



# Product Change Notification - GBNG-06YWZH104 [\(Convert To PDF\)](#)

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**Date:**

25 May 2018

**Product Category:**

Switching Regulators; Successive Approximation Register (SAR) A/D Converters; Linear Op Amps; Linear Comparators; Linear Selectable Gain Amplifiers; Linear Programmable Gain Amplifiers

**Affected CPNs:****Notification subject:**

CCB 3177 Final Notice: Qualification of MMT as an additional assembly site for selected products of the 120K and 121K wafer technologies available in 8L MSOP package using CuPdAu bond wire.

**Notification text:****PCN Status:**

Final notification.

**PCN Type:**

Manufacturing Change

**Microchip Parts Affected:**

Please open one of the icons found in the Affected CPNs section above.

**NOTE:** For your convenience Microchip includes identical files in two formats (.pdf and .xls)

**Description of Change:**

Qualification of MMT as an additional assembly site for selected products of the 120K and 121K wafer technologies available in 8L MSOP package using palladium coated copper with gold flash (CuPdAu) bond wire.

**Pre Change:**

Assembled at MTAI assembly site.

**Post Change:**

Assembled at MTAI assembly or MMT assembly site.

**Pre and Post Change Summary:**

	<b>Pre Change</b>	<b>Post Change</b>	
<b>Assembly Site</b>	Microchip Technology Thailand - HQ (MTAI)	Microchip Technology Thailand - HQ (MTAI)	Microchip Technology Thailand – Branch (MMT)
<b>Wire material</b>	CuPdAu	CuPdAu	CuPdAu
<b>Die attach material</b>	8390A	8390A	8390A
<b>Molding compound material</b>	G600V	G600V	G600V
<b>Lead frame material</b>	CDA194	CDA194	CDA194

**Impacts to Data Sheet:**

None

**Change Impact:**

None

**Reason for Change:**

To improve productivity by qualifying MMT as an additional assembly site.

**Change Implementation Status:**

In Progress

**Estimated First Ship Date:**

June 25, 2018 (date code: 1826)

NOTE: Please be advised that after the estimated first ship date customers may receive pre and post change parts.

**Time Table Summary:**

Workweek	November 2017					->	May 2018					June 2018			
	44	45	46	47	48		18	19	21	21	22	23	24	25	26
Initial PCN Issue Date					X										
Qual Report Availability									X						
Final PCN Issue Date									X						
Estimated Implementation Date															X

**Method to Identify Change:**

Traceability code

**Qualification Report:**

Please open the attachments included with this PCN labeled as PCN\_#\_Qual Report.

**Revision History:**

**November 28, 2017:** Issued initial notification.

**May 25, 2018:** Issued final notification. Attached the qualification report. Updated the affected CPN list to match with the updated scope. Provided estimated first ship date to be on June 25, 2018.

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\\_GBNG-06YWZH104\\_QUAL\\_REPORT.pdf](#)

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

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GBNG-06YWZH104 - CCB 3177 Final Notice: Qualification of MMT as an additional assembly site for selected products of the 120K and 121K wafer technologies available in 8L MSOP package using CuPdAu bond wire.

<b>Affected Catalog Part Numbers(CPN)</b>
MCP1650R-E/MS
MCP1650RT-E/MS
MCP1650S-E/MS
MCP1650ST-E/MS
MCP1651R-E/MS
MCP1651RT-E/MS
MCP1651S-E/MS
MCP1651ST-E/MS
MCP1652R-E/MS
MCP1652RT-E/MS
MCP1652S-E/MS
MCP1652ST-E/MS
MCP3001-I/MS
MCP3002-I/MS
MCP3201-CI/MS
MCP3201T-CI/MS
MCP3202-CI/MS
MCP3202T-CI/MS
MCP3301-BI/MS
MCP3301-CI/MS
MCP3301T-BI/MS
MCP3301T-CI/MS
MCP6002-E/MS
MCP6002-I/MS
MCP6002T-E/MS
MCP6002T-E/MSHAZ
MCP6002T-I/MS
MCP6021-E/MS
MCP6021T-E/MS
MCP6031-E/MS
MCP6031T-E/MS
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MCP6292-E/MSAAA
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MCP6G01-E/MS
MCP6G01T-E/MS
MCP6G02-E/MS
MCP6G02T-E/MS
MCP6G03-E/MS
MCP6G03T-E/MS
MCP6L02T-E/MS
MCP6L02T-E/MS-HCM
MCP6L1T-E/MS

MCP6L2T-E/MS
MCP6L71T-E/MS
MCP6L72T-E/MS
MCP6L91T-E/MS
MCP6L92T-E/MS
MCP6L92T-E/MSHHH
MCP6S21-I/MS
MCP6S21T-I/MS
MCP6S22-I/MS
MCP6S22T-I/MS
MCP6S91-E/MS
MCP6S91T-E/MS
MCP6S92-E/MS
MCP6S92T-E/MS



**QUALIFICATION REPORT SUMMARY**  
RELIABILITY LABORATORY

**PCN#: GBNG-06YWZH104**

**Date**  
**May 18, 2018**

**Qualification of MMT as an additional assembly site for  
selected products of the 120K and 121K wafer  
technologies available in 8L MSOP package using  
CuPdAu bond wire**





