

**Product Change Notification - JAON-24EPKL576**


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**Date:**

08 Nov 2019

**Product Category:**

Access Networks; Line Drivers; Broadband Gateway; Network Synchronization; Clock Synthesis; Voice Audio; Jitter Attenuators; Clock and Timing - Clock Generation; Clock and Timing - Clock and Data Distribution; Others

**Affected CPNs:**

**Notification subject:**

CCB 3970 Final Notice: Qualification of palladium coated copper with gold flash (CuPdAu) bond wire for selected MSCC products available in various packages at ASEM 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 for selected MSCC products available in various packages at ASEM assembly site.

**Pre Change:**

Assembled at ASEM assembly site using palladium coated copper (PdCu) or Copper (Cu) bond wire.

**Post Change:**

Assembled at ASEM assembly site using palladium coated copper with gold flash (CuPdAu) bond wire.

**Pre and Post Change Summary:**

	Pre Change	Post Change
<b>Assembly Site</b>	ASE Group -Malaysia (ASEM)	ASE Group -Malaysia (ASEM)
<b>Wire material</b>	See attached pre and post change per affected package type.	
<b>Die attach material</b>		
<b>Molding compound material</b>		
<b>Lead frame material</b>		

**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 material.

**Change Implementation Status:**

In Progress

**Estimated First Ship Date:**

March 1, 2020 (date code: 2010)

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

**Time Table Summary:**

	November 2019					->	March 2020				
	44	45	46	47	48		10	11	12	13	14
Workweek											
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 8, 2019:** Issued final notification. Attached the qualification report. Provided estimated first ship date to be on March 1, 2020.

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 JAON-24EPKL576 Qual Report.pdf](#)

[PCN JAON-24EPKL576 Pre and Post Change Summary.pdf](#)

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

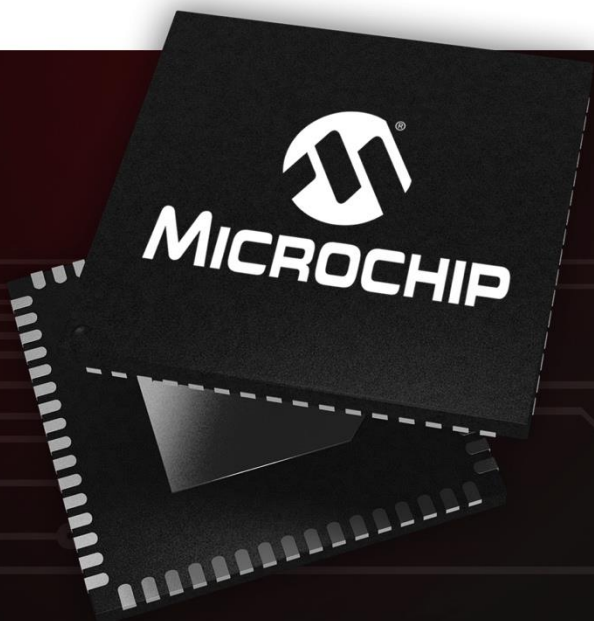
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# MICROCHIP



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Mixed-Signal, Analog & Flash-IP Solutions



**CCB 3970\_ Pre and Post Change Summary**  
**PCN# JAON-24EPKL576**



# Pre and Post Change 16L VQFN package (3x3x1mm)

	Pre Change	Post Change
<b>Assembly Site Location</b>	ASE Group -Malaysia (ASEM)	ASE Group -Malaysia (ASEM)
<b>Wire material</b>	PdCu	CuPdAu
<b>Die attach material</b>	HR5104	HR5104
<b>Molding compound material</b>	CEL-9240HF10AK-G1	CEL-9240HF10AK-G1
<b>Lead frame material</b>	C194	C194



# Pre and Post Change

## 164L VQFN package (13x13x0.95mm)

	Pre Change	Post Change
<b>Assembly Site Location</b>	ASE Group -Malaysia (ASEM)	ASE Group -Malaysia (ASEM)
<b>Wire material</b>	PdCu	CuPdAu
<b>Die attach material</b>	1076DS	1076DS
<b>Molding compound material</b>	G631H-Y	G631H-Y
<b>Lead frame material</b>	C7025	C7025



# Pre and Post Change

## VQFN package (Other than specified above)

	Pre Change	Post Change
<b>Assembly Site Location</b>	ASE Group -Malaysia (ASEM)	ASE Group -Malaysia (ASEM)
<b>Wire material</b>	PdCu	CuPdAu
<b>Die attach material</b>	1076DS	1076DS
<b>Molding compound material</b>	CEL-9240HF10AK-G1	CEL-9240HF10AK-G1
<b>Lead frame material</b>	C194	C194

