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Product Change Notification - CYER-01DNRB151

Date: 01 Apr 2010

Product Category: 16-bit Microcontrollers and Digital Signal Controllers; Analog (Linear & Mixed Signal) AND Interface; RF and Security; Touch Sensing Technologies; 8-bit Microcontrollers; All 16-bit Microcontrollers

Device Family:  

Notification subject: CCB# 946 Qualification of different paddle sizes in 18L & 28L SOIC packages at MMS (ATES).

Notification text:

PCN Status:
Initial notification

Microchip Part#s Affected:
See attachments of Affected Part Numbers Labeled as...
PCN# CYER-01DNRB151_CPN_Affected.xls
PCN# CYER-01DNRB151_CPN_Affected.pdf

Description of Change:
Qualification of different paddle sizes in 18L & 28L SOIC packages at MMS (ATES).

Pre Change:
18L SOIC: 160 x 200 mils paddle. 28L SOIC: 160 x 205 mils paddle.

Post Change:
18L SOIC: 140 x 170 mils paddle. 28L SOIC: 200 x 240 mils paddle.

Impacts to Data Sheet:
None

Reason for Change:
To improve manufacturability

Change Implementation Status:
In Progress

Estimated First Ship Date:
May 31, 2010 (Date code 1022)

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: (e.g.: Date Code, Device Marking, Ship Container Marking)
Traceability code

Attachment(s): [PCN CYER-01DNRB151_CPN_Affected.pdf](#)
[PCN CYER-01DNRB151_CPN_Affected.xls](#)
[PCN CYER-01DNRB151_Qual Plan.pdf](#)

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MICROCHIP

QUALIFICATION PLAN

PCN#: CYER-01DNRB151

**Date:
Feb 18, 2010**

**Qualification of different paddle sizes in 18L SOIC
(.300") and 28L SOIC (.300") packages at MMS (ATES)**

Distribution

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Purpose: _____ Qualification of a different paddle size in 18L SOIC (.300") package at MMS (ATES).

MP code: _____ 971007F2XB20

Part No.: _____ PIC16C715-20I/SO

CCB: _____ 946.01

Package:

Type _____ 18L SOIC

Width or Size _____ 300 mils

Die thickness: _____ 15 mils

Die size: _____ 117.0x 140.0 mils

Lead frame:

Paddle size: _____ 140 x 170 mils

Material _____ C194

Surface _____ Ag spot plating

Process _____ Stamped

Lead Lock _____ No

Part Number _____ FD0128

Wire:

Material _____ Au / Heraeus (China)

Die Attach Epoxy:

Part Number _____ 84-1LMISR4 / Ablestik (China)

Conductive _____ Yes

Mold Compound: _____ G600F / Sumitomo (China)

Reliability Test plan: _____ See attached, STD Package Reliability Test plan on each package.

Purpose: _____ Qualification of larger paddle in 28L SOIC (.300") package at MMS (ATES).

MP code: _____ A5AF31N3XC20

Part No.: _____ PIC16F873-20/SO

CCB: _____ 946.02

Package:

Type _____ 28L SOIC

Width or Size _____ 300 mils

Die thickness: _____ 15 mils

Die size: _____ 179.2x 199.6 mils

Lead frame:

Paddle size: _____ 200 x 240 mils

Material _____ C194

Surface _____ Ag spot plating

Process _____ Stamped

Lead Lock _____ No

Part Number _____ FD0122

Wire:

Material _____ Au / Heraeus (China)

Die Attach Epoxy:

Part Number _____ 84-1LMISR4 / Ablestik (China)

Conductive _____ Yes

Mold Compound: _____ G600F / Sumitomo (China)

Reliability Test plan: _____ See attached, STD Package Reliability Test plan on each package.

Package Reliability Tests								
Test Name	Conditions	Sample Size	Min. Qty of Spares per Lot (should be properly marked)	Quantity 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 hr 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.

Package Reliability Tests								
Test Name	Conditions	Sample Size	Min. Qty of Spares per Lot (should be properly marked)	Quantity of Lots	Total Units	Fail Accept Qty	Est. Dur. Days	Special Instructions
Wire Bond Pull - WBP	Mil. Std. 883-2011	5	0	1	5	0 fails after TC	5	30 bonds from a min. 5 devices.
Wire Bond Shear - WBS	CDF-AEC-Q100-001	5	0	1	5		5	30 bonds from a min. 5 devices.
Wire Sweep								Required for any reduction in wire bond thickness.
External Visual	Mil. Std. 883-2009/2010	ALL	0	3	ALL	0	5	

Package Reliability Tests

Test Name	Conditions	Sample Size	Min. Qty of Spares per Lot (should be properly marked)	Quantity of Lots	Total Units	Fail Accept Qty	Est. Dur. Days	Special Instructions
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.	45	5	3	150	0	10	Must be in progress at time of package release to production, but completion is not required for release to production.
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 Jedec-STD-020C for package type; Electrical test pre and post stress at +25°C. Perform SAM analysis using the standard sample size. MSL1 @ 260°	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.

