive standalone analog and PIC MCU devices. Please review the affected CPN lists (attached) to identify the actual parts affected.

Pre Change:

Gold (Au) wire

Post Change:

Palladium coated copper (PdCu) bond wire

Impacts to Data Sheet:

None

Reason for Change:

To improve manufacturability

Change Implementation Status:

In progress

Estimated First Ship Dates:

October 18, 2013 (Date code: 1342)

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 23, 2013: Initial notification issue date.

September 5, 2013: Final notification issue date. Attached qualification report.

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-09EMYS877_Qual Report.pdf](#) [PCN_CYER-09EMYS877_Affected CPN.pdf](#) [PCN_CYER-09EMYS877_Affected CPN.xlsx](#)

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

Terms and Conditions:

If you wish to change your product/process change notification (PCN) profile please log on to our website at <http://www.microchip.com/PCN> sign into myMICROCHIP to open the myMICROCHIP home page, then select a profile option from the left navigation bar.

To opt out of future offer or information emails (other than product change notification emails), click here to go to [microchipDIRECT](#) and login, then click on the "My account" link, click on "Update profile" and un-check the box that states "Future offers or information about Microchip's products or services."

PCN_CYER-09EMYS877
CATALOG_PART_NBR
DSPIC30F3011-20E/P
DSPIC30F3011-20I/P
DSPIC30F3011-30I/P
DSPIC30F3014-20E/P
DSPIC30F3014-20I/P
DSPIC30F3014-30I/P
DSPIC30F4011-20E/P
DSPIC30F4011-20I/P
DSPIC30F4011-30I/P
DSPIC30F4013-20E/P
DSPIC30F4013-20I/P
DSPIC30F4013-30I/P
PIC16C64A-04/P
PIC16C64A-04I/P
PIC16C64A-04I/P053
PIC16C64A-10/P
PIC16C64A-20/P
PIC16C64A-20I/P
PIC16C65A-04/P
PIC16C65A-10/P
PIC16C65A-20/P
PIC16C65A-20I/P
PIC16C65B-04/P
PIC16C65B-04I/P
PIC16C65B-20/P
PIC16C65B-20I/P
PIC16C662-04I/P
PIC16C67-04/P
PIC16C67-04I/P
PIC16C67-10/P
PIC16C67-20/P
PIC16C67-20I/P
PIC16C74A-04/P
PIC16C74A-04I/P
PIC16C74A-10/P
PIC16C74A-10I/P
PIC16C74A-20/P
PIC16C74A-20E/P
PIC16C74A-20I/P
PIC16C74B-04/P
PIC16C74B-04I/P
PIC16C74B-04I/P4AP
PIC16C74B-20/P
PIC16C74B-20E/P
PIC16C74B-20I/P

PIC16C765-I/P
PIC16C77-04/P
PIC16C77-04E/P
PIC16C77-04I/P
PIC16C77-10/P
PIC16C77-10I/P
PIC16C77-20/P
PIC16C77-20E/P
PIC16C77-20I/P
PIC16C774/P
PIC16C774-E/P
PIC16C774-I/P
PIC16F59-E/P
PIC16F59-I/P
PIC16F747-I/P
PIC16F74-E/P
PIC16F74-I/P
PIC16F74-I/P4AP
PIC16F777-E/P
PIC16F777-I/P
PIC16F77-E/P
PIC16F77-I/P
PIC16F77-I/P4AP
PIC16F871-E/P
PIC16F871-I/P
PIC16F874-04/P
PIC16F874-04I/P
PIC16F874-20/P
PIC16F874-20I/P
PIC16F874A-E/P
PIC16F874A-I/P
PIC16F877-04/P
PIC16F877-04E/P
PIC16F877-04I/P
PIC16F877-10E/P
PIC16F877-20/P
PIC16F877-20I/P
PIC16F877A-E/P
PIC16F877A-I/P
PIC16F884-E/P
PIC16F884-I/P
PIC16F887-E/P
PIC16F887-I/P
PIC16F914-E/P
PIC16F914-I/P
PIC16F917-E/P
PIC16F917-I/P

