



## Product Change Notification - GBNG-10IBJX960

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**Date:**

11 Jun 2019

**Product Category:**

16-Bit - Microcontrollers and Digital Signal Controllers; 32-bit Microcontrollers; 8-bit Microcontrollers

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

CCB 3300.002 Final Notice: Qualification of palladium coated copper with gold flash (CuPdAu) bond wire in selected products of the 0.18 um and 0.25 um TSMC wafer technologies available in 100L TQFP (12x12x1mm) package at MTAI assembly site.

**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 palladium coated copper with gold flash (CuPdAu) bond wire in selected products of the 0.18 um and 0.25 um TSMC wafer technologies available in 100L TQFP (12x12x1mm) package at MTAI assembly site.

**Pre Change:**

Using palladium coated copper (PdCu) bond wire.

**Post Change:**

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

**Pre and Post Change Summary:**

	Pre Change	Post Change
Assembly Site	Microchip Technology Thailand HQ (MTAI)	Microchip Technology Thailand HQ (MTAI)
Wire material	PdCu	CuPdAu
Die attach material	3280	3280
Molding compound material	G700HA	G700HA
Lead frame material	C7025	C7025

**Impacts to Data Sheet:**

None

**Change Impact:**

None

**Reason for Change:**

To improve manufacturability by qualifying CuPdAu bond wire at MTAI assembly site.

**Change Implementation Status:**

In Progress

**Estimated First Ship Date:**

July 11, 2019 (date code: 1928)

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

**Time Table Summary:**

	June 2019					July 2019				
Workweek	22	23	24	25	26	27	28	29	30	31



Final PCN Issue Date			X							
Qual Report Availability			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:**

**June 11, 2019:** Issued final notification. Attached is the qualification report. Estimated first ship date(EFSD) is on July 11 2019.

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-10IBJX960\\_Qual\\_Report.pdf](#)

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

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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)

PIC24FJ128GB210-I/PT  
PIC24FJ192GA110-E/PT  
PIC24FJ192GA110-I/PT  
PIC24FJ192GB110-I/PT  
PIC24FJ256DA110-I/PT  
PIC24FJ256DA110T-I/PT  
PIC24FJ256DA210-I/PT  
PIC24FJ256DA210T-I/PT  
PIC24FJ256GA110-E/PT  
PIC24FJ256GA110-I/PT  
PIC24FJ256GA110T-I/PT  
PIC24FJ256GA110T-I/PT024  
PIC24FJ256GA110T-I/PT025  
PIC24FJ256GA110T-I/PTC33  
PIC24FJ256GB110-I/PT  
PIC24FJ256GB110T-I/PT  
PIC24FJ256GB110T-I/PT025  
PIC24FJ256GB210-I/PT  
PIC24FJ256GB210T-I/PT  
PIC24FJ64GA010-I/PT  
PIC24FJ64GA010-I/PTC04  
PIC24FJ64GB110-I/PT  
PIC24FJ96GA010-I/PT  
PIC24FJ96GA010T-I/PT  
PIC24HJ128GP210A-E/PT  
PIC24HJ128GP210A-I/PT  
PIC24HJ128GP210AT-E/PT  
PIC24HJ128GP210AT-I/PT  
PIC24HJ128GP210-I/PT  
PIC24HJ128GP310A-E/PT  
PIC24HJ128GP310A-I/PT  
PIC24HJ128GP310AT-E/PT  
PIC24HJ128GP310AT-I/PT  
PIC24HJ128GP310-I/PT  
PIC24HJ128GP510A-E/PT  
PIC24HJ128GP510A-H/PT  
PIC24HJ128GP510A-I/PT  
PIC24HJ128GP510A-I/PT042  
PIC24HJ128GP510AT-E/PT  
PIC24HJ128GP510AT-H/PT  
PIC24HJ128GP510AT-I/PT  
PIC24HJ128GP510AT-I/PT042  
PIC24HJ128GP510-I/PT  
PIC24HJ256GP210A-E/PT  
PIC24HJ256GP210A-I/PT  
PIC24HJ256GP210-I/PT

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GBNG-10IBJX960 - CCB 3300.002 Final Notice: Qualification of palladium coated copper with gold flash (CuPdAu) bond wire in selected products of the 0.18 um and 0.25 um TSMC wafer technologies available in 100L TQFP (12x12x1mm) package at MTAI assembly site.