This is applicable to below package types, lead counts and package dimension:

Lead Count	Package Type	Package Dimension
16L	VQFN	4x4x1mm
24L	VQFN	4x4x1mm
28L	VQFN	4x5x1mm
48L	VQFN	7x7x1mm
32L	VQFN	8x8x1mm
32L	VQFN	5x5x1mm
24L	VQFN	6x6x1mm
64L	VQFN	9x9x1mm
40L	VQFN	6x6x1mm
53L	VQFN	7x7x1mm
56L	VQFN	8x8x1mm
64L	VQFN	9x9x1mm
48L	VQFN	7x7x1mm
53L	VQFN	7x7x1mm
56L	VQFN	8x8x1mm



# Pre and Post Change LQFP, MQFP and TQFP packages

	Pre Change	Post Change
<b>Assembly Site Location</b>	ASE Group -Malaysia (ASEM)	ASE Group -Malaysia (ASEM)
<b>Wire material</b>	Cu or PdCu	CuPdAu
<b>Die attach material</b>	Yiz8143	Yiz8143
<b>Molding compound material</b>	CEL-9240HF10AK-G1	CEL-9240HF10AK-G1
<b>Lead frame material</b>	C7025	C7025

This is applicable to below package types, lead counts and package dimension:

Lead Count	Package Type	Package Dimension
64L	LQFP	14x14x1.4mm
176L	LQFP	20x20x1.4mm
80L	LQFP	12x12x1.4mm
44L	LQFP	10x10x1.4mm
80L	LQFP	14x14x1.4mm
48L	LQFP	7x7x1.4mm
64L	LQFP	10x10x1.4mm
100L	LQFP	14x14x1.4mm
100L	MQFP	14x20x2.72mm
44L	TQFP	10x10x1mm
128L	TQFP	14x14x1mm
64L	TQFP	10x10x1mm
48L	TQFP	7x7x1mm
32L	TQFP	7x7x1mm

# Pre and Post Change BGA packages

	Pre Change	Post Change
<b>Assembly Site Location</b>	ASE Group -Malaysia (ASEM)	ASE Group -Malaysia (ASEM)
<b>Wire material</b>	PdCu	CuPdAu
<b>Die attach material</b>	AB2100A	AB2100A
<b>Molding compound material</b>	G750E	G750E
<b>Substrate material</b>	830/832NX	830/832NX

This is applicable to below package types, lead counts and package dimension:

Lead Count	Package Type	Package Dimension
144L	BGA	13x13x1.95mm
64L	LBGA	9x9x1.72mm
100L	LBGA	11x11x1.55mm
196L	LBGA	15x15x1.65mm
100L	LFBGA	9x9x1.72mm
256L	HBGA	17x17x1.97mm
96L	VFBGA	7x7mm





**MICROCHIP**

**QUALIFICATION REPORT SUMMARY**  
RELIABILITY LABORATORY

**PCN #: JAON-24EPKL576**

**Date:**  
**Oct 18, 2019**

**Qualification of palladium coated copper with gold flash  
(CuPdAu) bond wire for selected MSCC products available in  
various packages at ASEM assembly site.**



## MICROCHIP PACKAGE QUALIFICATION REPORT

**Purpose** Qualification of palladium coated copper with gold flash (CuPdAu) bond wire for selected MSCC products available in various packages at ASEM assembly site.

**QUAL ID** CCB#3970

**CCB No.:** 3970

### Package Qualification Information

<b>Package</b>	<b>44L PLCC</b>	<b>80L LQFP</b>	<b>48L VQFN</b>	<b>100L LBGA</b>
<b>Lead frame material</b>	C194	C7025	C194	830/832NX
<b>Epoxy / Die Attach material</b>	YIZ8143	YIZ8143	1076DS	2100A
<b>Bond wire material</b>	CuPdAu	CuPdAu	CuPdAu	CuPdAu
<b>Mold compound material</b>	CEL 9240HF10AK-G1	CEL 9240HF10AK-G1	CEL 9240HF10AK-G1	G750E
<b>Plating</b>	100% Sn	100% Sn	100% Sn	SAC305



# MICROCHIP PACKAGE QUALIFICATION REPORT

## Manufacturing Information

Assembly Lot No.	Part No.	Package
904LE98B01	MT8816	PLCC44
904LE97B01	Le88266	LQFP80 14X14
903LE93B01	Le9641	QFN48 7X7
903LE92B01	ZL80018	LBGA100 11X11

