


Date: 09 Nov 2011

Product Category: Memory; 16-bit Microcontrollers and Digital Signal Controllers; Analog (Linear & Mixed Signal) AND Interface; Touch Sensing Technologies; RF and Security; Analog (Thermal, Power Management & Safety); Radio Frequency Devices; 8-bit Microcontrollers

Device Family:  

Notification subject: CCB 1081 Final Notification: Qualification of 8L, 14L, 16L, 20L PDIP, & 28L SPDIP with CRM-1064L die attach at ALPH (MMT) assembly site.

Notification text: PCN Status:
Final notification

Microchip Parts Affected:
See attachments of affected catalog part numbers (CPN) labeled as...
PCN_CYER-19TJTE192_Affected_CPN.xls
PCN_CYER-19TJTE192_Affected_CPN.pdf

Description of Change:
Qualification of 8L, 14L, 16L, 20L PDIP, & 28L SPDIP with CRM-1064L die attach at ALPH (MMT) assembly site.

Pre Change:
8390A die attach on 8L, 14L, 16L, 20L PDIP
3280 die attach on 28L SPDIP

Post Change:
CRM-1064L die attach on 8L, 14L, 16L, 20L PDIP & 28L SPDIP

Impacts to Data Sheet:
None

Reason for Change:

To improve on time delivery performance

Change Implementation Status:
In Progress

Estimated First Ship Date:
November 25, 2011 (date code: 1148)

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:
August 24, 2011: Issued initial notification.
November 9, 2011: Issued final notification. Attached qualification report.

Attachment(s):

[PCN_CYER-19TJTE192_Affected_CPN.pdf](#) [PCN_CYER-19TJTE192_Affected_CPN.xls](#) [PCN_CYER-19TJTE192_Qual Report.pdf](#)

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

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Parts Affected

23A256
23A640
23K256
23K640
24AA00
24AA02
24AA04
24AA04H
24AA08
24AA08H
24AA128
24AA16
24AA16H
24AA256
24AA32A
24AA32AF
24AA512
24AA64
24AA64F
24C00
24FC256
24FC512
24FC64
24LC00
24LC01B
24LC04B
24LC04BH
24LC08B
24LC08BH
24LC128
24LC16B
24LC16BH
24LC21
24LC21A
24LC22A
24LC256
24LC32A
24LC32AF
24LC512
24LC64
24LC64F
24LCS21A
24LCS22A

25AA040
25AA080
25AA080A
25AA080B
25AA080C
25AA080D
25AA128
25AA160
25AA160A
25AA160B
25AA160C
25AA160D
25AA256
25AA320
25AA320A
25AA640
25AA640A
25C040
25C080
25C160
25C320
25LC040
25LC080
25LC080A
25LC080B
25LC080C
25LC080D
25LC128
25LC160
25LC160A
25LC160B
25LC160C
25LC160D
25LC256
25LC320
25LC320A
25LC640
25LC640A
93AA46
93AA46A
93AA46B
93AA46C
93AA56
93AA56A
93AA56B

93AA56C
93AA66A
93AA66B
93AA66C
93AA76
93AA76C
93AA86
93AA86C
93C46A
93C46B
93C46C
93C56A
93C56B
93C56C
93C66A
93C66B
93C66C
93C76C
93C86
93C86C
93LC46
93LC46A
93LC46B
93LC46C
93LC56
93LC56A
93LC56B
93LC56C
93LC66
93LC66A
93LC66B
93LC66C
93LC76
93LC76C
93LC86C
dsPIC30F2012
dsPIC33FJ12GP202
dsPIC33FJ12MC201
dsPIC33FJ12MC202
dsPIC33FJ16GP102
dsPIC33FJ16MC101
dsPIC33FJ16MC102
dsPIC33FJ32GP202
dsPIC33FJ32MC202
ENC28J60

HB12-100D0s/12DB30

HCS101

HCS200

HCS201

HCS300

HCS301

HCS500

HI12-100D0S/12DI30

HS12-100D0s/12DS30

MCP1406

MCP1407

MCP1525

MCP1541

MCP2004

MCP201

MCP2021

MCP2022

MCP2036

MCP2120

MCP2122

MCP23017

MCP23S17

MCP2551

MCP3001

MCP3002

MCP3004

MCP3008

MCP3201

MCP3202

MCP3204

MCP3208

MCP3301

MCP3302

MCP3304

MCP4011

MCP41010

MCP41050

MCP41100

MCP4131

MCP4132

MCP4141

MCP4142

MCP4151

MCP4152

MCP4161

MCP4162
MCP42010
MCP42050
MCP42100
MCP4231
MCP4241
MCP4251
MCP4261
MCP4331
MCP4341
MCP4351
MCP4361
MCP4801
MCP4802
MCP4811
MCP4812
MCP4821
MCP4822
MCP4901
MCP4902
MCP4911
MCP4912
MCP4921
MCP4922
MCP6002
MCP6004
MCP601
MCP602
MCP6021
MCP6022
MCP6023
MCP6024
MCP603
MCP6031
MCP6032
MCP604
MCP6041
MCP6042
MCP6043
MCP6044
MCP606
MCP607
MCP608
MCP609
MCP6141