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PIC24HJ256GP210I-I/PT  
PIC24HJ256GP610A-E/PT  
PIC24HJ256GP610A-H/PT  
PIC24HJ256GP610A-I/PT  
PIC24HJ256GP610AT-I/PT  
PIC24HJ256GP610-I/PT  
PIC24HJ256GP610T-I/PT  
PIC24HJ64GP210A-E/PT  
PIC24HJ64GP210A-I/PT  
PIC24HJ64GP210AT-E/PT  
PIC24HJ64GP210AT-I/PT  
PIC24HJ64GP210-I/PT  
PIC24HJ64GP510A-E/PT  
PIC24HJ64GP510A-I/PT  
PIC24HJ64GP510AT-E/PT  
PIC24HJ64GP510AT-I/PT  
PIC24HJ64GP510-I/PT  
PIC24HJ64GP510T-I/PT  
PIC32MX320F128L-80I/PT  
PIC32MX320F128L-80V/PT  
PIC32MX320F128LT-80I/PT  
PIC32MX320F128LT-80V/PT  
PIC32MX340F128L-80I/PT  
PIC32MX340F128L-80V/PT  
PIC32MX340F128LT-80I/PT  
PIC32MX340F128LT-80V/PT  
PIC32MX360F256L-80I/PT  
PIC32MX360F256L-80I/PT023  
PIC32MX360F256L-80V/PT  
PIC32MX360F256LT-80I/PT  
PIC32MX360F256LT-80V/PT  
PIC32MX360F512L-80I/PT  
PIC32MX360F512L-80V/PT  
PIC32MX360F512LT-80I/PT  
PIC32MX360F512LT-80V/PT  
PIC32MX440F128L-80I/PT  
PIC32MX440F128L-80V/PT  
PIC32MX440F128LT-80I/PT  
PIC32MX440F128LT-80V/PT  
PIC32MX460F256L-80I/PT  
PIC32MX460F256L-80V/PT  
PIC32MX460F256LT-80I/PT  
PIC32MX460F256LT-80V/PT  
PIC32MX460F512L-80I/PT  
PIC32MX460F512L-80I/PTB21  
PIC32MX460F512L-80V/PT  
PIC32MX460F512LT-80I/PT  
PIC32MX460F512LT-80I/PT024  
PIC32MX460F512LT-80I/PT025