**Result**       Pass       Fail       \_\_\_\_\_

All four qual packages pass reliability test per Qual plan. These packages were qualified per the Moisture/Reflow Sensitivity Classification Level 3 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/S S	Result	Remarks
<b>Moisture/Reflow Sensitivity Classification Test (At MSL Level 3)</b>	85°C/ 85%RH Moisture Soak 168 hrs. System: 3x Convection-Reflow 265°C max  (IPC/JEDEC J-STD-020E)	IPC/JEDEC J-STD-020E	1015	0/1015	Pass	

<b>Precondition Prior Perform Reliability Tests (At MSL Level 3)</b>	<b>Electrical Test:</b> +25°C and 85°C	JESD22-A113	635	0/1015	Pass	Good Devices
	Bake 150°C, 24 hrs System:			0/1015		
	85°C/85%RH Moisture Soak 168 hrs. System:			0/1015		
	3x Convection-Reflow 265°C max System:			0/1015		
	<b>Electrical Test</b> :+25°C and 85°C			0/1015		

# PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
<b>Temp Cycle</b>	<b>Stress Condition:</b> Lead frame package: -65°C to +150°C, 500 Cycles	JESD22- A104	340	340	Pass	Parts had been pre-conditioned at 260°C
	BGA/Substrate package: -55°C to +125°C, 500 Cycles     Sub					340
<b>UNBIASED- HAST</b>	<b>Stress Condition:</b> +130°C/85%RH, 96 hrs. System:	JESD22- A118	340	340	0/340	Parts had been pre-conditioned at 260°C
	<b>Electrical Test:</b> +25°C System:					Pass
<b>High Temperature Storage Life</b>	<b>Stress Condition:</b> Bake 150°C, 500 hrs System: N/A	JESD22- A103	335	335	0/335	Parts had been pre-conditioned at 260°C
	<b>Electrical Test:</b> + 25°C System:					Pass

Affected Catalog Part Numbers (CPN)

LE79112AKVCT  
LE79114KVC  
LE79124KVC  
LE79124KVCT  
LE79128KVC  
LE79128KVCT  
LE79234KVC  
LE792388TVC  
LE792388TVCT  
LE792388VQC  
LE792388VQCT  
LE79252BTC  
LE79252BTCT  
LE79271AMQC  
LE79271AMQCT  
LE79271MQC  
LE79271MQCT  
LE79272PQC  
LE79272PQCT  
LE79Q2281DVC  
LE79Q2281DVCT  
LE79Q2284MVC  
LE79Q2284MVCT  
LE79R70-1FQC  
LE87100NQC  
LE87100NQCT  
LE87251NQC  
LE87251NQCT  
LE87270NQC  
LE87270NQCT  
LE87281NQC  
LE87281NQCT  
LE87285NQC  
LE87285NQCT  
LE87286NQC  
LE87290YQC  
LE87290YQCT  
LE87401NQC  
LE87401NQCT  
LE87411NQC  
LE87411NQCT  
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LE87501NQCT  
LE87502MQC  
LE87502MQCT  
LE87511NQC

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LE87611NQC  
LE87611NQCT  
LE87614MQC  
LE87614MQCT  
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LE88102KQC  
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LE88131BLCT  
LE88221DLC  
LE88221DLCT  
LE88231DLC  
LE88231DLCT  
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LE88266DLCT  
LE88266TQC  
LE88266TQCT  
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LE88830KQCT  
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LE89010QVCT  
LE89116QVC  
LE89116QVCT  
LE89156PQC  
LE89156PQCT  
LE89316QVC  
LE89316QVCT  
LE9530CETC  
LE9530CETCT  
LE9530CPQC  
LE9530CPQCT  
LE9530DETC  
LE9530DETCT

LE9530DPQC  
LE9530DPQCT  
LE9540CUQC  
LE9540CUQCT  
LE9540DUQC  
LE9540DUQCT  
LE9541CUQC  
DS3105LN2  
DS3106LN2  
LE57D111BTC  
LE57D111BTCT  
LE57D121BTC  
LE57D121BTCT  
LE57D122BTC  
LE57D122BTCT  
LE58QL021BVC  
LE58QL021BVCT  
LE58QL022BVC  
LE58QL022BVCT  
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LE58QL061BVCT  
LE58QL063HVC  
LE58QL063HVCT  
LE79112AKVC  
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LE9541DUQC  
LE9541DUQCT  
LE9551CMQC  
LE9551CMQCT  
LE9551DMQC  
LE9551DMQCT  
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LE9632RQCT  
LE9641PQC  
LE9641PQCT  
LE9642PQC  
LE9642PQCT  
LE9651PQC  
LE9651PQCT  
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LE9662WQC  
LE9662WQCT  
LE9672WQC  
LE9672WQCT



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