MCP6142
MCP6143
MCP6144
MCP616
MCP617
MCP618
MCP619
MCP6231
MCP6232
MCP6234
MCP6241
MCP6242
MCP6244
MCP6272
MCP6274
MCP6275
MCP6282
MCP6284
MCP6285
MCP6292
MCP6294
MCP6295
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MCP6542
MCP6543
MCP6544
MCP6546
MCP6547
MCP6548
MCP6549
MCP6S21
MCP6S22
MCP6S26
MCP6S28
MCP6S91
MCP6S92
MCRF450
PIC10F200
PIC10F202
PIC10F204
PIC10F206
PIC10F220
PIC10F222
PIC12C508
PIC12C508A

PIC12C509
PIC12C509A
PIC12CR509A
PIC12F1822
PIC12F1840
PIC12F508
PIC12F509
PIC12F510
PIC12F519
PIC12F609
PIC12F615
PIC12F617
PIC12F629
PIC12F635
PIC12F675
PIC12F683
PIC14000
PIC16C505
PIC16C55
PIC16C55A
PIC16C57
PIC16C57C
PIC16C62B
PIC16C63A
PIC16C642
PIC16C66
PIC16C72A
PIC16C73A
PIC16C73B
PIC16C745
PIC16C76
PIC16C770
PIC16C771
TC7662B
TC9400
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TC9402
TC962
PIC16C773
PIC16C781
PIC16C782
PIC16CR63
PIC16CR72
PIC16F1507
PIC16F1516

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PIC16F1823
PIC16F1824
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PIC16F1847
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PIC16F1936
PIC16F1938
PIC16F505
PIC16F506
PIC16F526
PIC16F57
PIC16F610
PIC16F616
PIC16F630
PIC16F631
PIC16F636
PIC16F676
PIC16F677
PIC16F684
PIC16F685
PIC16F687
PIC16F688
PIC16F689
PIC16F690
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PIC16F72
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PIC16F721
PIC16F722
PIC16F722A
PIC16F723
PIC16F723A
PIC16F726
PIC16F737
PIC16F767
PIC16F785
PIC16F870
PIC16F872
PIC16F873A
PIC16F876
PIC16F876A
PIC16F883

PIC16F886
PIC16F913
PIC16F916
PIC16LF1902
PIC16LF1903
PIC18C242
PIC18F13K22
PIC18F13K50
PIC18F14K22
PIC18F14K50
PIC18F2220
PIC18F2221
PIC18F2320
PIC18F2321
PIC18F23K20
PIC18F23K22
PIC18F242
PIC18F2420
PIC18F2423
PIC18F2439
PIC18F2450
PIC18F2480
PIC18F24J10
PIC18F24J11
PIC18F24J50
PIC18F24K20
PIC18F24K22
PIC18F2510
PIC18F252
PIC18F2520
PIC18F2523
PIC18F2539
PIC18F2580
PIC18F25J10
PIC18F25J11
PIC18F25J50
PIC18F25K20
PIC18F25K22
PIC18F25K80
PIC18F2620
PIC18F26J11
PIC18F26J13
PIC18F26J50
PIC18F26J53
PIC18F26K20

PIC18F26K22
PIC18F26K80
PIC18F27J13
PIC18F27J53
PIC24F04KA201
PIC24F08KA101
PIC24F08KA102
PIC24F16KA101
PIC24F16KA102
PIC24F16KA301
PIC24F16KA302
PIC24F32KA301
PIC24F32KA302
PIC24FJ16GA002
PIC24FJ16MC101
PIC24FJ16MC102
PIC24FJ32GA002
PIC24FJ32GA102
PIC24FJ32GB002
PIC24FJ48GA002
PIC24FJ64GA002
PIC24FJ64GA102
PIC24FJ64GB002
PIC24HJ12GP202
PIC24HJ32GP202
TC1026
TC1029
TC1044S
TC1121
TC1232
TC1410
TC1410N
TC1411
TC1411N
TC1412
TC1412N
TC1413
TC1413N
TC1426
TC1427
TC1428
TC2185
TC3400
TC426
TC427

