Product Change Notification - JAON-04DYUU003

Date:

17 Oct 2018

Product Category:

Ethernet PHYs

Affected CPNs:

Notification subject:

CCB 3459 Final Notice: Qualification of MTAI as a new assembly site for selected Micrel products available in 32L VQFN (5x5x0.9mm) 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 MTAI as a new assembly site for selected Micrel products available in 32L VQFN (5x5x0.9mm) package.

Pre Change:

Assembled at TICP using Ag bond wire, EN-4900 die attach and G631 mold compound material.

Post Change:

Assembled at MTAI using Au bond wire, 3280 die attach and G700LTD mold compound material.

Pre and Post Change Summary:

	Pre Change	Post Change
Assembly Site	Taiwan IC Packing Corp. (TICP)	Microchip Technology Thailand (HQ) MTAI
Wire material	Ag	Au
Die attach material	EN-4900	3280
Molding compound material	G631	G700LTD
Lead frame material	C194	C194

Impacts to Data Sheet:

None

Change Impact:

None

Reason for Change:

To improve on-time delivery performance by qualifying MTAI as a new assembly site.

Change Implementation Status:

In Progress

Estimated First Ship Date:

November 17, 2018 (date code: 1846)

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

Time Table Summary:

	July 2018					🕮	October 2018					November 2018			
Workweek	27	28	29	30	31	♋♑❒♋❖♏🖃	40	41	42	43	44	45	46	47	48
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:

July 12, 2018: Issued initial notification.

October 17, 2018: Issued final notification. Attached the Qualification Report. Provided estimated first ship date to be on November 17, 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_JAON-04DYUU003_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.

Affected Catalog Part Numbers (CPN)

KSZ8081MNXCA
KSZ8081MNXCA-TR
KSZ8081MNXIA-TR
KSZ8081RNBCA-TR
KSZ8081RNBIA-TR
KSZ8091MNXCA
KSZ8091MNXCA-TR
KSZ8091MNXIA-TR
KSZ8091RNBCA
KSZ8091RNBCA-TR
KSZ8091RNBIA-TR
SPNY801139
SPNZ801174
SPNZ801174-TR

QUALIFICATION REPORT SUMMARY

RELIABILITY LABORATORY

PCN #: JAON-04DYUU003

Date

October 08,2018

Qualification of MTAI as a new assembly site for selected Micrel products available in 32L VQFN (5x5x0.9mm) package.

PACKAGE QUALIFICATION REPORT

Purpose	**Qualification of MTAI as a new assembly site for selected Micrel products available in 32L VQFN (5x5x0.9mm) package.**
CCB No.	3459
CN	ES226534
QUAL ID	Q18150
MP CODE	XKAA1TPFAA04
Part No.	KSZ8081RNBIA-TR
Bonding No.	BDM-001909 REV.A
Package	
Type	32L VQFN
Package size	5 x 5 x 1.0 mm
Die thickness	8 mils
Die size	57.8 x 37.4 mils
Lead Frame	
Paddle size	150 x 150 mils
Material	C194
Surface	Ag spot
Process	Etched
Lead Lock	No
Part Number	10103204
Treatment	Roughened
Material	
Epoxy	3280
Wire	Au/2N wire
Mold Compound	G700LTD
Plating Composition	Matte Tin

PACKAGE QUALIFICATION REPORT

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
MTAI192002027.000	DU0291033565.000	1833GGQ
MTAI192002287.000	DU0291033565.000	1833HDB
MTAI19200288.000	DU0291033565.000	1833HDC

Result [X] Pass [ ] Fail [ ] ____________________

32L VQFN (5x5x1.0 mm) assembled by MTAI pass reliability test per QCI-39000. This package was qualified the Moisture/Reflow Sensitivity Classification Level 2 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/SS	Result	Remarks
Moisture/Reflow Sensitivity Classification Test (At MSL Level 2)	85°C/ 60%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH 3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243 (IPC/JEDEC J-STD-020E)	IPC/JEDEC J-STD-020E	135	0/135	Pass	
Precondition Prior Perform Reliability Tests (At MSL Level 2)	**Electrical Test :**+25°C and 85°C System: LTX_D1X Bake 150°C, 24 hrs System: CHINEE 85°C/60%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH 3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243 **Electrical Test :**+25°C and 85°C System: LTX_D1X	JESD22-A113	693(0)	693 693 693 693 0/693	Pass	Good Devices
Temp Cycle	**Stress Condition:** -65°C to +150°C, 500 Cycles System : TABAI ESPEC TSA-70H **Electrical Test:** + 85°C System: LTX_D1X **Bond Strength:** Wire Pull (> 2.5 grams) Bond Shear (>15.00 grams)	JESD22-A104	231(0) 15 (0) 15 (0)	231 0/231 0/15 0/15	Pass Pass Pass	Parts had been pre-conditioned at 260°C 77 units / lot
UNBIASED-HAST	**Stress Condition:** +130°C/85%RH, 96 hrs. **Electrical Test:** +25°C System: LTX_D1X	JESD22-A118		231 0/231		Parts had been pre- 77 units / lot
HAST	**Stress Condition:** +130°C/85%RH, 96 hrs. **Bias Volt:** 3.3 Volts System: HAST 6000X **Electrical Test:**+25°C and 85°C System: LTX_D1X	JESD22-A110	231(0)	231 0/231	Pass	Parts had been pre-conditioned at 260°C 77 units / lot

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
High Temperature Storage Life	**Stress Condition:** Bake 175°C, 504 hrs System: SHEL LAB **Electrical Test :**+25°C and 85°C System: LTX_D1X	JESD22- A103	45(0)	45 0/45	Pass	45 units
Bond Strength Data Assembly	Wire Pull (> 2.5 grams)	M2011	30 (0) Wires	0/30	Pass	
	Bond Shear (>15.00 grams)	JESD22- B116	30 (0) bonds	0/30	Pass	