

Product Change Notification - KSRA-11PKSB895

Date: 16 Aug 2017
Product Category: Interface- Serial Peripherals
Notification subject: CCB 2771 Final Notice: Qualification of CuPdAu bond wire in selected products of the 150K (DLM) wafer technologies available in 28L QFN package at NSEB assembly
Notification text: **PCN Status:** Final notification

Microchip Parts Affected:
 Please open the attachments found in the attachments field below labeled as PCN_#_Affected_CPN.

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 150K (DLM) wafer technologies available in 28L QFN package at NSEB assembly site.

Pre Change:
 Using gold (Au) bond wire, 8600 die attach and G700LTD molding compound material

Post Change:
 Using palladium coated copper with gold flash (CuPdAu) bond wire, 8600 die attach and G700LTD molding 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	EFTEC-64T	EFTEC-64T

Impacts to Data Sheet:
 None

Change Impact:
 None

Reason for Change:
 To improve manufacturability by qualifying palladium coated copper with gold flash (CuPdAu) bond wire

Change Implementation Status:
 In Progress

Estimated First Ship Date:
 September 16, 2017 (1737)

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

Time Table Summary:

	October 2016				->	August 2017					September 2017			
	41	42	43	44		31	32	33	34	35	36	37	38	39
Workweek														
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:
October 21, 2016: Issued initial notification.
August 16, 2017: Issued final notification. Attached the Qualification Report. Provided estimated first ship date on September 16, 2017

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-11PKSB895_Qual Report.pdf](#)
[PCN_KSRA-11PKSB895_Affected_CPN.pdf](#)
[PCN_KSRA-11PKSB895_Affected_CPN.xlsx](#)

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Affected Catalog Part Number (CPN)

PCN_KSRA-11PKSB895
CATALOG_PART_NBR
MCP23017-E/ML
MCP23017T-E/ML
MCP23S17-E/ML
MCP23S17T-E/ML



MICROCHIP

QUALIFICATION REPORT SUMMARY
RELIABILITY LABORATORY

PCN #: KSRA-11PKSB895

Date
April 07, 2017

Qualification of palladium coated copper with gold flash (CuPdAu) bond wire in selected products of the 150K (DLM) wafer technologies available in 28L QFN package at NSEB assembly site.

Purpose Qualification of palladium coated copper with gold flash (CuPdAu) bond wire in selected products of the 150K (DLM) wafer technologies available in 28L QFN package at NSEB assembly site.

CN ES092466
QUAL ID Q17021
MP CODE C5BS14M4XA00
Part No. MCP23017-E/ML
Bonding No. BDM-001186 Rev. A
CCB No. 2771

Package

Type 28L QFN
Package size 6x6x0.9 mm
Die thickness 11 mils
Die size 60.30 x 60.30 mils

Lead Frame

Paddle size 173 x 173 mils
Material EFTEC-64T
Surface Ag on lead
Process Etched
Lead Lock Yes
Part Number FR0931
Treatment In-house roughening

Material

Epoxy 8600
Wire CuPdAu wire
Mold Compound G700LTD
Plating Composition Matte Tin



MICROCHIP PACKAGE QUALIFICATION REPORT

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
NSEB174300956.000	TMPE217234066.100	1703MD8
NSEB174300957.000	TMPE217234066.100	1703MDC
NSEB174400019.000	TMPE217234066.100	1704MDD

Result

Pass Fail _____

28L QFN (6x6x0.9mm) assembled by UTL (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
UNBIASED-HAST	Stress Condition: (Standard) +130°C/85%RH, 96 hrs. System: HAST 6000X	JESD22- A118		231		Parts had been pre-conditioned at 260°C
	Electrical Test: +25°C System: J750		231(0)	0/231	Pass	77 units / lot
High Temperature Storage Life	Stress Condition: Bake 175°C, 504 hrs System: SHEL LAB	JESD22- A103		45		45 units
	Electrical Test: + 25°C,85°C and 125°C System: J750		45(0)	0/45	Pass	
Bond Strength Data Assembly	Wire Pull (>3.0 grams)	M2011	30 (0) Wires	0/30	Pass	
	Bond Shear (>15.00 grams)	JESD22- B116	30 (0) bonds	0/30	Pass	