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PIC32MX460F512LT-80I/PT026

PIC32MX460F512LT-80I/PTB21

PIC32MX460F512LT-80V/PT

PIC32MX534F064L-I/PT

PIC32MX534F064LT-I/PT

PIC32MX534F064LT-V/PT

PIC32MX534F064L-V/PT

PIC32MX564F064L-I/PT

PIC32MX564F064LT-I/PT

PIC32MX564F064LT-V/PT

PIC32MX564F064L-V/PT

PIC32MX564F128L-I/PT

PIC32MX564F128LT-I/PT

PIC32MX564F128LT-V/PT

PIC32MX564F128L-V/PT

PIC32MX575F256L-80I/PT

PIC32MX575F256L-80V/PT

PIC32MX575F256LT-80I/PT

PIC32MX575F256LT-80V/PT

PIC32MX575F512L-80I/PT

PIC32MX575F512L-80I/PT024

PIC32MX575F512L-80I/PT025

PIC32MX575F512L-80I/PTC21

PIC32MX575F512L-80V/PT

PIC32MX575F512L-80V/PTC22

PIC32MX575F512LT-80I/PT

PIC32MX575F512LT-80I/PT024

PIC32MX575F512LT-80I/PT025

PIC32MX575F512LT-80V/PT

PIC32MX575F512LT-80V/PTC22

PIC32MX664F064L-I/PT

PIC32MX664F064LT-I/PT

PIC32MX664F064LT-V/PT

PIC32MX664F064L-V/PT

PIC32MX664F128L-I/PT

PIC32MX664F128LT-I/PT

PIC32MX664F128LT-V/PT

PIC32MX664F128L-V/PT

PIC32MX675F256L-80I/PT

PIC32MX675F256L-80V/PT

PIC32MX675F256LT-80I/PT

PIC32MX675F256LT-80V/PT

PIC32MX675F512L-80I/PT

PIC32MX675F512L-80V/PT

PIC32MX675F512LT-80I/PT

PIC32MX675F512LT-80V/PT

PIC32MX695F512L-80I/PT

PIC32MX695F512L-80I/PT020

PIC32MX695F512L-80I/PT021

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PIC32MX695F512L-80I/PT023  
PIC32MX695F512L-80I/PTD21  
PIC32MX695F512L-80I/PTD22  
PIC32MX695F512L-80V/PT  
PIC32MX695F512LT-80I/PT  
PIC32MX695F512LT-80I/PTD21  
PIC32MX695F512LT-80I/PTD22  
PIC32MX695F512LT-80V/PT  
PIC32MX764F128L-I/PT  
PIC32MX764F128LT-I/PT  
PIC32MX764F128LT-V/PT  
PIC32MX764F128L-V/PT  
PIC32MX775F256L-80I/PT  
PIC32MX775F256L-80V/PT  
PIC32MX775F256LT-80I/PT  
DSPIC33EP256MU810-E/PT  
DSPIC33EP256MU810-I/PT  
DSPIC33EP256MU810T-E/PT  
DSPIC33EP256MU810T-I/PT  
DSPIC33EP256MU810T-I/PTC02  
DSPIC33EP512MU810-E/PT  
DSPIC33EP512MU810-E/PTC03  
DSPIC33EP512MU810-I/PT  
DSPIC33EP512MU810T-E/PT  
DSPIC33EP512MU810T-I/PT  
DSPIC33FJ128GP310A-E/PT  
DSPIC33FJ128GP310A-I/PT  
DSPIC33FJ128GP310AT-E/PT  
DSPIC33FJ128GP310AT-I/PT  
DSPIC33FJ128GP310-I/PT  
DSPIC33FJ128GP710A-E/PT  
DSPIC33FJ128GP710A-H/PT  
DSPIC33FJ128GP710A-I/PT  
DSPIC33FJ128GP710AT-E/PT  
DSPIC33FJ128GP710AT-H/PT  
DSPIC33FJ128GP710AT-I/PT  
DSPIC33FJ128GP710AT-I/PTB21  
DSPIC33FJ128GP710-I/PT  
DSPIC33FJ128MC510A-E/PT  
DSPIC33FJ128MC510A-I/PT  
DSPIC33FJ128MC510A-I/PTC31  
DSPIC33FJ128MC510AT-E/PT  
DSPIC33FJ128MC510AT-I/PT  
DSPIC33FJ128MC510AT-I/PTC27  
DSPIC33FJ128MC510AT-I/PTC30  
DSPIC33FJ128MC510-I/PT  
DSPIC33FJ128MC510-I/PTC21  
DSPIC33FJ128MC510-I/PTC22  
DSPIC33FJ128MC510T-I/PTC21

