



## Product Change Notification - KSRA-04FJDK272

---

**Date:**

18 Oct 2018

**Product Category:**

8-bit Microcontrollers

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

CCB 2937 Final Notice: Qualification of palladium coated copper with gold flash (CuPdAu) bond wire in selected products of the 200K wafer technology available in 28L QFN-S package at NSEB 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 200K wafer technology available in 28L QFN-S package at NSEB assembly site

**Pre Change:**

Using gold (Au) bond wire, 8600 die attach and G700LTD mold compound material.

**Post Change:**

Using palladium coated copper with gold flash (CuPdAu) bond wire, 8600 die attach and G700LTD mold compound material.

**Pre and Post Change Summary:**

	Pre Change	Post Change
Assembly Site	NSEB Assembly Site	NSEB Assembly Site
Wire material	Au Wire	CuPdAu Wire
Die attach material	8600	8600
Molding compound material	G700LTD	G700LTD
Lead frame material	C194	C194

**Impacts to Data Sheet:**

None

**Change Impact:**

None

**Reason for Change:**

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

**Change Implementation Status:**

In Progress

**Estimated First Ship Date:**

November 18, 2018 (date code: 1847)

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



post change parts.

**Time Table Summary:**

Workweek	May 2017					-->	October 2018				November 2018			
	18	19	20	21	22		40	41	42	43	44	45	46	47
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:**

**May 09, 2017:** Issued initial notification.

**October 18, 2018:** Issued final notification. Attached the Qualification Report. Revised the affected parts list. Provided estimated first ship date on November 18, 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\\_KSRA-04FJDK272\\_Qual\\_Report.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)

PIC18F25K80-E/MM  
PIC18F25K80-E/MMC01  
PIC18F25K80-H/MM  
PIC18F25K80-I/MM  
PIC18F25K80-I/MM030  
PIC18F25K80-I/MM031  
PIC18F25K80-I/MM032  
PIC18F25K80-I/MMC04  
PIC18F25K80T-E/MM  
PIC18F25K80T-E/MMC01  
PIC18F25K80T-E/MMCUI  
PIC18F25K80T-H/MM  
PIC18F25K80T-I/MM  
PIC18F25K80T-I/MM030  
PIC18F25K80T-I/MM031  
PIC18F25K80T-I/MM032  
PIC18F25K80T-I/MMC04  
PIC18F26K80-E/MM  
PIC18F26K80-H/MM  
PIC18F26K80-I/MM  
PIC18F26K80T-E/MM  
PIC18F26K80T-I/MM  
PIC18F26K80T-I/MM023  
PIC18F26K80T-I/MM025  
PIC18LF25K80-I/MM  
PIC18LF25K80T-I/MM  
PIC18LF26K80-I/MM  
PIC18LF26K80-I/MMC01  
PIC18LF26K80T-I/MM  
PIC18LF26K80T-I/MMC01



**MICROCHIP**

**QUALIFICATION REPORT SUMMARY**  
RELIABILITY LABORATORY

**PCN #: KSRA-04FJDK272**

**Date:**  
**September 13,2018**

**Qualification of palladium coated copper with gold flash  
(CuPdAu) bond wire in selected products of the 200K  
wafer technology available in 28L QFN-S package at NSEB  
assembly site**



## MICROCHIP PACKAGE QUALIFICATION REPORT

<b>Purpose</b>	Qualification of palladium coated copper with gold flash (CuPdAu) bond wire in selected products of the 200K wafer technology available in 28L QFN-S package at NSEB assembly site
<b>CN</b>	ES117956
<b>QUAL ID</b>	Q17190
<b>MP CODE</b>	LEBC1YM2XAXF
<b>Part No.</b>	PIC18F25K80T-E/MM
<b>Bonding No.</b>	BDM-001348
<b>CCB No.</b>	2937
<b><u>Package</u></b>	
<b>Type</b>	28L QFN-S
<b>Package size</b>	6x6x0.9 mm
<b>Die thickness</b>	11 mils
<b>Die size</b>	138.3 x 135.5 mils
<b><u>Lead Frame</u></b>	
<b>Paddle size</b>	193 x 193 mils
<b>Material</b>	C194
<b>Process</b>	Etched
<b>Lead Lock</b>	Yes
<b>Part Number</b>	FR0410
<b>Treatment</b>	Micro-etched
<b><u>Material</u></b>	
<b>Epoxy</b>	8600
<b>Wire</b>	CuPdAu wire
<b>Mold Compound</b>	G700LTD
<b>Plating Composition</b>	Matte Tin



## MICROCHIP PACKAGE QUALIFICATION REPORT

### Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
NSEB182901200.000	GRSM417402739.100	17414CS
NSEB183000068.000	GRSM417402739.100	17424E3
NSEB183000069.000	GRSM417402739.100	17424GS

**Result**

Pass     Fail     \_\_\_\_\_

28L QFN (6x6x0.9 mm) assembled by NSEB 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	198	0/198	Pass	
<b>Precondition Prior Perform Reliability Tests (At MSL Level 1)</b>	<b>Electrical Test</b> :+25°C and 125°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	JESD22-A113	693(0)	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> + 125°C System: J750 <b>Bond Strength:</b> Wire Pull (>2.5 grams) Bond Shear (>15.00 grams) -65°C to +150°C, 1000 Cycles System : TABAI ESPEC TSA-70H	JESD22-A104	  231 (0)  45(0)	231  0/231  0/45	  Pass  Pass	Parts had been pre-conditioned at 260°C
<b>HAST</b>	<b>Stress Condition:</b> +130°C/85%RH, 96 hrs. <b>Bias Volt:</b> 5.5 Volts System: HAST 6000X <b>Electrical Test:</b> + 25°C and 125°C System: J750 <b>Bond Strength:</b> Wire Pull (>2.5 grams) Bond Shear (>15.00 grams)	JESD22-A110	  231(0)  45 (0)	231  0/231  0/45	  Pass  Pass	Parts had been pre-conditioned at 260°C  77 units / lot
<b>UNBIASED-HAST</b>	<b>Stress Condition:</b> +130°C/85%RH, 96 hrs. System: HAST 6000X <b>Electrical Test:</b> +25°C System: J750	JESD22-A118	  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	JESD22- A103		135		45 units / lot
	<b>Electrical Test</b> :+25°C and 125°C System: J750		135(0)	0/135	Pass	
<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 95.5Ag3.9 Cu0.6 System: ERSA RA 2200D Visual Inspection: External Visual Inspection	JESD22B -102E	22 (0)	22 22 0/22	Pass	
<b>Bond Line Thickness</b>	Bond Line Thickness	SPI- 45528	15(0)	15(0)	Pass	5 units / lot
<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	