Product Change Notification - GBNG-29PLBE459

Date: 19 Jan 2018

Product Category: Ethernet PHYs

Notification subject: CCB 2756 Final Notice: Qualification of ASE assembly site for selected products available in 48L LQFP (7x7mm) package.

Notification text:

PCN Status:
Final notification

PCN Type:
Manufacturing Change

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 ASE assembly site for selected products available in 48L LQFP (7x7mm) package.

Pre Change:
Assembled at TICP assembly site using silver (Ag) or gold (Au) wire, EN4900 die attach and CEL-9200 mold compound.

Post Change:
Assembled at ASE assembly site using gold (Au) wire, CRM1076WA die attach and G631H mold compound.

Pre and Post Change Summary:

	Pre Change	Post Change
Assembly Site	Taiwan IC Packing Corp (TICP)	ASE Inc. (ASE)
Wire material	Ag wire or Au wire	Au wire
Die attach material	EN4900	CRM1076WA
Molding compound material	CEL-9200	G631H
Lead frame material	C7025	C7025

Impacts to Data Sheet:
None

Change Impact:
None

Reason for Change:
To improve productivity by qualifying ASE assembly site.

Change Implementation Status:
In Progress

Estimated First Ship Date:
February 19, 2018 (datecode: 1808)

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

Time Table Summary:

	October 2016					->	January 2018					February 2018			
Workweek	40	41	42	43	44		01	02	03	04	05	06	07	08	09
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 3, 2016: Issued initial notification.
January 19, 2018: Issued final notification. Attached the qualification report and provided the estimated first ship date to be on February 19, 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_GBNG-29PLBE459_Qual Report.pdf
PCN_GBNG-29PLBE459_Affected CPN.pdf
PCN_GBNG-29PLBE459_Affected CPN.xlsx

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

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To opt out of future offer or information emails (other than product change notification emails), click here to go to microchipDIRECT and login, then click on the "My account" link, click on "Update profile" and un-check the box that states "Future offers or information about Microchip's products or services."

QUALIFICATION REPORT SUMMARY
RELIABILITY LABORATORY

PCN #: GBNG-29PLBE459

Date
August 16, 2017

Qualification of ASE assembly site for selected products available in 48L LQFP (7x7mm) package.

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PACKAGE QUALIFICATION REPORT

Purpose	**Qualification of ASE assembly site for selected products available in 48L LQFP (7x7mm) package.**
CCB No	2756
CN	ES099719
QUAL ID	Q17071
MP CODE	XKAA11CAAA01
Part No.	KSZ8081MLXCA
Bonding No.	KSZ8081MLXCA-AI-2-D_ASE Eng 3-20-2017
Package	
Type	48 LQFP
Package size	7x7 mm
Die size	1.467 mm x 0.945 mm
Lead Frame	
Paddle size	3.81x3.81 mm
Material	C7025
Surface	Ag double ring
Process	Stamped
Lead Lock	None
Part Number	A08588 **/** L-matrix
Treatment	None
Material	
Epoxy	CRM1076WA
Wire	Au wire
Mold Compound	G631H
Plating Composition	Matte Tin

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PACKAGE QUALIFICATION REPORT

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
ASE-175100531.000	DU02917389983.100	171165W
ASE-175100532.000	DU02917389983.100	1711662
ASE-175200086.000	DU02917389983.100	1712664

Result [X] Pass [ ] Fail [ ] ____________________

48L LQFP (7x7x 0.5mm) assembled by ASE 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. 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	135	0/135	Pass	
Precondition Prior Perform Reliability Tests (At MSL Level 3)	**Electrical Test :**+25°C System: LTX_D1X	JESD22-A113	693(0)	693		Good Devices
	Bake 150°C, 24 hrs System: CHINEE			693		
	30°C/60%RH Moisture Soak 192 hrs. System: TABAI ESPEC Model PR-3SPH			693		
	3x Convection-Reflow 265°C max			693		
	System: Vitronics Soltec MR1243					
	Electrical Test :+25°C System: LTX_D1X			0/693	Pass	

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, 500 Cycles System : TABAI ESPEC TSA-70H	JESD22-A104		231		Parts had been pre-conditioned at 260°C
	Electrical Test: + 25°C System: LTX_D1X		231(0)	0/231	Pass	77 units / lot
	Bond Strength: Wire Pull (> 2.0 grams)		15 (0)	0/15	Pass	
	Bond Shear (>5.00 grams)		15 (0)	0/15	Pass	
UNBIASED-HAST	**Stress Condition:** +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: LTX_D1X		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 System: LTX_D1X		45(0)	0/45	Pass	

PACKAGE QUALIFICATION REPORT						
Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
Solderability Temp 245°C	**Steam Aging:** 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	
Physical Dimensions	Physical Dimension, 30 units from 1 lot	JESD22-B100/B108	30(0) Units	0/30	Pass	
Bond Strength Data Assembly	Wire Pull (> 2.0 grams)	M2011	30 (0) Wires	0/30	Pass	
	Bond Shear (>5.00 grams)	JESD22-B116	30 (0) bonds	0/30	Pass	

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Affected Catalog Part Numbers (CPN)

PCN_GBNG-29PLBE459
CATALOG_PART_NBR
KSZ8081MLXCA
KSZ8081MLXCA-TR
KSZ8081MLXIA
KSZ8081MLXIA-TR
KSZ8091MLXCA
KSZ8091MLXCA-TR
KSZ8091MLXIA
SPNY801146
SPNY801146-TR
SPNY801151
SPNY801151-TR
SPNZ801146
SPNZ801146-TR
SPNZ801151
SPNZ801151-TR