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DSPIC33FJ128MC510T-I/PTC22

DSPIC33FJ128MC710A-E/PT

DSPIC33FJ128MC710A-H/PT

DSPIC33FJ128MC710A-I/PT

DSPIC33FJ128MC710AT-E/PT

DSPIC33FJ128MC710AT-H/PT

DSPIC33FJ128MC710AT-I/PT

DSPIC33FJ128MC710-I/PT

DSPIC33FJ256GP510A-I/PT

DSPIC33FJ256GP510-I/PT

DSPIC33FJ256GP710A-E/PT

DSPIC33FJ256GP710A-H/PT

DSPIC33FJ256GP710A-I/PT

DSPIC33FJ256GP710AT-E/PT

DSPIC33FJ256GP710AT-I/PT

DSPIC33FJ256GP710-I/PT

DSPIC33FJ256GP710-I/PTB21

DSPIC33FJ256GP710T-I/PT

DSPIC33FJ256GP710T-I/PTB21

DSPIC33FJ256MC510A-E/PT

DSPIC33FJ256MC510A-I/PT

DSPIC33FJ256MC510AT-I/PT

DSPIC33FJ256MC510-I/PT

DSPIC33FJ256MC510T-I/PT

DSPIC33FJ256MC710A-E/PT

DSPIC33FJ256MC710A-H/PT

DSPIC33FJ256MC710A-I/PT

DSPIC33FJ256MC710AT-E/PT

DSPIC33FJ256MC710AT-I/PT

DSPIC33FJ256MC710-I/PT

DSPIC33FJ256MC710T-I/PT

DSPIC33FJ32GS610-50I/PT

DSPIC33FJ32GS610-E/PT

DSPIC33FJ32GS610-I/PT

DSPIC33FJ32GS610T-50I/PT

DSPIC33FJ64GP310A-E/PT

DSPIC33FJ64GP310A-I/PT

DSPIC33FJ64GP310AT-E/PT

DSPIC33FJ64GP310AT-I/PT

DSPIC33FJ64GP310-I/PT

DSPIC33FJ64GP710A-E/PT

DSPIC33FJ64GP710A-I/PT

DSPIC33FJ64GP710AT-E/PT

DSPIC33FJ64GP710AT-I/PT

DSPIC33FJ64GP710-I/PT

DSPIC33FJ64GS610-50I/PT

DSPIC33FJ64GS610-E/PT

DSPIC33FJ64GS610-I/PT

DSPIC33FJ64GS610T-50I/PT

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DSPIC33FJ64MC510A-E/PT

DSPIC33FJ64MC510A-I/PT

DSPIC33FJ64MC510AT-E/PT

DSPIC33FJ64MC510AT-I/PT

DSPIC33FJ64MC510-I/PT

DSPIC33FJ64MC710A-E/PT

DSPIC33FJ64MC710A-I/PT

DSPIC33FJ64MC710AT-E/PT

DSPIC33FJ64MC710AT-I/PT

DSPIC33FJ64MC710-I/PT

IC164035-2X

MTR1202-I/PT

PIC18F96J60-I/PT

PIC18F96J65-I/PT

PIC18F97J60-I/PT

PIC18F97J60T-I/PT

PIC24EP256GU810-E/PT

PIC24EP256GU810-I/PT

PIC24EP256GU810T-E/PT

PIC24EP256GU810T-I/PT

PIC24EP512GU810-E/PT

PIC24EP512GU810-I/PT

PIC24EP512GU810T-E/PT

PIC24EP512GU810T-I/PT

PIC24FJ128DA110-I/PT

PIC24FJ128DA210-I/PT

PIC24FJ128GA010-I/PT

PIC24FJ128GA010T-I/PT

PIC24FJ128GA110-E/PT

PIC24FJ128GA110-I/PT

PIC24FJ128GB110-I/PT

PIC32MX775F256LT-80V/PT

PIC32MX775F512L-80I/PT

PIC32MX775F512L-80V/PT

PIC32MX775F512LT-80I/PT

PIC32MX775F512LT-80V/PT

PIC32MX795F512L-80I/PT

PIC32MX795F512L-80I/PTE22

PIC32MX795F512L-80V/PT

PIC32MX795F512LT-80I/PT

PIC32MX795F512LT-80I/PTE21

PIC32MX795F512LT-80I/PTE22

PIC32MX795F512LT-80V/PT





**MICROCHIP**

# **QUALIFICATION REPORT SUMMARY**

## **RELIABILITY LABORATORY**

**PCN #: GBNG-10IBJX960**

**Date**

**Nov 01,2018**

**Qualification of palladium coated copper with gold flash (CuPdAu) bond wire in selected products of the 0.18 um TSMC wafer technology available in 100L TQFP (12x12x1mm) package at MTAI assembly site. The selected products of the 0.25 um TSMC wafer technology will qualify by similarity.**



## MICROCHIP PACKAGE QUALIFICATION REPORT

**Purpose:** Qualification of palladium coated copper with gold flash (CuPdAu) bond wire in selected products of the 0.18 um TSMC wafer technology available in 100L TQFP (12x12x1mm) package at MTAI assembly site. The selected products of the 0.25 um TSMC wafer technology will qualify by similarity.