Package Reliability Tests

Test Name	Conditions	Sample Size	Min. Qty of Spares per Lot (should be properly marked)	Quantity of Lots	Total Units	Fail Accept Qty	Est. Dur. Days	Special Instructions
HAST *	+130 deg C/85% RH for 96 hours. Electrical test pre and post stress at +25 and hot temp.	77	5	3	246	0	10	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
Autoclave *	+121 deg C/15 psig for 96 hours. Electrical test pre and post stress at +25 deg 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.	77	5	3	246	0	15	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.

PCN # CYER-01DNRB151
CATALOG_PART_NBR
AP7675/SO
CF775-04/SO
DSPIC30F2010-20E/SO
DSPIC30F2010-20I/SO
DSPIC30F2010-30I/SO
DSPIC30F2010-30I/SOC01
DSPIC30F2010T-20E/SO
DSPIC30F2010T-20I/SO
DSPIC30F2010T-30I/SO
DSPIC30F2011-20E/SO
DSPIC30F2011-20I/SO
DSPIC30F2011-30I/SO
DSPIC30F2011T-20E/SO
DSPIC30F2011T-20I/SO
DSPIC30F2011T-30I/SO
DSPIC30F2012-20E/SO
DSPIC30F2012-20I/SO
DSPIC30F2012-30I/SO
DSPIC30F2012-30I/SO020
DSPIC30F2012-30I/SOB31
DSPIC30F2012T-20E/SO
DSPIC30F2012T-20I/SO
DSPIC30F2012T-30I/SO
DSPIC30F2012T-30I/SO020
DSPIC33FJ12GP201-E/SO
DSPIC33FJ12GP201-I/SO
DSPIC33FJ12GP201T-E/SO
DSPIC33FJ12GP201T-I/SO
DSPIC33FJ12GP202-E/SO
DSPIC33FJ12GP202-I/SO
DSPIC33FJ12GP202T-E/SO
DSPIC33FJ12GP202T-I/SO
DSPIC33FJ12MC202-E/SO
DSPIC33FJ12MC202-E/SOC22
DSPIC33FJ12MC202-I/SO
DSPIC33FJ12MC202-I/SOC22
DSPIC33FJ12MC202T-E/SO
DSPIC33FJ12MC202T-E/SOC22
DSPIC33FJ12MC202T-I/SO
DSPIC33FJ12MC202T-I/SOC22
DSPIC33FJ32GP202-E/SO
DSPIC33FJ32GP202-I/SO
DSPIC33FJ32GP202T-E/SO
DSPIC33FJ32GP202T-I/SO
DSPIC33FJ32MC202-E/SO
DSPIC33FJ32MC202-H/SO
DSPIC33FJ32MC202-I/SO
DSPIC33FJ32MC202T-E/SO
DSPIC33FJ32MC202T-H/SO
DSPIC33FJ32MC202T-I/SO

ENC28J60/SO
ENC28J60/SOC01
ENC28J60-I/SO
ENC28J60-I/SOC02
ENC28J60-I/SOC04
ENC28J60T/SO
ENC28J60T/SOC01
ENC28J60T-I/SO
HA0124-I/SO
HA0124T-I/SO
HA1126/SO
HA1126/SO012
HA1126/SO013
HA1126T/SO
HA1126T/SO012
HA1126T/SO013
HA1126T/SO202
HA1573T-I/SOC19
HA2068-I/SO
HA2068T-I/SO
HA2525-I/SO
HA2525T-I/SO
HA3078-I/SO
HA3078T-I/SO
HA3089-I/SO
HA3099/SO
HA4016-I/SOC03
HA4231-I/SO
HA4231-I/SO011
HA4231T-I/SO011
HCS512/SO
HCS512-I/SO
HCS512T/SO
HCS512T-I/SO
HCS512T-I/SO027
HS10-100S0S/10SS25
MCP2140A-I/SO
MCP2140AT-I/SO
MCP2140-I/SO
MCP2140-I/SORVB
MCP2140T-I/SO
MCP2140T-I/SORVB
MCP2150-I/SO
MCP2150-I/SORVB
MCP2150T-I/SO
MCP2150T-I/SORVB
MCP2150T-I/SORVC
MCP2155-I/SO
MCP2155-I/SORVB
MCP2155-I/SORVC
MCP2155T-I/SO
MCP2155T-I/SORVB

