



Product Change Notification - KSRA-21IGTK891

Date:

09 Jan 2019

Product Category:

Ethernet Controllers

Affected CPNs:**Notification subject:**

CCB 3196 Final Notice: Qualification of CEL-9750ZHF10AKL molding compound for KSZ8695 products available in 289L BGA package assembled at ASE assembly site.

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 CEL-9750ZHF10AKL molding compound for KSZ8695 products available in 289L BGA package assembled at ASE assembly site.

Pre Change:

Using EME-G770J Molding compound material

Post Change:

Using CEL-9750ZHF10AKL Molding compound material

Pre and Post Change Summary:

	Pre Change	Post Change
Assembly Site	ASE Inc. (ASE)	ASE Inc. (ASE)
Wire material	Gold (Au) Wire	Gold (Au) Wire
Die attach material	2100A	2100A
Molding compound material	EME-G770J	CEL-9750ZHF10AKL
Solder Ball Alloy	SAC405	SAC405

Impacts to Data Sheet:

None

Change Impact:

None

Reason for Change:

To improve manufacturability by qualifying CEL-9750ZHF10AKL molding compound.

Change Implementation Status:

In Progress

Estimated First Ship Date:

February 9, 2019 (date code: 1906)

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

Time Table Summary:

	November 2017	-->	January 2019	February 2019



Workweek	44	45	46	47	48		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:

November 23, 2017: Issued initial notification.

January 09, 2019: Issued final notification. Corrected the Solder Ball Alloy in pre and post change summary. Attached the Qualification Report. Provided estimated first ship date on February 09, 2019.

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_KSRA-21IGTK891_Qual_Report.pdf](#)

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

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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)

KSZ8695P

KSZ8695PI

KSZ8695PX



QUALIFICATION REPORT SUMMARY
RELIABILITY LABORATORY

PCN #: KSRA-21IGTK891

Date
October 25,2018

**Qualification of CEL-9750ZHF10AKL molding compound for
KSZ8695 products available in 289L BGA package assembled
at ASE assembly site.**



MICROCHIP

PACKAGE QUALIFICATION REPORT

Purpose Qualification of CEL-9750ZHF10AKL molding compound for KSZ8695 products available in 289L BGA package assembled at ASE assembly site.

CN ES170961
QUAL ID Q18028
MP CODE TAKA11ACAA02
Part No. KSZ8695PX
Bonding No. KSZ8695PX-AI-B
CCB No. 3196

Package

Type 289L PBGA
Package size 19x19x2.36mm
Die thickness 29 mils
Die size 6.3 x 6.5 mils

Lead Frame/Substrate

Paddle size 298 x 306 mils
Laminate CCL-HL832NX(A-EX), 2 Layer BT
Soldermask PSR-4000 AUS308
Substrate Part Number A041950

Material

Epoxy 2100A
Wire Au wire
Mold Compound CEL-9750ZHF10AKL
Solder Ball Plating 95.5Sn/4.0Ag/0.5Cu (SAC405)



MICROCHIP **PACKAGE QUALIFICATION REPORT**

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
ASE-183900158.000	TC03918197629.200	1751J60
ASE-183900159.000	TC03918197629.200	1751J63
ASE-183900160.000	TC03918197629.200	1751J66

Result

☒ Pass ☐ Fail ☐ _____

289L PBGA 19x19x2.36mm 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 C J-STD- 020D	135	0/135	Pass	
<u>Precondition Prior Perform Reliability Tests (At MSL Level 3)</u>	Electrical Test :+25°C System: CHROMA3360P Bake 150°C, 24 hrs System: CHINEE 30°C/60%RH Moisture Soak 192 hrs. System: TABAI ESPEC Model PR-3SPH 3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243 Electrical Test :+25°C System: CHROMA3360P	JESD22- A113	693(0)	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: + 25°C System: CHROMA3360P 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. System: HAST 6000X Electrical Test: +25°C System: CHROMA3360P	JESD22- A118	 231(0)	231 0/231	 Pass	Parts had been pre-conditioned at 260°C 77 units / lot
High Temperature Storage Life	Stress Condition: Bake 175°C, 504 hrs System: SHEL LAB Electrical Test :+25°C System: CHROMA3360P	JESD22- A103	 45(0)	45 0/45	 Pass	45 units

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
Wire sweep	Wire sweep Inspection 15 Wires / lot	-	45(0) Wires	0/45	Pass	
Physical Dimensions	Physical Dimension, 10 units from 1 lot	JESD22- B100/B108	30(0) Units	0/30	Pass	
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		