

**Product / Process Change Notification JLIO-7L2VG6**[Home](#)

The information below reflects a change that is being implemented.

Notice Date: [02/26/2009](#)

Product Category: [Mixed Signal Devices; dsPIC; PIC16xxx; PIC17xxx; PIC18xxx](#)

Notification Subject: [CCB#861: QUALIFICATION OF 40L PDIP \(.6000"\) WITH G600 MOLD COMPOUND AT UTL \(NSEB\) ASSEMBLY](#)

Notification Body:

PCN Status:  
[Final Notification](#)

Microchip Part#s Affected (please see the link for these files at the end of this PCN):  
[CCB#861\\_Microchip Catalog Part#s Affected.xls](#)  
[CCB#861\\_Microchip Catalog Part#s Affected.pdf](#)

Description of Change:  
[Change in bill of materials](#)

Pre-Change:  
[Mold compound: EME 6600CS](#)  
[Die attach epoxy: 8390A](#)

Post-Change:  
[Mold compound: G600](#)  
[Die attach epoxy: 8200T](#)

Impacts to Data Sheet:  
[None](#)

Reason for Change:  
[To improve manufacturability](#)

Change Implementation Status:  
[In progress](#)

Estimated Change Implementation Date(s):  
[December 1st, 2008 \(Date Code: 0849\)](#)

[NOTE: Please be advised that during a transition period you may receive parts with either bill of materials, due to existing inventory of the original bill of materials.](#)

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

Attachment(s):

[PCN\\_JL10-7L2VG6\\_40L PDIP\\_NSEB\\_CCB#861\\_Qual Report.pdf](#)

[CCB#861\\_Microchip\\_Catalog\\_Part#s\\_Affected.xls](#)   [CCB#861\\_Microchip\\_Catalog\\_Part#s\\_Affected.pdf](#)





**MICROCHIP**

**QUALIFICATION REPORT  
RELIABILITY LABORATORY**

**Q08185**

**CCB#: 861**

**PCN#: JLIO-7L2VG6**

**Date**

**January 20, 2009**

**Qualification of 40L PDIP (.600 mil) Package  
with G600 Mold Compound and 8200T epoxy  
at NSEB Assembly**

Distribution

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## MICROCHIP PACKAGE QUALIFICATION REPORT

|                                   |   |
|-----------------------------------|---|
| <b>Purpose</b>                    | To qualify G600 mold compound and 8200T epoxy for 40L PDIP (.600 mil) at NSEB assembly. |
| <b>CN</b>                         | BC082697  |
| <b>QUAL ID</b>                    | Q08185  |
| <b>MP CODE</b>                    | DECS97S2XXXX  |
| <b>Part No.</b>                   | PIC18F4685-I/PXXX   |
| <b>Bonding No.</b>                | BDE-000708 Rev. 01 (Engineering bonding)  |
| <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>                   | 177.4 x 227.4 mils  |
| <b><u>Lead Frame</u></b>          |   |
| <b>Paddle size</b>                | 300 x 300 mils  |
| <b>Material</b>                   | CDA194 / Shinko (Singapore)   |
| <b>Surface</b>                    | Ag spot plating   |
| <b>Process</b>                    | Stamped   |
| <b>Lead Lock</b>                  | Yes   |
| <b>Part Number</b>                | FB0047  |
| <b><u>Die attach material</u></b> |   |
| <b>Epoxy</b>                      | 8200T / Ablestik (USA)  |
| <b>Wire</b>                       | Au wire Tanaka (Malaysia)   |
| <b>Mold Compound</b>              | G600 / Sumitomo (Singapore)   |
| <b>Plating Composition</b>        | Matte Tin   |



# MICROCHIP PACKAGE QUALIFICATION REPORT

## Assembly Information

| Lot No.       | WF No.            | Date Code |
|---------------|-------------------|-----------|
| NSEB093200093 | GRSM409072614.200 | 0845T5Q   |
| NSEB093200094 | GRSM409072614.200 | 0845T5R   |
| NSEB093200095 | GRSM409072614.200 | 0845T5S   |

## Result

Pass

Fail

40L PDIP (.600") using (G600 Compound and 8200T Epoxy) assembled by UTL (NSEB) pass reliability test per QCI-39000.