PIC16LC64A-04/P
PIC16LC64A-04I/P
PIC16LC65A-04/P
PIC16LC65B-04/P
PIC16LC65B-04I/P
PIC16LC67-04/P
PIC16LC74A-04/P
PIC16LC74B-04/P
PIC16LC74B-04I/P
PIC16LC774/P
PIC16LF747-I/P
PIC16LF74-I/P
PIC16LF777-I/P
PIC16LF77-I/P
PIC16LF871-I/P
PIC16LF874-04/P
PIC16LF874-04I/P
PIC16LF874A-I/P
PIC16LF877-04/P
PIC16LF877-04I/P
PIC16LF877A-I/P
PIC17C42A-16/P
PIC17C42A-16I/P
PIC17C42A-25/P
PIC17C42A-33/P
PIC17C42A-33I/P
PIC17C43-16/P
PIC17C43-16I/P
PIC17C43-25/P
PIC17C43-33/P
PIC17C43-33I/P
PIC17C44-16/P
PIC17C44-16I/P
PIC17C44-25/P
PIC17C44-25E/P
PIC17C44-25I/P
PIC17C44-33/P
PIC17C44-33I/P
PIC17LC44-08I/P
PIC18C442-I/P
PIC18C452-E/P
PIC18C452-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
PIC18F4331-E/P
PIC18F4331-I/P
PIC18F4410-E/P
PIC18F4410-I/P
PIC18F4420-E/P
PIC18F4420-I/P
PIC18F4423-E/P
PIC18F4423-I/P
PIC18F442-E/P
PIC18F442-I/P
PIC18F4431-E/P
PIC18F4431-I/P
PIC18F4439-I/P
PIC18F4450-I/P
PIC18F4455-I/P
PIC18F4455-I/PC03
PIC18F4458-I/P
PIC18F4480-E/P
PIC18F4480-I/P
PIC18F448-I/P
PIC18F44J10-I/P
PIC18F4510-E/P
PIC18F4510-I/P
PIC18F4515-E/P
PIC18F4515-I/P
PIC18F4520-E/P
PIC18F4520-I/P
PIC18F4523-E/P
PIC18F4523-I/P
PIC18F4525-E/P
PIC18F4525-I/P
PIC18F452-E/P
PIC18F452-I/P
PIC18F452-I/P039
PIC18F4539-I/P
PIC18F4550-I/P
PIC18F4553-I/P
PIC18F4580-E/P
PIC18F4580-I/P
PIC18F4585-E/P
PIC18F4585-H/P
PIC18F4585-I/P
PIC18F458-E/P

PIC18F458-I/P
PIC18F45J10-I/P
PIC18F4610-E/P
PIC18F4610-I/P
PIC18F4620-E/P
PIC18F4620-I/P
PIC18F4680-E/P
PIC18F4680-H/P
PIC18F4680-I/P
PIC18F4682-E/P
PIC18F4682-I/P
PIC18F4685-E/P
PIC18F4685-I/P
PIC18F46J11-I/PAQL
PIC18F46J50-I/PAQL
PIC18LC452-I/P
PIC18LF4220-I/P
PIC18LF4221-I/P
PIC18LF4320-I/P
PIC18LF4321-I/P
PIC18LF4331-I/P
PIC18LF4410-I/P
PIC18LF4420-I/P
PIC18LF4423-I/P
PIC18LF442-I/P
PIC18LF4431-I/P
PIC18LF4450-I/P
PIC18LF4455-I/P
PIC18LF4458-I/P
PIC18LF4480-I/P
PIC18LF448-I/P
PIC18LF44J10-I/P
PIC18LF4510-I/P
PIC18LF4515-I/P
PIC18LF4520-I/P
PIC18LF4523-I/P
PIC18LF4525-I/P
PIC18LF452-I/P
PIC18LF4539-I/P
PIC18LF4550-I/P
PIC18LF4553-I/P
PIC18LF4580-I/P
PIC18LF4585-I/P
PIC18LF458-I/P
PIC18LF45J10-I/P
PIC18LF4610-I/P
PIC18LF4620-I/P