MCP2155T-I/SORVC
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MCP23016-I/SO
MCP23016T-I/SO
MCP23017-E/SO
MCP23017T-E/SO
MCP23018-E/SO
MCP23018T-E/SO
MCP23S09-E/SO
MCP23S09T-E/SO
MCP23S17-E/SO
MCP23S17T-E/SO
MCP23S18-E/SO
MCP23S18T-E/SO
MCP2510-E/SO
MCP2510-I/SO
MCP2510T-E/SO
MCP2510T-I/SO
MCP2515-E/SO
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MCP2515-E/SORB4
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MCP2515-I/SORB4
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MCP2515T-E/SORB2
MCP2515T-E/SORB4
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MCP2515T-I/SORB4
MCP722B-I/SOV02
MCV28A-I/SO
MCV28AT-I/SO
MTR9657-I/SO
PIC16C54-10/SO
PIC16C54-10I/SO
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PIC16C54A-04E/SO
PIC16C54A-04I/SO
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PIC16C54A-10E/SO
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PIC16C54A-20I/SO
PIC16C54AT-04/SO
PIC16C54AT-04/SO048
PIC16C54AT-04I/SO
PIC16C54AT-04I/SO068
PIC16C54AT-04I/SO071
PIC16C54AT-04I/SO093

PIC16C54AT-04I/SO117
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PIC16C54-HSE/SO
PIC16C54-HSI/SO
PIC16C54-LP/SO
PIC16C54-LPI/SO
PIC16C54-LPI/SO027
PIC16C54-RC/SO
PIC16C54-RC/SO241
PIC16C54-RCE/SO
PIC16C54-RCI/SO
PIC16C54T-10/SO
PIC16C54T-RC/SO222
PIC16C54T-RCI/SO
PIC16C54T-XT/SO
PIC16C54T-XTI/SO
PIC16C54-XT/SO
PIC16C54-XTE/SO
PIC16C54-XTI/SO
PIC16C55-10/SO
PIC16C55-10I/SO
PIC16C554-04/SO
PIC16C554-04I/SO
PIC16C554-20/SO
PIC16C554-20I/SO
PIC16C554T-04/SO
PIC16C554T-04I/SO
PIC16C558-04/SO
PIC16C558-04E/SO
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PIC16C57C-20I/SO
PIC16C57C-40/SO
PIC16C57CT-04/SO
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PIC16C58B-04E/SO
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PIC16C58B-20E/SO
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PIC16C58BT-04/SO
PIC16C58BT-04I/SO
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PIC16C620AT-04I/SO
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PIC16C622-04/SO
PIC16C622-04I/SO
PIC16C622-20/SO
PIC16C622-20E/SO
PIC16C622-20I/SO
PIC16C622A-04/SO
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PIC16C622A-20I/SO
PIC16C622A-40/SO
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PIC16C622AT-04/SO026
PIC16C622AT-04/SO035
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PIC16C622AT-04E/SO061
PIC16C622AT-04I/SO
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PIC16C622AT-20/SOC03
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PIC16C63-20I/SO
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PIC16C63A-04E/SO
PIC16C63A-04I/SO
PIC16C63A-20/SO
PIC16C63A-20E/SO
PIC16C63A-20I/SO
PIC16C63AT-04/SO
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PIC16C63AT-20I/SO029
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PIC16C710-20E/SO
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PIC16C710T-20I/SO
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PIC16C711-20/SO
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PIC16C711-20I/SO
PIC16C711T-04/SO
PIC16C711T-04/SO052
PIC16C711T-04E/SO
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PIC16C71-20I/SO

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PIC16C715-04I/SO
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PIC16C715-20E/SO
PIC16C715-20I/SO
PIC16C715T-04/SO
PIC16C715T-04I/SO
PIC16C715T-04I/SO053
PIC16C715T-20/SO
PIC16C715T-20E/SO
PIC16C715T-20I/SO
PIC16C716-04/SO
PIC16C716-04E/SO
PIC16C716-04I/SO
PIC16C716-20/SO
PIC16C716-20E/SO
PIC16C716-20I/SO
PIC16C716T-04I/SO
PIC16C716T-20/SO
PIC16C716T-20I/SO
PIC16C717/SO
PIC16C717/SOHXX
PIC16C717-E/SO
PIC16C717-I/SO
PIC16C717T/SO
PIC16C717T-I/SO
PIC16C71T-04/SO
PIC16C71T-04I/SO
PIC16C72-04/SO
PIC16C72-04E/SO
PIC16C72-04I/SO
PIC16C72-10I/SO
PIC16C72-20/SO
PIC16C72-20E/SO
PIC16C72A-04/SO
PIC16C72A-04E/SO
PIC16C72A-04I/SO
PIC16C72A-04I/SO4AP
PIC16C72A-20/SO
PIC16C72A-20I/SO
PIC16C72AT-04/SO
PIC16C72AT-04/SO091
PIC16C72AT-04I/SO
PIC16C72AT-04I/SO077
PIC16C72AT-20I/SO
PIC16C73A-04/SO

PIC16C73A-04I/SO
PIC16C73A-10/SO
PIC16C73A-10I/SO
PIC16C73A-20/SO
PIC16C73A-20I/SO
PIC16C73AT-04/SO
PIC16C73AT-10/SO
PIC16C73B-04/SO
PIC16C73B-04E/SO
PIC16C73B-04I/SO
PIC16C73B-04I/SO4AP
PIC16C73B-20/SO
PIC16C73B-20E/SO
PIC16C73B-20I/SO
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