Product Change Notification / JAON-17JQJE576

Date:

18-Nov-2020

Product Category:

Ethernet PHYs

PCN Type:

Manufacturing Change

Notification Subject:

CCB 2519.001 Final Notice: Qualification of ANAC as an additional assembly site for selected LAN8710xx and LAN8720xx device families available in 32L VQFN (5x5x0.9mm) and 24L VQFN (4x4x0.9mm) packages.

Affected CPNs:

JAON-17JQJE576_Affected_CPN_11182020.pdf
JAON-17JQJE576_Affected_CPN_11182020.csv

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 ANAC as an additional assembly site for selected LAN8710xx and LAN8720xx device families available in 32L VQFN (5x5x0.9mm) and 24L VQFN (4x4x0.9mm) packages.

Pre Change:
Assembled at ASE using EN-4900F die attach and G631B mold compound material.

Post Change:
Assembled at ASE using EN-4900F die attach and G631B mold compound material or assembled at ANAC using 8290 die

attach and G700 mold compound material

Pre and Post Change Summary:

	Pre Change	Post Change	
Assembly Site	ASE Inc. (ASE)	ASE Inc. (ASE)	Amkor Assembly & Test (Shanghai) Co., LTD (ANAC)
Wire material	PdCu	PdCu	PdCu
Die attach material	EN-4900F	EN-4900F	8290
Molding compound material	G631B	G631B	G700
Lead frame material	C194	C194	C194

Impacts to Data Sheet: None.

Change Impact: None.

Reason for Change: To improve on-time delivery performance by qualifying ANAC as an additional assembly site.

Change Implementation Status: In Progress

Estimated First Ship Date: December 20, 2020 (date code: 2052)

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

Time Table Summary:

	November 2020				December 2020				
Workweek	45	46	47	48	49	50	51	52	53
Qual Report Availability			X						
Final PCN Issue Date			X						
Estimated First Ship 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 18, 2020: Issued final notification. Attached the qualification report. Provided estimated first ship date to be on December 20, 2020.

The change described in this PCN does not alter Microchip's current regulatory compliance regarding the material content of the applicable products.

Attachments:

PCN_JAON-17JQJE576_Qual_Report.pdf

Please contact your local Microchip sales office with questions or concerns regarding this notification.

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QUALIFICATION REPORT SUMMARY

RELIABILITY LABORATORY

PCN #: JAON-17JQJE576

Date:
August 18, 2016

Qualification of ANAC as an additional assembly site for selected products available in 36L VQFN (6x6x0.9mm) package. The qualification of ANAC as an additional assembly site for selected LAN8710xx and LAN8720xx device families available in 32L VQFN (5x5x0.9mm) and 24L VQFN (4x4x0.9mm) packages will qualify by similarity (QBS).

Purpose: Qualification of ANAC as an additional assembly site for selected products available in 36L VQFN (6x6x0.9mm) package. The qualification of ANAC as an additional assembly site for selected LAN8710xx and LAN8720xx device families available in 32L VQFN (5x5x0.9mm) and 24L VQFN (4x4x0.9mm) packages will qualify by similarity (QBS).

QUAL ID: QAR2016-009

CCB No.: 2519 and 2519.001

PRODUCT INFORMATION

PACKAGE TYPE	**VQFN (PUNCH)**
PACKAGE LEAD COUNT	**36 (6x6x0.9mm)**
TERMINAL PITCH	**0.5mm**
PACKAGE CODE	**RPX**

MATERIALS USED IN ASSEMBLY:

LEADFRAME PART NUMBER	**101343095**
LEADFRAME MATERIAL	**C194 (ETCHED)**
LEADFRAME INTERNAL PLATING	**DOUBLE RING**
LEADFRAME SURFACE	**NO TREATMENT**
LEADFRAME PAD	**3.90 x 3.90 mm**
LEADFRAME SIZE	**250 X 70mm (VHDLF)**
LEADLOCK	**NO**
LEADFRAME THICKNESS	**0.20mm**
UNITS PER L/F STRIP	**168 (24X7)**
DIE ATTACH EPOXY TYPE	**8290**
EPOXY – CONDUCTIVE	**YES**
WIRE TYPE	**PdCu**
DOWNBOND	**YES**
MOLDING COMPOUND TYPE	**G700**
LEAD FINISH PROCESS	**Matte Sn**
MARKING	**LASER**

