Product Change Notification - JAON-02XYUD377

Date:

05 Sep 2019

Product Category:

Ethernet Switches

Affected CPNs:

Notification subject:

CCB 3599.002 Final Notice: Qualification of ASE as a new assembly site for selected Micrel KSZ8895 device family available in 128L PQFP (14x20x2.72mm) package.

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 ASE as a new assembly site for selected Micrel KSZ8895 device family available in 128L PQFP (14x20x2.72mm) package

Pre Change:

Assembled at OSE using silver (Ag) bonding wire and G700L mold compound

Post Change:

Assembled at ASE using gold (Au) bonding wire and EME-G631H mold compound

Pre and Post Change Summary:

	Pre Change	Post Change
Assembly Site	Orient Semiconductor Electronics, Ltd (OSE)	ASE Inc. (ASE)
Wire material	Ag	Au
Die attach material	CRM-1076WA	CRM-1076WA
Molding compound material	G700L	EME-G631H
Lead frame material	C7025	C7025

Impacts to Data Sheet:

None

Change Impact:

None

Reason for Change:

To improve productivity and on-time delivery performance by qualifying ASE as a new additional assembly site.

Change Implementation Status:

In Progress

Estimated First Ship Date:

October 3, 2019 (date code: 1940)

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

Time Table Summary:

	September 2019				October 2019				
Workweek	36	37	38	39	40	41	42	43	44
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:
September 5, 2019: Issued final notification.
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-02XYUD377_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.

QUALIFICATION REPORT SUMMARY

PCN #: JAON-02XYUD377

Date

July 31, 2019

Qualification of ASE as a new assembly site for selected Micrel KSZ8382Q device family available in 128L PQFP (14x20x2.72mm) package. The selected Micrel KSZ8895 device family available in 128L PQFP (14x20x2.72mm) package will qualify by similarity (QBS).

Purpose: **Qualification of ASE as a new assembly site for selected Micrel KSZ8382Q device family available in 128L PQFP (14x20x2.72mm) package. The selected Micrel KSZ8895 device family available in 128L PQFP (14x20x2.72mm) package will qualify by similarity (QBS).**

Summary:

The purpose of this report is to qualify mask XKBC1 (KSZ8382Q) in PQFP 128 LD 14x20x2.7 mm (C2A) package ASE, Taiwan per CCB# 3599 and following guidelines established in Microchip specification QCI-39000, "Worldwide Quality Conformance Requirements".

I. Conclusion:

Based on the results, XKBC1(KSZ8382Q) in PQFP 128 LD 14x20x2.7 mm at ASE complies with the reliability guidelines implemented in the qualification plan. Therefore, this part/package can be released to production.

II. Device Description:

Device	KSZ8382Q
Document Control Number	ML0820190020
Document Revision	A
CCB No.	3599, 3599.001 and 3599.002

III. Qualification Material:

Test Lot	Lot 1	Lot 2	Lot 3
WAFER LOT	DU02917014676.100/ M145H01	DU02917014676.100/ M145H01	DU02917014676.100/ M145H01
ASSEMBLY LOT	ASE193400588.000	ASE193400590.000	ASE193500003.000
PACKAGE	PQFP 128 LD 14x20x2.7 mm	PQFP 128 LD 14x20x2.7 mm	PQFP 128 LD 14x20x2.7 mm
QUAL TESTS	PRECOND, HTSL, HAST, UHAST, TC	PRECOND, HAST, UHAST, TC	PRECOND, HAST, UHAST, TC

IV. **Bill of Materials:**

Misc.	Assembly site	ASE
	BD Number	AAH@K-I-0128-70A640-0
	MP Code (MPC)	XKBC11C2AA03
	Part Number (CPN)	KSZ8382Q
Lead-Frame	Paddle size	236x236
	Material	C7025
	Manufacturer	SHINKO
	DAP Surface Prep	N/A
	Treatment	N/A
	Process	Stamp
	Part Number	K-I-0128-70-A
	Lead Plating	Matte Sn
Bond Wire	Material	Au
Die Attach	Part Number	CRM-1076WA
	Conductive	Yes
MC	Part Number	EME-G631H
PKG	PKG Type	QFP
	Pin/Ball Count	128
	PKG width/size	14x20x2.7 mm
Die	Die Thickness	15 mils
	Die Size	152x165 mil
	Fab Process (site)	DongBu/0.11 um