TC428
TC429
TC4404
TC4405
TC4420
TC4426
TC4426A
TC4427
TC4427A
TC4428
TC4428A
TC4429
TC4431
TC4432
TC621
TC622
TC623
TC624
TC642B
TC646B
TC647B
TC648B
TC649B
TC682
TC7650
TC7660
TC7660H
TC7660S
TC7662A

| PCN_CYER-19TJTE192 |
|--------------------|
| CATALOG_PART_NBR |
| 23A256-I/P |
| 23A640-I/P |
| 23K256-E/P |
| 23K256-I/P |
| 23K640-E/P |
| 23K640-I/P |
| 24AA00/P |
| 24AA00-I/P |
| 24AA02-I/PG |
| 24AA04/P |
| 24AA04H-I/P |
| 24AA04-I/P |
| 24AA08/P |
| 24AA08H-I/P |
| 24AA08-I/P |
| 24AA08-I/PG |
| 24AA128-I/P |
| 24AA16/P |
| 24AA16H-I/P |
| 24AA16-I/P |
| 24AA256-I/P |
| 24AA256-I/PG |
| 24AA32AF-I/P |
| 24AA32A-I/P |
| 24AA512-I/P |
| 24AA64/P |
| 24AA64/PRVA |
| 24AA64F-I/P |
| 24AA64-I/P |
| 24AA64-I/PG |
| 24C00/P |
| 24C00-E/P |
| 24C00-I/P |
| 24FC256-I/P |
| 24FC512-I/P |
| 24FC64F-I/P |
| 24FC64-I/P |
| 24LC00/P |
| 24LC00-I/P |
| 24LC01B-I/PG |
| 24LC04B/P |
| 24LC04B-E/P |
| 24LC04BH-E/P |
| 24LC04BH-I/P |
| 24LC04B-I/P |
| 24LC04B-I/PNR |
| 24LC08B/P |
| 24LC08B-E/P |
| 24LC08BH-E/P |
| 24LC08BH-I/P |

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|----------------|
| 24LC08B-I/P |
| 24LC08B-I/PNR |
| 24LC128-E/P |
| 24LC128-I/P |
| 24LC16B/P |
| 24LC16B-E/P |
| 24LC16BH-E/P |
| 24LC16BH-I/P |
| 24LC16B-I/P |
| 24LC16B-I/PNR |
| 24LC21/P |
| 24LC21A/P |
| 24LC21A-I/P |
| 24LC21A-I/PG |
| 24LC21-I/P |
| 24LC22A-I/P |
| 24LC256-E/P |
| 24LC256-I/P |
| 24LC256-I/PG |
| 24LC256-I/PRVE |
| 24LC32A/P |
| 24LC32A-E/P |
| 24LC32AF-E/P |
| 24LC32AF-I/P |
| 24LC32A-I/P |
| 24LC512-E/P |
| 24LC512-I/P |
| 24LC64-E/P |
| 24LC64F-E/P |
| 24LC64F-I/P |
| 24LC64-I/P |
| 24LC64-I/PG |
| 24LCS21A/P |
| 24LCS21A-I/P |
| 24LCS21A-I/PG |
| 24LCS22A-I/P |
| 25AA040/P |
| 25AA040-I/P |
| 25AA080/P |
| 25AA080A-I/P |
| 25AA080B-I/P |
| 25AA080C-I/P |
| 25AA080D-I/P |
| 25AA080-I/P |
| 25AA128-I/P |
| 25AA160/P |
| 25AA160A-I/P |
| 25AA160B-I/P |
| 25AA160C-I/P |
| 25AA160D-I/P |
| 25AA160-I/P |
| 25AA160-I/PG |

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|--------------|
| 25AA256-I/P |
| 25AA320A-I/P |
| 25AA320-I/P |
| 25AA640A-I/P |
| 25AA640-I/P |
| 25AA640-I/PG |
| 25C040/P |
| 25C040-E/P |
| 25C040-I/P |
| 25C080/P |
| 25C080-E/P |
| 25C080-I/P |
| 25C160/P |
| 25C160-E/P |
| 25C160-I/P |
| 25C320/P |
| 25C320-I/P |
| 25LC040/P |
| 25LC040-I/P |
| 25LC080/P |
| 25LC080A-E/P |
| 25LC080A-I/P |
| 25LC080B-E/P |
| 25LC080B-I/P |
| 25LC080C-E/P |
| 25LC080C-I/P |
| 25LC080D-E/P |
| 25LC080D-I/P |
| 25LC080-I/P |
| 25LC128-E/P |
| 25LC128-I/P |
| 25LC160/P |
| 25LC160A-E/P |
| 25LC160A-I/P |
| 25LC160B-E/P |
| 25LC160B-I/P |
| 25LC160C-E/P |
| 25LC160C-I/P |
| 25LC160D-E/P |
| 25LC160D-I/P |
| 25LC160-I/P |
| 25LC256-E/P |
| 25LC256-I/P |
| 25LC320/P |
| 25LC320A-E/P |
| 25LC320A-I/P |
| 25LC320-E/P |
| 25LC320-I/P |
| 25LC640A-E/P |
| 25LC640A-I/P |
| 25LC640-E/P |
| 25LC640-I/P |