PACKAGE QUALIFICATION REPORT

Manufacturing Information

Assembly Lot (Test)	Wafer Lot	MARKING /Date Code
ANAC170300034.000	7MCM42406.000 wafer 24 / GF07916422407.100	USB2512B D1615-A2P10 615YKYA ATC-CN
ANAC170300035.000	7MCM42406.000 wafer 24 / GF07916422407.100	USB2512B D1615-A2P10 615YM3A ATC-CN
ANAC170300036.000	7MCM42406.000 wafer 24 / GF07916422407.100	USB2512B D1615-A2P10 615YM8A ATC-CN

Result [X] Pass [ ] Fail [ ] _____

The 36L QFN (6x6X0.9mm) package using ALS Leadframe with PdCu wire, assembled by ANAC Pass Reliability test per QCI-39000.This package was qualified the Moisture/Reflow Sensitivity Classification Level 3 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
Moisture/Reflow Sensitivity Classification Test (At MSL Level 3)	30°C/ 60%RH Moisture Soak 192 hrs. (IPC/JEDEC J-STD-020D)	IPC/ JEDEC J-STD-020D	240 240 240	0/240 0/240 0/240	Pass Pass Pass	LOT 1 LOT 2 LOT 3

<u>Precondition Prior Perform Reliability Tests</u> (At MSL Level 3)	Electrical Test: +85°C SAT Bake 125°C, 24hrs 85°C/85%RH Moisture Soak 192hrs 3x Convection-Reflow 260°C SAT Electrical Test : +85°C	JESD22-A113	240 (0) Lot 1	240 240 240 240 240 240 240	PASS PASS	Good Devices

Precondition Prior Perform Reliability Tests **(At MSL Level 3)**	**Electrical Test: +85°C** **SAT** **Bake 125°C, 24hrs** **30°C/60%RH Moisture Soak 192hrs** **3x Convection-Reflow 260°C** **SAT** **Electrical Test : +85°C**	**JESD22-A113**	**240 (0)** **Lot 2**	**240** **240** **240** **240** **240** **240** **240**	**PASS** **PASS**	**Good Devices**

Precondition Prior Perform Reliability Tests **(At MSL Level 3)**	**Electrical Test: +85°C** **SAT** **Bake 125°C, 24hrs** **30°C/60%RH Moisture Soak 192hrs** **3x Convection-Reflow 260°C** **SAT** **Electrical Test : +85°C**	**JESD22-A113**	**240 (0)** **Lot 3**	**240** **240** **240** **240** **240** **240** **240**	**PASS** **PASS**	**Good Devices**

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
Temp Cycle	**Stress Condition:** - -65°C to +150°C, 1000x **Electrical Test:** +85°C	JESD22-A104	231 (0)	231 0/231	Pass	Parts had been pre-conditioned at 260°C 77 units / lot
BHAST	**Stress Condition:** +130°C/85%RH, 192hrs **Electrical Test:** +85°C	JESD22-A110	231 (0)	231 0/231	Pass	Parts had been pre-conditioned at 260°C units / lot
uHAST	**Stress Condition:** +130°C/85%RH, 192hrs **Electrical Test:** +85°C	JESD22-A110	231 (0)	231 0/231	Pass	Parts had been pre-conditioned at 260°C 77 units / lot
High Temperature Storage Life	**Stress Condition:** Bake +150°C,1008hrs **Electrical Test :** +85°C	JESD22-A103	231 (0)	231 0/231	Pass	**Parts had no pre-conditioned** 77 units / lot

Affected Catalog Part Numbers (CPN)

LAN8720A-CP
LAN8710A-EZC
LAN8710A-EZK
LAN8720AI-CP
LAN8710AI-EZK
LAN8720A-CP-TR
LAN8710A-EZK-TR
LAN8710A-EZC-TR
LAN8720AI-CP-TR
LAN8710AI-EZK-TR