Prepared By: Thinnapol N. Date: January 20, 2009 (Reliability Engineer)

Approved By: Surasit P. Date: January 20, 2009 (Reliability Manager)

# PACKAGE QUALIFICATION REPORT

Qual Report : Q08185

| Test Number<br>(Reference) | Test Condition   | Microchip<br>Spec      | Qty.<br>(Acc.) | Date in  | Date Out | Def/SS. | Result | Remarks                                       |
|----------------------------|--|------------------------|----------------|----------|----------|---------|--------|---|
| <b>Electrical Test</b>     | Electrical Test :+25°C and 85°C<br>System: J750  | S12/14/16<br><br>(PDC) | 693(0)         | 12/02/08 | 12/09/08 | 693     |        | Good Devices                                  |
| <b>Temp Cycle</b>          | <b>Stress Condition:</b><br>-65°C to +150°C, 500 Cycles<br>System : TABAI ESPEC TSA-70H<br>Inspection: External crack inspection all units<br>under 40X Optical magnification<br><br><b>Electrical Test:</b> +85°C<br>System: J750<br><br><b>Bond Strength:</b><br>Bond Shear (12.40 grams)<br>Wire Pull (> 3 grams) | PI-91020B              |                | 12/10/08 | 12/22/08 | 231     |        |   |
|                            |  | QCI-33003              | 30(0)          | 12/22/08 | 12/22/08 | 0/30    |        |   |
|                            |  | S12/14/16<br><br>(PDC) | 231(0)         | 12/22/08 | 12/24/08 | 0/231   | Pass   | 77 units / lot                                |
|                            |  | QCI-91022              | 15 (0)         | 12/24/08 | 12/25/08 | 0/15    | Pass   | Wire pull & bond<br>shear after Temp<br>Cycle |
| <b>Pressure Cooker</b>     | <b>Stress Condition:</b><br>+121°C, 100% RH, 15 PSI, 96 hrs.<br>System: TABAI ESPEC TPC-421  | PI-92013B              |                | 12/10/08 | 12/14/08 | 231     |        |   |
|                            |  | S12/14/16<br><br>(PDC) | 231(0)         | 12/14/08 | 12/18/08 | 0/231   | Pass   | 77 units / lot                                |

# PACKAGE QUALIFICATION REPORT

Qual Report : Q08185

| Test Number<br>(Reference)             | Test Condition  | Microchip<br>Spec      | Qty.<br>(Acc.)                         | Date in  | Date Out | Def/SS. | Result | Remarks                                    |
|--|---|------------------------|--|----------|----------|---------|--------|--|
| <b>HAST</b>                            | <b>Stress Condition:</b><br>+130°C/85%RH, 96 hrs.<br>System: HAST 6000X   | PI-92010B              |  | 12/10/08 | 12/22/08 | 231     |        |  |
|  | <b>Electrical Test:</b> +25°C and 85°C<br>System: J750  | S12/14/16<br><br>(PDC) | 231(0)                                 | 12/22/08 | 12/26/08 | 0/231   | Pass   | 77 units / lot                             |
| <b>Solderability</b>                   | <b>Steam Aging:</b> Temp 93°C,8Hrs<br>System: SAS-3000<br>Solder Dipping: Solder Temp.245°C<br><br>System: ERSA RA 2200D<br>Visual Inspection: External Visual Inspection | QCI-31003              | 22 (0)                                 | 12/10/08 | 12/11/08 | 22      | Pass   |  |
|  |   |                        |  | 12/11/08 | 12/11/08 | 22      |        |  |
|  |   |                        |  | 12/11/08 | 12/11/08 | 0/22    |        |  |
| <b>Bond Strength<br/>Data Assembly</b> | Bond Shear (12.40 grams)<br><br>Wire Pull (> 4 grams)   | QCI-91022              | 30 (0)<br>bonds<br><br>30 (0)<br>wires | -        | -        | 0/30    | Pass   | Wire pull & bond<br>shear data<br>assembly |
|  |   |                        |  | -        | -        | 0/30    | Pass   |  |

## Microchip Catalog Part#s Affected

AY0438-I/P  
AY0438/P  
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-10I/P  
PIC16C64A-20/P  
PIC16C64A-20E/P  
PIC16C64A-20I/P  
PIC16C65A-04/P  
PIC16C65A-04I/P  
PIC16C65A-10/P  
PIC16C65A-10I/P  
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PIC16C65B-20/P  
PIC16C65B-20E/P  
PIC16C65B-20I/P  
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PIC16C65B-E/PPKG  
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PIC16C662-10I/P  
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TC7106IPL  
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TC7107ACPL  
TC7107AIPL  
TC7107ARCPL  
TC7107CPL  
TC7107IPL  
TC7107RCPL  
TC7109ACPL  
TC7109ACPL514  
TC7109CPL  
TC7116ACPL  
TC7116CPL  
TC7117ACPL  
TC7117CPL  
TC7117RCPL  
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