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|---------------|
| 25LC640-I/PG |
| 93AA46/P |
| 93AA46A-I/P |
| 93AA46B-I/P |
| 93AA46C-I/P |
| 93AA56/P |
| 93AA56A-I/P |
| 93AA56B-I/P |
| 93AA56C-I/P |
| 93AA56-I/P |
| 93AA66/P |
| 93AA66A-I/P |
| 93AA66B-I/P |
| 93AA66C-I/P |
| 93AA66-I/P |
| 93AA76/P |
| 93AA76C-I/P |
| 93AA86/P |
| 93AA86C-I/P |
| 93C46A-E/P |
| 93C46A-I/P |
| 93C46B/P |
| 93C46B-E/P |
| 93C46B-I/P |
| 93C46B-I/PRVA |
| 93C46C-E/P |
| 93C46C-I/P |
| 93C56A-E/P |
| 93C56A-I/P |
| 93C56B-E/P |
| 93C56B-E/PRVA |
| 93C56B-I/P |
| 93C56C-E/P |
| 93C56C-I/P |
| 93C56-E/P |
| 93C66A-E/P |
| 93C66A-I/P |
| 93C66B-E/P |
| 93C66B-I/P |
| 93C66C-E/P |
| 93C66C-I/P |
| 93C66-E/P |
| 93C76C-E/P |
| 93C76C-I/P |
| 93C76-E/P |
| 93C86C-E/P |
| 93C86C-I/P |
| 93C86-E/P |
| 93LC46/P |
| 93LC46A/P |
| 93LC46A-E/P |
| 93LC46A-I/P |

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|-----------------------|
| 93LC46A-I/PA22 |
| 93LC46B/P |
| 93LC46B/PRVA |
| 93LC46B-E/P |
| 93LC46B-I/P |
| 93LC46B-I/PRVA |
| 93LC46C-E/P |
| 93LC46C-I/P |
| 93LC46-I/P |
| 93LC46-I/PG |
| 93LC56/P |
| 93LC56A/P |
| 93LC56A-E/P |
| 93LC56A-I/P |
| 93LC56B/P |
| 93LC56B/PRVA |
| 93LC56B-E/P |
| 93LC56B-I/P |
| 93LC56C-E/P |
| 93LC56C-I/P |
| 93LC56-I/P |
| 93LC66/P |
| 93LC66A/P |
| 93LC66A-E/P |
| 93LC66A-I/P |
| 93LC66A-I/PE31 |
| 93LC66B/P |
| 93LC66B-E/P |
| 93LC66B-I/P |
| 93LC66C-E/P |
| 93LC66C-I/P |
| 93LC66-I/P |
| 93LC76/P |
| 93LC76C-E/P |
| 93LC76C-I/P |
| 93LC76-I/P |
| 93LC86/P |
| 93LC86C-E/P |
| 93LC86C-I/P |
| 93LC86-I/P |
| CF775-04/SP |
| DSPIC30F2012-20E/SP |
| DSPIC30F2012-20I/SP |
| DSPIC30F2012-30I/SP |
| DSPIC33FJ12GP202-E/SP |
| DSPIC33FJ12GP202-I/SP |
| DSPIC33FJ12MC201-E/P |
| DSPIC33FJ12MC201-I/P |
| DSPIC33FJ12MC202-E/SP |
| DSPIC33FJ12MC202-I/SP |
| DSPIC33FJ16GP102-E/SP |
| DSPIC33FJ16GP102-I/SP |

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| DSPIC33FJ16MC101-E/P |
| DSPIC33FJ16MC101-I/P |
| DSPIC33FJ16MC102-E/SP |
| DSPIC33FJ16MC102-I/SP |
| DSPIC33FJ32GP202-E/SP |
| DSPIC33FJ32GP202-I/SP |
| DSPIC33FJ32MC202-E/SP |
| DSPIC33FJ32MC202-I/SP |
| ENC28J60-I/SP |
| GEN321-I/P004 |
| HA3078-I/SP |
| HA3089A-I/SP |
| HA3089-I/SP |
| HB12-100D0S/12DB30 |
| HCS101/P |
| HCS101-I/P |
| HCS200/P |
| HCS200-I/P |
| HCS201/P |
| HCS201/P030 |
| HCS201/P032 |
| HCS201-I/P |
| HCS300/P |
| HCS300-I/P |
| HCS301/P |
| HCS301-I/P |
| HCS500/P |
| HCS500-I/P |
| HI12-100D0S/12DI30 |
| HS12-100D0S/12DS30 |
| MCP1406-E/P |
| MCP1407-E/P |
| MCP1525-I/P |
| MCP1541-I/P |
| MCP2004-E/P |
| MCP201-E/P |
| MCP201-I/P |
| MCP2021-330E/P |
| MCP2021-500E/P |
| MCP2022-330E/P |
| MCP2022-500E/P |
| MCP2036-I/P |
| MCP2120-I/P |
| MCP2122-E/P |
| MCP23017-E/SP |
| MCP23S17-E/SP |
| MCP2551-E/P |
| MCP2551-I/P |
| MCP3001-I/P |
| MCP3002-I/P |
| MCP3004-I/P |
| MCP3008-I/P |