**Purpose** Qualification of MMT as an additional assembly site for selected products of the 120K and 121K wafer technologies available in 8L MSOP package using CuPdAu bond wire

**CN** ES152779  
**QUAL ID** Q18005  
**MP CODE** A7BV84A3XA00  
**Part No.** MCP6282-E/MS  
**Bonding No.** BDM-001547 Rev. A  
**CCB NO.:** 3177

**Package**

**Type** 8L MSOP  
**Package size** 3x3 mm  
**Die thickness** 8 mils  
**Die size** 43.50 x 58.00 mils

**Lead Frame**

**Paddle size** 68 x 94 mils  
**Material** CDA194  
**Surface** Bare Cu  
**Process** Stamped  
**Lead Lock** No  
**Part Number** 10100838  
**Treatment** BOT

**Material**

**Epoxy** 8390A  
**Wire** CuPdAu  
**Mold Compound** G600V  
**Plating Composition** Matte Tin



**MICROCHIP**

**Manufacturing Information**

<b>Assembly Lot No</b>	<b>Wafer Lot No.</b>	<b>Date Code</b>
MMT-184200112.000	TMPE218258400.120	1802K05
MMT-184200196.000	TMPE218258400.120	1802KH7
MMT-184200197.000	TMPE218258400.120	1802KK7

**Result**

**Pass**

**Fail**

8L MSOP (3x3mm) assembled by MMT pass reliability test per QCI-39000. This package was qualified the Moisture/Reflow Sensitivity Classification Level 1 at 260°C reflow temperature per IPC/JEDEC J-STD-020D standard.

# PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS	Result	Remarks
<b>Moisture/Reflow Sensitivity Classification Test (At MSL Level 1)</b>	85°C/ 85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH 3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243 (IPC/JEDEC J-STD-020D)	IPC/JEDEC J-STD-020D	135	0/135	Pass	
<b><u>Precondition Prior Perform Reliability Tests</u> (At MSL Level 1)</b>	Electrical Test:+25°C and 125°C System: ETS300  Bake 150°C, 24 hrs System: CHINEE  85°C/85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH  3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243  Electrical Test :+25°C and 125°C System: ETS300	JESD22A113	693(0)	693  693  693  0/693	      Pass	Good Devices

# PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
<b>Temp Cycle</b>	<b>Stress Condition:</b> -65°C to +150°C, 500 Cycles System: TABAI ESPEC TSA-70H  <b>Electrical Test:</b> +125°C System: ETS300	JESD22A104	231(0)	231 231(0)	Pass	Parts had been pre-conditioned at 260°C  77 units / lot
	<b>Bond Strength:</b> Wire Pull (> 2.5 grams)  Bond Shear (>15.00 grams)	15 (0)  15 (0)	15 (0)  15 (0)	Pass  Pass		
<b>UNBIASEDHAST</b>	<b>Stress Condition:</b> +130°C/85%RH, 96 hrs. System: HAST 6000X  <b>Electrical Test:</b> +25°C System: ETS300	JESD22-A118	231(0)	231 0/231	Pass	Parts had been pre-conditioned at 260°C  77 units / lot
<b>HAST</b>	<b>Stress Condition:</b> +130°C/85%RH,96hrs. <b>Bias Volt:</b> 5.0 Volts System: HAST 6000X  <b>Electrical Test:</b> +25°C and 125°C System: ETS300	JESD22-A110	231(0)	231 0/231	Pass	Parts had been pre-conditioned at 260°C  77 units / lot

# PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
<b>High Temperature Storage Life</b>	<b>Stress Condition:</b> Bake 175°C, 504 hrs System: SHEL LAB  <b>Electrical Test</b> : +25°C and 125°C System: ETS300	JESD22A103	45(0)	45  0/45	Pass	45 units
<b>Solderability Temp 215°C</b>	<b>Steam Aging:</b> Temp 93°C,8Hrs System: SAS-3000 Solder Dipping: Solder Temp.215°C Solder material: SnPb Sn63,Pb37 System: ERSA RA 2200D Visual Inspection: External Visual Inspection	JESD22B-102E	22 (0)	22  22  0/22	Pass	
<b>Solderability Temp 245°C</b>	<b>Steam Aging:</b> Temp 93°C,8Hrs System: SAS-3000 Solder Dipping:Solder Temp.245°C Solder material:Pb Free Sn 95.5Ag3.9Cu0.6 System: ERSA RA 2200D Visual Inspection: External Visual Inspection	JESD22B-102E	22 (0)	22  22  0/22	Pass	
<b>Physical Dimensions</b>	Physical Dimension, 10 units from each lot	JESD22-B100/B108	30(0) Units	0/30	Pass	
<b>Bond Strength</b>	Wire Pull (> 2.5 grams)	M2011	30 (0) Wires	0/30	Pass	
<b>Data Assembly</b>	Bond Shear (>15.00 grams)	JESD22B116	30 (0) bonds	0/30	Pass	