

**Product Change Notification - GBNG-23KQCL340**


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**Date:**

12 Nov 2018

**Product Category:**

8-bit Microcontrollers

**Affected CPNs:**

**Notification subject:**

CCB 3600, 3600.001-3600.003 Initial Notice: Qualification of palladium coated copper with gold flash (CuPdAu) bond wire in selected Atmel products of the 35.4K, 35.5K and 35.8K wafer technologies available in 40L PDIP, 20L PDIP, 8L PDIP and 28L SPDIP packages.

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

Initial 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 palladium coated copper with gold flash (CuPdAu) bond wire in selected Atmel products of the 35.4K, 35.5K and 35.8K wafer technologies available in 40L PDIP, 20L PDIP, 8L PDIP and 28L SPDIP packages.

**Pre Change:**

Using gold (Au) bond wire.

**Post Change:**

Using palladium coated copper with gold flash (CuPdAu) bond wire.

**Pre and Post Change Summary:**

	<b>Pre Change</b>	<b>Post Change</b>
<b>Assembly Site</b>	Microchip Technology Thailand (Branch) (MMT)	Microchip Technology Thailand (Branch) (MMT)
<b>Wire material</b>	Au	CuPdAu
<b>Die attach material</b>	CRM-1064L	CRM-1064L
<b>Molding compound material</b>	GE800	GE800
<b>Lead frame material</b>	CDA194	CDA194

**Impacts to Data Sheet:**

None

**Change Impact:**

None

**Reason for Change:**

To improve on-time delivery performance by qualifying palladium coated copper with gold flash (CuPdAu) bond wire.

**Change Implementation Status:**

In Progress



**Estimated Qualification Completion Date:**

December 2018

Note: Please be advised the qualification completion times may be extended because of unforeseen business conditions however implementation will not occur until after qualification has completed and a final PCN has been issued. The final PCN will include the qualification report and estimated first ship date. Also note that after the estimated first ship date guided in the final PCN customers may receive pre and post change parts.

**Time Table Summary:**

	November 2018					December 2018			
Workweek	44	45	46	47	48	49	50	51	52
Initial PCN Issue Date			X						
Qual Report Availability									X
Final PCN Issue Date									X

**Method to Identify Change:**

Traceability code

**Qualification Plan:**

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

**Revision History:**

**November 12, 2018:** Issued initial notification.

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-23KQCL340\\_Qual Plan.pdf](#)

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

**Terms and Conditions:**

If you wish to receive Microchip PCNs via email please register for our PCN email service at our [PCN home page](#) select register then fill in the required fields. You will find instructions about registering for Microchips PCN email service in the [PCN FAQ](#) section.

If you wish to change your PCN profile, including opt out, please go to the [PCN home page](#) select login and sign into your myMicrochip account. Select a profile option from the left navigation bar and make the applicable selections.

Affected Catalog Part Numbers (CPN)

AT89LP2052-20PU  
AT89LP4052-20PU  
AT89S2051-24PU  
AT89S4051-24PU  
ATMEGA1284P-PU  
ATMEGA1284-PU  
ATMEGA328P-PU  
ATTINY2313-20PU  
ATTINY2313A-PU  
ATTINY2313V-10PU  
ATTINY26-16PU  
ATTINY261A-PU  
ATTINY26L-8PU  
ATTINY4313-PU  
ATTINY461-20PU  
ATTINY461A-PU  
ATTINY461V-10PU  
ATTINY861-20PU  
ATTINY861A-PU  
ATTINY861V-10PU



**MICROCHIP**

## **QUALIFICATION PLAN SUMMARY**

**PCN #: GBNG-23KQCL340**

**Date**

**Oct. 18, 2018**

**Qualification of palladium coated copper with gold flash (CuPdAu) bond wire in selected Atmel products of the 35.4K, 35.5K and 35.8K wafer technologies available in 40L PDIP package. The selected products available in 20L PDIP, 8L PDIP and 28L SPDIP packages will qualify by similarity (QBS).**

**Purpose: Qualification of palladium coated copper with gold flash (CuPdAu) bond wire in selected Atmel products of the 35.4K, 35.5K and 35.8K wafer technologies available in 40L PDIP package. The selected products available in 20L PDIP, 8L PDIP and 28L SPDIP packages will qualify by similarity (QBS).**

**CCB No. 3600**

		<b>Qualification Report</b>
<b><u>Misc.</u></b>	<b>Assembly site</b>	MMT
	<b>BD Number</b>	BDM-001967/A
	<b>MP Code (MPC)</b>	354527S2XA01
	<b>Part Number (CPN)</b>	ATMEGA1284P-PU
<b><u>Lead-Frame</u></b>	<b>Paddle size</b>	260x266 mils
	<b>Material</b>	CDA194
	<b>Surface</b>	Ag Spot Plated
	<b>Treatment</b>	None
	<b>Process</b>	Stamped
	<b>Lead-lock</b>	Yes
	<b>Part Number</b>	10104004
	<b>Lead Plating</b>	Matte TIn
<b><u>Bond Wire</u></b>	<b>Material</b>	CuPdAu
<b><u>Die Attach</u></b>	<b>Part Number</b>	CRM-1064L
	<b>Conductive</b>	Yes
<b><u>MC</u></b>	<b>Part Number</b>	GE800
<b><u>PKG</u></b>	<b>PKG Type</b>	PDIP
	<b>Pin/Ball Count</b>	40
	<b>PKG width/size</b>	600 mils
<b><u>Die</u></b>	<b>Die Thickness</b>	15 mils
	<b>Die Size</b>	164.5x197.5 mils
	<b>Fab Process (site)</b>	35.4K/MCSO

Test Name	Conditions	Sample Size	Min. Qty of Spares per Lot (should be properly marked)	Qty of Lots	Total Units	Fail Accept Qty	Est. Dur. Days	Test Site	Special Instructions
Wire Bond Pull - WBP	Mil. Std. 883-2011	5	0	3	15	0 fails after TC	5	MMT/MPHL	30 bonds from a minimum of 5 devices.
Wire Bond Shear - WBS	CDF-AEC-Q100-001	5	0	3	15		5	MMT/MPHL	30 bonds from a minimum of 5 devices.
Wire Sweep		5	0	3	15	0		MMT	Required for any reduction in wire bond thickness.
External Visual	Mil. Std. 883-2009/2010	All devices prior to submission for qualification testing	0	3	ALL	0	5	MMT/MPHL	
HTSL (High Temp Storage Life)	+175 C for 504 hours. Electrical test pre and post stress at +25°C and hot temp.	45	5	1	50	0	25	MPHL	
HAST	+130°C/85% RH for 96 hours. Electrical test pre and post stress at +25°C and hot temp.	77	5	3	246	0	10	MPHL	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.
Unbiased HAST	+130°C/85% RH for 96 hrs. Electrical test pre and post stress at +25°C.	77	5	3	246	0	10	MPHL	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	MPHL	Spares should be properly identified. Use the parts which have gone through Pre-conditioning.