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| MCP3201-BI/P |
| MCP3201-CI/P |
| MCP3202-BI/P |
| MCP3202-CI/P |
| MCP3204-BI/P |
| MCP3204-CI/P |
| MCP3208-BI/P |
| MCP3208-CI/P |
| MCP3301-BI/P |
| MCP3301-CI/P |
| MCP3302-BI/P |
| MCP3302-CI/P |
| MCP3304-BI/P |
| MCP3304-CI/P |
| MCP4011-103E/P |
| MCP4011-202E/P |
| MCP4011-502E/P |
| MCP4011-503E/P |
| MCP41010-E/P |
| MCP41010-I/P |
| MCP41050-E/P |
| MCP41050-I/P |
| MCP41100-E/P |
| MCP41100-I/P |
| MCP4131-103E/P |
| MCP4131-104E/P |
| MCP4131-502E/P |
| MCP4131-503E/P |
| MCP4132-103E/P |
| MCP4132-104E/P |
| MCP4132-502E/P |
| MCP4132-503E/P |
| MCP4141-103E/P |
| MCP4141-104E/P |
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| MCP4141-503E/P |
| MCP4142-103E/P |
| MCP4142-104E/P |
| MCP4142-502E/P |
| MCP4142-503E/P |
| MCP4151-103E/P |
| MCP4151-104E/P |
| MCP4151-502E/P |
| MCP4151-503E/P |
| MCP4152-103E/P |
| MCP4152-104E/P |
| MCP4152-502E/P |
| MCP4152-503E/P |
| MCP4161-103E/P |
| MCP4161-104E/P |
| MCP4161-502E/P |
| MCP4161-503E/P |

| |
|----------------|
| MCP4162-103E/P |
| MCP4162-104E/P |
| MCP4162-502E/P |
| MCP4162-503E/P |
| MCP42010-E/P |
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| MCP42100-I/P |
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| MCP6004-I/P |
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| MCP6022-E/P |
| MCP6022-I/P |
| MCP6023-E/P |
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| MCP6024-E/P |
| MCP6024-I/P |
| MCP602-E/P |
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| MCP6032-E/P |
| MCP6032-E/PAAA |
| MCP603-E/P |
| MCP603-I/P |
| MCP603-I/PBAA |
| MCP6041-E/P |
| MCP6041-I/P |
| MCP6041-I/PAAA |
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| MCP6042-I/P |
| MCP6042-I/PAAA |
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| MCP6044-I/P |
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| MCP6S26-I/P |
| MCP6S28-I/P |
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| MCP6S92-E/P |
| MCP722C-I/SPV03 |
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| MCV14A-I/P |
| MCV28A-I/SP |
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| PIC12C508A-04I/P158 |
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| PIC12CR509A-04/P013 |
| PIC12CR509A-04I/P054 |
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| PIC12F510-I/P030 |

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| PIC12F675-I/P163 |
| PIC12F675-I/PG |
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| PIC16C505-04I/P128 |
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| PIC16C782-I/P |
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| PIC16LF1933-I/SP |
| PIC16LF1936-E/SP |
| PIC16LF1936-I/SP |
| PIC16LF1938-E/SP |
| PIC16LF1938-I/SP |
| PIC16LF720-E/P |
| PIC16LF720-I/P |
| PIC16LF721-E/P |
| PIC16LF721-I/P |
| PIC16LF722A-E/SP |