PIC18LF4680-I/P
PIC18LF4682-I/P
PIC18LF4685-I/P
PIC18LF46J50-I/PAQQ
CF775-04/P
PIC16C557-I/P
PIC16C55A-04/P
PIC16C55A-04I/P
PIC16C55A-20/P
PIC16C55A-20I/P
PIC16C55A-40/P
PIC16C57C-04/P
PIC16C57C-04/P072
PIC16C57C-04/P073
PIC16C57C-04E/P
PIC16C57C-04I/P
PIC16C57C-04I/P027
PIC16C57C-04I/P063
PIC16C57C-04I/P069
PIC16C57C-04I/P071
PIC16C57C-04I/P077
PIC16C57C-20/P
PIC16C57C-20I/P
PIC16C57C-40/P
PIC16C622-ME
PIC16C711-ME/P
PIC16C715-ME/P
PIC16F57-E/P
PIC16F57-E/PG
PIC16F57-I/P
PIC16F57-I/P022
PIC16F57-I/P032
PIC16F57-I/P033
PIC16F57-I/P034
PIC16F57-I/P037
PIC16F57-I/P038
PIC16F57-I/PC02
PIC16F57-I/PG
PIC16LC55A-04/P
PIC16LC55A-04I/P
PIC16LC57C-04/P
PIC16LC57C-04I/P



QUALIFICATION REPORT RELIABILITY LABORATORY

PCN #: CYER-09EMYS877

Date
August 21, 2013

Qualification of selected products available in the 40L PDIP package with palladium coated copper (PdCu) bond wire at MTAI assembly site. The 28L PDIP package will qualify at MTAI assembly site by similarity.

Distribution

Somnuek T.	Rangsun K.
Wanphen L.	A. Navarro
Wichai K.	J. Fernandez
Payungsak W.	S. Kelsall
	S. Melby

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

Purpose	Qualification of selected products available in the 40L PDIP package with palladium coated copper (PdCu) bond wire at MTAI assembly site. The 28L PDIP package will qualify at MTAI assembly site by similarity.
CN	BC130711
QUAL ID	Q13077
Part No.	PIC18F448-I/PREL
MP CODE	C5AL27S2XREL
Bonding No.	A-033982 Rev. F
CCB No.	1155.09
<u>Package</u>	
Type	40L PDIP
Package size	600 mils
Die thickness	15 mils
Die size	152.70 x 243.60 mils
<u>Lead Frame</u>	
Paddle size	300 x 300 mils
Material	CDA194
Surface	Ag spot
Process	Stamp
Lead Lock	Yes
Part Number	10104009
<u>Die attach material</u>	
Epoxy	CRM-1064L
Wire	PdCu wire
Mold Compound	GE800
Plating Composition	Matte Tin



MICROCHIP PACKAGE QUALIFICATION REPORT

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
MTAI140902458	TMPE213309872.330	13224G1
MTAI140902459	TMPE213309872.320	13224G2
MTAI140902460	TMPE213309872.310	13224G3

Result

Pass Fail _____

40L PDIP (.600") assembled by MTAI pass reliability test per QCI-39000.

Prepared By: _____ **Date:** August 21, 2013 **(Reliability Engineer)**

(Mr.Thinnapol Nakkasun)

Approved By: _____ **Date:** August 21, 2013 **(Reliability Manager)**

(Mr. Somnuek Thongprasert)

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
Electrical Test	Electrical Test: +25°C and 85°C System: J750	JESD22- A113	693(0)	693		Good Devices
Temp Cycle	Stress Condition: (Standard) -65°C to +150°C, 50, 250, 500 Cycles System : TABAI ESPEC TSA-70H Electrical Test: + 85°C System: J750	JESD22- A104	231(0)	0/231	Pass	
UNBIASED-HAST	Stress Condition: (Standard) +130°C/85%RH, 96 hrs. System: HAST 6000X Electrical Test: +25°C System: J750	JESD22- A118	231(0)	0/231	Pass	
HAST	Stress Condition: (Standard) +130°C/85%RH, 96 hrs. Bias Volt: 5.5 Volts System: HAST 6000X Electrical Test: +25°C and 85°C System: J750	JESD22- A110	231(0)	0/231	Pass	

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
High Temperature Storage Life	Stress Condition: Bake 175°C, 504 hrs System: SHEL LAB	JESD22- A103		45		45 units
	Electrical Test: +25°C and 85°C System: J750		45(0)	0/45	Pass	
Bond Strength Data Assembly	Wire Pull (> 2.5 grams)	JESD22- B116	30 (0) Wires	0/30	Pass	
	Bond Shear (15.00 grams)		30 (0) bonds	0/30	Pass	