V. Qualification Data:

Package Preconditioning

Test Method/Condition	JEDEC J-STD-020D and JESD22-A113F, MSL Level 3 soak and +260ºC peak Reflow Temperature
Lot #	Results (Fail/Pass) Min SS = 231
Lot 1	0/270
Lot 2	0/270
Lot 3	0/270

Pre and Post testing was conducted at +25◦C

HAST (Highly Accelerated Temperature and Humidity Stress Test)

Test Method/Condition	JESD22-A110, Vin 3.3V & 1.2V, Ta = +130ºC/85%RH, 96 HRS . Min SS = 77 units
Lot #	Results (Fail/Pass)
Lot 1	0/82 @ 96 hrs
Lot 2	0/82 @ 96 hrs
Lot 3	0/80 @ 96 hrs

Pre and Post testing was conducted at +25◦C, +85◦C

UNBIASED HAST

Test Method/Condition	JESD22-A118, Ta = +130ºC/85%RH, 96HRS Min SS = 77 units
Lot #	Results (Fail/Pass)
Lot 1	0/82 @ 96 hrs
Lot 2	0/82 @ 96 hrs
Lot 3	0/82 @ 96 hrs

Pre and Post testing was conducted at +25◦C

Temperature Cycling

Test Method/Condition	JESD22-A104, Ta = -65ºC/+150 ºC, 500 CYC Min SS = 77 units
Lot #	Results (Fail/Pass)
Lot 1	0/82 @ 500 cyc ; WPS after TCY: 0 fail/5
Lot 2	0/82 @ 500 cyc
Lot 3	0/82 @ 500 cyc

Pre and Post testing was conducted at +85◦C

High Temperature Storage Life

Test Method/Condition	JESD22-A103, Ta = +175 ºC, 504 HRS Min SS = 45 units
Lot #	Results (Fail/Pass)
Lot 1	0/50 @ 504 HRS

Pre and Post testing was conducted at +25◦C, +85◦C

VI. Wire Pull/Ball Shear/Solderability

Lot #1:

Test Item	Sample Size/ Unit	Comment
Wire Pull	200wires	Pass
Ball Shear	100 balls	Pass
Solderabilty	22	Pass

Lot #2

Test Item	Sample Size/ Unit	Comment
Wire Pull	200wires	Pass
Ball Shear	100 balls	Pass
Solderabilty	22	Pass

Lot #3

Test Item	Sample Size/ Unit	Comment
Wire Pull	200 wires	Pass
Ball Shear	100 balls	Pass
Solderabilty	22	Pass

VII. Physical Dimension:

Test Method/Condition	**JESD22 -B100 and B108, Min SS = 10 units/lot**
Lot #	Results (Fail/Pass)
Lot 1	0/10 PASS
Lot 2	0/10 PASS
Lot 3	0/10 PASS

JAON-02XYUD377 - CCB 3599.002 Final Notice: Qualification of ASE as a new assembly site for selected

Affected Catalog Part Numbers(CPN)

KSZ8895FQXC
KSZ8895FQXCA
KSZ8895FQXC-TR
KSZ8895FQXI
KSZ8895FQXIA
KSZ8895FQXI-TR
KSZ8895MQXC
KSZ8895MQXCA
KSZ8895MQXC-TR
KSZ8895MQXI
KSZ8895MQXIA
KSZ8895MQXI-TR
KSZ8895RQXC
KSZ8895RQXCA
KSZ8895RQXCA-TR
KSZ8895RQXC-TR
KSZ8895RQXI
KSZ8895RQXIA
KSZ8895RQXI-TR