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| PIC16LF722A-I/SP |
| PIC16LF722-E/SP |
| PIC16LF722-I/SP |
| PIC16LF723A-E/SP |
| PIC16LF723A-I/SP |
| PIC16LF723-E/SP |
| PIC16LF723-I/SP |
| PIC16LF726-E/SP |
| PIC16LF726-I/SP |
| PIC16LF737-I/SP |
| PIC16LF767-I/SP |
| PIC16LF872-I/SP |
| PIC16LF873A-I/SP |
| PIC16LF876-04/SP |
| PIC16LF876-04I/SP |
| PIC16LF876A-I/SP |
| PIC18C242-E/SP |
| PIC18C242-I/SP |
| PIC18F13K22-E/P |
| PIC18F13K22-I/P |
| PIC18F13K50-E/P |
| PIC18F13K50-I/P |
| PIC18F14K22-E/P |
| PIC18F14K22-I/P |
| PIC18F14K50-E/P |
| PIC18F14K50-I/P |
| PIC18F2220-E/SP |
| PIC18F2220-I/SP |
| PIC18F2221-E/SP |
| PIC18F2221-I/SP |
| PIC18F2320-E/SP |
| PIC18F2320-I/SP |
| PIC18F2321-E/SP |
| PIC18F2321-I/SP |
| PIC18F23K20-E/SP |
| PIC18F23K20-I/SP |
| PIC18F23K22-E/SP |
| PIC18F23K22-I/SP |
| PIC18F2420-E/SP |
| PIC18F2420-I/SP |
| PIC18F2423-E/SP |
| PIC18F2423-I/SP |
| PIC18F242-E/SP |
| PIC18F242-I/SP |
| PIC18F2439-I/SP |
| PIC18F2450-I/SP |
| PIC18F2450-I/SPXXX |
| PIC18F2480-E/SP |
| PIC18F2480-I/SP |
| PIC18F24J10-I/SP |
| PIC18F24J10-I/SPXXX |
| PIC18F24J11-I/SP |

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| PIC18F24J50-I/SP |
| PIC18F24K20-E/SP |
| PIC18F24K20-I/SP |
| PIC18F24K22-E/SP |
| PIC18F24K22-I/SP |
| PIC18F2510-E/SP |
| PIC18F2510-I/SP |
| PIC18F2520-E/SP |
| PIC18F2520-I/SP |
| PIC18F2523-E/SP |
| PIC18F2523-I/SP |
| PIC18F252-E/SP |
| PIC18F252-I/SP |
| PIC18F2539-I/SP |
| PIC18F2580-E/SP |
| PIC18F2580-I/SP |
| PIC18F25J10-I/SP |
| PIC18F25J10-I/SPXXX |
| PIC18F25J11-I/SP |
| PIC18F25J50-I/SP |
| PIC18F25K20-E/SP |
| PIC18F25K20-I/SP |
| PIC18F25K22-E/SP |
| PIC18F25K22-I/SP |
| PIC18F25K80-E/SP |
| PIC18F25K80-I/SP |
| PIC18F2620-I/SPC03 |
| PIC18F26J11-I/SP |
| PIC18F26J13-I/SP |
| PIC18F26J50-I/SP |
| PIC18F26J53-I/SP |
| PIC18F26K20-E/SP |
| PIC18F26K20-I/SP |
| PIC18F26K22-E/SP |
| PIC18F26K22-I/SP |
| PIC18F26K80-E/SP |
| PIC18F26K80-I/SP |
| PIC18F27J13-I/SP |
| PIC18F27J53-I/SP |
| PIC18LF13K22-E/P |
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| PIC18LF13K50-I/P |
| PIC18LF14K22-E/P |
| PIC18LF14K22-I/P |
| PIC18LF14K50-I/P |
| PIC18LF2220-I/SP |
| PIC18LF2221-I/SP |
| PIC18LF2320-I/SP |
| PIC18LF2321-I/SP |
| PIC18LF23K22-E/SP |
| PIC18LF23K22-I/SP |
| PIC18LF2420-I/SP |

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| PIC18LF242-I/SP |
| PIC18LF2450-I/SP |
| PIC18LF2480-I/SP |
| PIC18LF24J10-I/SP |
| PIC18LF24J11-I/SP |
| PIC18LF24J50-I/SP |
| PIC18LF24K22-E/SP |
| PIC18LF24K22-I/SP |
| PIC18LF2510-I/SP |
| PIC18LF2520-I/SP |
| PIC18LF2523-I/SP |
| PIC18LF252-I/SP |
| PIC18LF2539-I/SP |
| PIC18LF2580-I/SP |
| PIC18LF25J10-I/SP |
| PIC18LF25J11-I/SP |
| PIC18LF25J50-I/SP |
| PIC18LF25K22-E/SP |
| PIC18LF25K22-I/SP |
| PIC18LF25K80-I/SP |
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| PIC18LF26J13-I/SP |
| PIC18LF26J50-I/SP |
| PIC18LF26J53-I/SP |
| PIC18LF26K22-E/SP |
| PIC18LF26K22-I/SP |
| PIC18LF26K80-I/SP |
| PIC18LF27J13-I/SP |
| PIC18LF27J53-I/SP |
| PIC24F04KA201-I/P |
| PIC24F08KA101-E/P |
| PIC24F08KA101-I/P |
| PIC24F08KA102-E/SP |
| PIC24F08KA102-I/SP |
| PIC24F16KA101-E/P |
| PIC24F16KA101-I/P |
| PIC24F16KA102-E/SP |
| PIC24F16KA102-I/SP |
| PIC24F16KA102-I/SPC03 |
| PIC24F16KA301-I/P |
| PIC24F16KA302-I/SP |
| PIC24F32KA301-I/P |
| PIC24F32KA302-I/SP |
| PIC24FJ16GA002-E/SP |
| PIC24FJ16GA002-I/SP |
| PIC24FJ16MC101-E/P |
| PIC24FJ16MC101-I/P |
| PIC24FJ16MC102-E/SP |
| PIC24FJ16MC102-I/SP |
| PIC24FJ32GA002-E/SP |
| PIC24FJ32GA002-I/SP |