<b>CCB No.</b>	3300 and 3300.002
<b>CN</b>	ES221251
<b>QUAL ID</b>	Q18129 Rev. A
<b>MP CODE</b>	TRAE19V7XAB4
<b>Part No.</b>	PIC32MX350F256L-V/PT
<b>Bonding No.</b>	BDE-004919 REV: 02
<b><u>Package</u></b>	
<b>Type</b>	100L TQFP
<b>Package size</b>	12 x 12 x 1 mm
<b>Die thickness</b>	11 mils
<b>Die size</b>	132.1 x 197.3 mils
<b><u>Lead Frame</u></b>	
<b>Paddle size</b>	240 x 240 mils
<b>Material</b>	C7025
<b>Surface</b>	Bare Cu on Paddle
<b>Process</b>	Stamped
<b>Lead Lock</b>	No
<b>Part Number</b>	10110002
<b>Treatment</b>	Roughening
<b><u>Material</u></b>	
<b>Epoxy</b>	3280
<b>Wire</b>	CuPdAu
<b>Mold Compound</b>	G700HA
<b>Plating Composition</b>	Matte Tin



## MICROCHIP PACKAGE QUALIFICATION REPORT

### Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
MTAI191502991.000	TC11918374924.000	1828MJK
MTAI191502992.000	TC11918374924.120	1828MJM
MTAI191504051.000	TC11918374924.120	1828TYW

### Result

Pass

Fail

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100L TQFP assembled by MTAI 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-020E 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-020E)	IPC/JEDEC C J-STD-020E	135	0/135	Pass	
<b>Precondition Prior Perform Reliability Tests (At MSL Level 1)</b>	<b>Electrical Test</b> :+25°C,105°C and -40°C System: J750  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  <b>Electrical Test</b> :+25°C and 105°C System: J750	JESD22-A113	693(0)	693  693  693  693	          Pass	Good Devices
<b>Temp Cycle</b>	<b>Stress Condition:</b> -65°C to +150°C, 500 Cycles System : TABAI ESPEC TSA-70H <b>Electrical Test:</b> + 105°C System: J750  <b>Stress Condition:</b> -65°C to +150°C, 1000 Cycles System : TABAI ESPEC TSA-70H  <b>Electrical Test:</b> + 105°C System: J750  <b>Bond Strength:</b> Wire Pull (> 2.5 grams) Bond Shear (>15.00 grams)	JESD22-A104	  231(0)  231(0)  5(0) Units 15 (0)	231  0/231  231  0/231  0/5  0/15	  Pass    Pass  Pass  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>UNBIASED-HAST</b>	<b>Stress Condition:</b> +130°C/85%RH, 96 hrs. System: HAST 6000X	JESD22-A118		231		Parts had been pre-conditioned at 260°C
	<b>Electrical Test:</b> +25°C System: J750		231(0)	0/231	Pass	77 units / lot
	<b>Stress Condition:</b> +130°C/85%RH, 192 hrs. System: HAST 6000X <b>Electrical Test:</b> + 25°C System J750		231(0)	0/231	Pass	
<b>HAST</b>	<b>Stress Condition:</b> +130°C/85%RH, 96 hrs. <b>Bias Volt:</b> 3.6,1.98 Volts System: HAST 6000X	JESD22-A110		231		Parts had been pre-conditioned at 260°C 77 units / lot
	<b>Electrical Test:</b> + 25°C and 105°C System: J750		231(0)	0/231	Pass	
	<b>Stress Condition:</b> +130°C/85%RH,192 hrs. <b>Bias Volt:</b> 3.6,1.98 Volts System: HAST 6000X <b>Electrical Test:</b> + 25°C and 105°C System: J750		231(0)	0/231	Pass	
<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 105°C System: J750	JESD22-A103		45		45 units
<b>Bond Strength Data Assembly</b>	Wire Pull (> 2.5 grams)	M2011	30 (0) Wires	0/30	Pass	
	Bond Shear (>15.00 grams)	JESD22-B116	30 (0) bonds	0/30	Pass	