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| PIC24FJ32GA102-I/SP |
| PIC24FJ32GB002-I/SP |
| PIC24FJ48GA002-E/SP |
| PIC24FJ48GA002-I/SP |
| PIC24FJ64GA002-E/SP |
| PIC24FJ64GA002-I/SP |
| PIC24FJ64GA102-I/SP |
| PIC24FJ64GB002-I/SP |
| PIC24FV16KA301-I/P |
| PIC24FV16KA302-I/SP |
| PIC24FV32KA301-I/P |
| PIC24FV32KA302-I/SP |
| PIC24HJ12GP202-E/SP |
| PIC24HJ12GP202-I/SP |
| PIC24HJ32GP202-E/SP |
| PIC24HJ32GP202-I/SP |
| TC1026CEPA |
| TC1029EPA |
| TC1044SCPA |
| TC1044SEPA |
| TC1121CPA |
| TC1121EPA |
| TC1232CPA |
| TC1232EPA |
| TC1410CPA |
| TC1410EPA |
| TC1410NCPA |
| TC1410NEPA |
| TC1411CPA |
| TC1411EPA |
| TC1411NCPA |
| TC1411NEPA |
| TC1411NVPA |
| TC1411VPA |
| TC1412CPA |
| TC1412EPA |
| TC1412NCPA |
| TC1412NEPA |
| TC1413CPA |
| TC1413EPA |
| TC1413NCPA |
| TC1413NEPA |
| TC1426CPA |
| TC1427CPA |
| TC1427CPAG |
| TC1427EPA |
| TC1427VPA |
| TC1428CPA |
| TC1428VPA |
| TC2185-2.8VPA |
| TC2185-5.0VPA |
| TC3400VPA |

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|---------------|
| TC426CPA |
| TC426EPA |
| TC427CPA |
| TC427EPA |
| TC427VPA |
| TC428CPA |
| TC428CPAG |
| TC428CPAROC |
| TC428EPA |
| TC429CPA |
| TC429EPA |
| TC4404CPA |
| TC4404EPA |
| TC4405CPA |
| TC4405EPA |
| TC4420CPA |
| TC4420EPA |
| TC4420VPA |
| TC4426ACPA |
| TC4426AEPA |
| TC4426AVPA |
| TC4426CPA |
| TC4426CPAG |
| TC4426EPA |
| TC4426VPA |
| TC4427ACPA |
| TC4427ACPAAAA |
| TC4427AEPA |
| TC4427AVPA |
| TC4427CPA |
| TC4427CPAG |
| TC4427EPA |
| TC4427EPAG |
| TC4427VPA |
| TC4428ACPA |
| TC4428AEPA |
| TC4428AVPA |
| TC4428CPA |
| TC4428EPA |
| TC4428VPA |
| TC4429CPA |
| TC4429EPA |
| TC4429VPA |
| TC4431CPA |
| TC4431EPA |
| TC4431VPA |
| TC4432CPA |
| TC4432EPA |
| TC4432VPA |
| TC621CCPA |
| TC621CEPA |
| TC621HCPA |

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| TC621HEPA |
| TC622CPA |
| TC622EPA |
| TC622VPA |
| TC623CCPA |
| TC623CEPA |
| TC624CPA |
| TC624EPA |
| TC624VPA |
| TC642BEPA |
| TC646BEPA |
| TC647BEPA |
| TC648BEPA |
| TC649BEPA |
| TC682CPA |
| TC682EPA |
| TC7650CPD |
| TC7660CPA |
| TC7660EPA |
| TC7660HCPA |
| TC7660HEPA |
| TC7660SCPA |
| TC7660SEPA |
| TC7662ACPA |
| TC7662AEPA |
| TC7662BCPA |
| TC7662BEPA |
| TC913ACPA |
| TC913AIPA |
| TC913BCPA |
| TC9400CPD |
| TC9401CPD |
| TC9402CPD |
| TC962CPA |
| TC962EPA |



**QUALIFICATION REPORT
RELIABILITY LABORATORY**

PCN#: CYER-19TJTE192

Date
October 27, 2011

Qualification of the 28L SPDIP with CRM-1064L die attach at ALPH (MMT) assembly site. The 8L, 14L, 16L, & 20L PDIP packages qualify by similarity.

Distribution

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MICROCHIP

PACKAGE QUALIFICATION REPORT

| | |
|-----------------------------------|--|
| Purpose | Qualification of the 28L SPDIP with CRM-1064L die attach at ALPH (MMT) assembly site. The 8L, 14L, 16L, & 20L PDIP packages qualify by similarity. |
| CN | BC112235 |
| QUAL ID | Q11091 |
| Part No. | PIC16C745-I/SP |
| MP CODE | A7BA27M3XA06 |
| Bonding No. | BDM-000042 Rev. A |
| CCB No. | 1081 |
| <u>Package</u> | |
| Type | 28L SPDIP |
| Package size | 300 mils |
| Die thickness | 15 mils |
| Die size | 164.4 x 204.1 mils |
| <u>Lead Frame</u> | |
| Paddle size | 180 x 240 mils |
| Material | CDA194 |
| Surface | Ag |
| Process | Stamp |
| Lead Lock | Yes |
| Part Number | 692-208-IPP |
| <u>Die attach material</u> | |
| Epoxy | CRM-1064L |
| Wire | Au wire |
| Mold Compound | GE800 |
| Plating Composition | Matte Tin |



MICROCHIP PACKAGE QUALIFICATION REPORT

Manufacturing Information

| Assembly Lot No. | Wafer Lot No. | Trace Code |
|------------------|-------------------|------------|
| ALPH122200333 | TMPE212109378.100 | 11351AJ |
| ALPH122200334 | TMPE212109378.100 | 11351AP |
| ALPH122200335 | TMPE212109378.100 | 11351AS |

Result Pass Fail _____

28L SPDIP assembled by MMT (ALPH) pass reliability test per QCI-39000.

Prepared By: _____) Date: October 27, 2011 (Reliability Engineer)

(Mr.Udom Suksansakul)

Approved By: _____) Date: October 27, 2011 (Reliability Manager)

(Mr. Surasit Phurikhup)

PACKAGE QUALIFICATION REPORT

| Test Number (Reference) | Test Condition | Microchip Spec | Qty. (Acc.) | Date in | Date Out | Def/SS. | Result | Remarks |
|----------------------------|---|--------------------|------------------|----------------------|----------------------|--------------|--------------|----------------|
| Electrical Test | Electrical Test: +25°C and 85°C System: J750 | S12/14/16 (PDC) | 693(0) | 09/20/11 | 09/22/11 | 693 | | Good Devices |
| Temp Cycle | Stress Condition: -65°C to +150°C, 500 Cycles System : TABAI ESPEC TSA-70H Inspection: External crack inspection all units under 40X Optical magnification | PI-91020B | | 09/22/11 | 10/03/11 | 231 | | |
| | Electrical Test: + 85°C System: J750 | QCI-33003 | 30(0) | 10/03/11 | 10/03/11 | 0/30 | | |
| | | S12/14/16 (PDC) | 231(0) | 10/03/11 | 10/04/11 | 0/231 | Pass | 77 units / lot |
| UNBIASED-HAST | Bond Strength: Bond Shear (21.10 grams) Wire Pull (> 3 grams) | QCI-91022 | 15 (0) 15 (0) | 10/04/11 10/04/11 | 10/04/11 10/04/11 | 0/15 0/15 | Pass Pass | |
| | Stress Condition: +130°C/85%RH, 96 hrs. System: HAST 6000X | PI-91261B | | 09/23/11 | 09/28/11 | 231 | | |
| | Electrical Test: +25°C System: J750 | S12/14/16 (PDC) | 231(0) | 09/28/11 | 09/28/11 | 0/231 | Pass | 77 units / lot |

PACKAGE QUALIFICATION REPORT

| Test Number (Reference) | Test Condition | Microchip Spec | Qty. (Acc.) | Date in | Date Out | Def/SS. | Result | Remarks |
|--|---|------------------------|-----------------|----------|----------|---------|--------|----------------|
| HAST | Stress Condition: +130°C/85%RH, 96 hrs. System: HAST 6000X | PI-92010B | | 09/27/11 | 10/01/11 | 231 | | |
| | Electrical Test: +25°C and 85°C System: J750 | S12/14/16 (PDC) | 231(0) | 10/01/11 | 10/03/11 | 0/231 | Pass | 77 units / lot |
| High Temperature Storage Life | Stress Condition: Bake 175°C, 504 hrs System: SHEL LAB | PI-92014B S12/14/16 | | 09/22/11 | 10/15/11 | 45 | | |
| | Electrical Test: +25°C and 85°C System: J750 | (PDC) | 45(0) | 10/15/11 | 10/17/11 | 0/45 | Pass | |
| Bond Strength Data Assembly | Bond Shear (21.10 grams) | QCI-91022 | 30 (0) bonds | - | - | 0/30 | Pass | |
| | Wire Pull (> 4 grams) | | 30 (0) wires | - | - | 0/30 | Pass | |