Product Change Notification - JAON-16TUGT945

Date: 02 Oct 2016

Product Category: Memory

Notification subject: CCB 2652 Final Notice: Qualification of G600V molding compound for products available in 8L SOIC Chip On Lead (COL) package assembled at MTAI assembly site.

Notification text:

PCN Status:
Final notification

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 G600V molding compound for products available in 8L SOIC Chip On Lead (COL) package assembled at MTAI assembly site.

Pre Change:
Using SG-8300GM molding compound

Post Change:
Using G600V molding compound

Pre and Post Change Summary:

	Pre Change	Post Change
Assembly Site	MTAI assembly site	MTAI assembly site
Wire material	Au wire	Au wire
Die attach material	8006NS	8006NS
Molding compound material	SG-8300GM	G600V
Lead frame material	CDA194	CDA194

Impacts to Data Sheet:
None

Change Impact:
None

Reason for Change:
To improve manufacturability by qualifying G600V molding compound.

Change Implementation Status:
In Progress

Estimated First Ship Date:
October 17, 2016 (date code: 1642)

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

Time Table Summary:

	June 2016					-->	September 2016					October 2016			
Workweek	22	23	24	25	26		35	36	37	38	39	40	41	42	43

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:
June 21, 2016: Issued initial notification.
October 2, 2016: Issued final notification. Attached the Qualification Report. Provided estimated first ship date on October 17, 2016.

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-16TUGT945_Qual Report.pdf
PCN_JAON-16TUGT945_Affected CPN.pdf
PCN_JAON-16TUGT945_Affected CPN.xls

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."

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Affected Catalog Part Numbers (CPN)

PCN_JAON-16TUGT945
CATALOG_PART_NBR
23A1024-E/SN
23A1024-I/SN
23A1024T-E/SN
23A1024T-I/SN
23A512-E/SN
23A512-I/SN
23A512T-E/SN
23A512T-I/SN
23LC1024-E/SN
23LC1024-I/SN
23LC1024T-E/SN
23LC1024T-I/SN
23LC512-E/SN
23LC512-I/SN
23LC512T-E/SN
23LC512T-I/SN
23LCV1024-I/SN
23LCV1024T-I/SN
23LCV512-I/SN
23LCV512T-I/SN
24AA128-I/SN
24AA128T-I/SN
24AA512-I/SN
24AA512T-I/SN
24FC128-I/SN
24FC128T-I/SN
24FC512-I/SN
24FC512T-I/SN
24LC128-I/SN
24LC128T-I/SN
24LC256-I/SN
24LC256T-I/SN
24LC512-E/SN
24LC512-I/SN
24LC512T-E/SN
24LC512T-I/SN
25AA128-I/SN
25AA128T-I/SN
25AA256-I/SN
25AA256T-I/SN
25LC128-E/SN
25LC128-I/SN
25LC128T-E/SN

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Affected Catalog Part Numbers (CPN)

PCN_JAON-16TUGT945
CATALOG_PART_NBR
25LC128T-I/SN
25LC256-I/SN
25LC256T-I/SN

QUALIFICATION REPORT

RELIABILITY LABORATORY

PCN #: JAON-16TUGT945

Date
September 20, 2016

Qualification of G600V molding compound for products available in 8L SOIC Chip On Lead (COL) package assembled at MTAI assembly site.

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PACKAGE QUALIFICATION REPORT

Purpose	Qualification of G600V molding compound for products available in 8L SOIC Chip On Lead (COL) package assembled at MTAI assembly site.
CN	BC160944
QUAL ID	Q16141
MP CODE	TVAA14CYXD00
Part No.	23LC512-E/SN
Bonding No.	BDM-001096 Rev. B
CCB No.	2652

Package

Type	8L SOIC
Package size	150 mils
Die thickness	8 mils
Die size	75.10 x 112.80 mils

Lead Frame

Paddle size	116 x 78 mils
Material	CDA194
Surface	Ag spot
Process	Etch
Lead Lock	No
Part Number	10100811
Treatment	None

Die attach material

Epoxy	8006NS
Wire	Au wire
Mold Compound	G600V
Plating Composition	Matte Tin

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PACKAGE QUALIFICATION REPORT

Manufacturing Information

Assembly Lot No.	Wafer No.	Date Code
MTAI171702428.000	U08F917122171.410	1629J7D
MTAI171802852.000	U08F917122171.410	1630PTY
MTAI171802853.000	U08F917122171.410	1630PU0

Result [X] Pass [ ] Fail [ ] ____________________

8L SOIC (.150”) assembled by MTAI pass reliability test per QCI-39000.This package was qualified the Moisture/Reflow Sensitivity Classification Level 1 at 260°C reflow temperature per IPC/JEDEC J-STD-020D standard.

Prepared By:____________________**Date:** September 20, 2016 **(Sr.Reliability Engineer)**

(Mr.Thinnapol Nakkasun)

Approved By:____________________**Date:** September 20, 2016 **(Reliability Manager)**

(Mr. Somnuek Thongprasert)

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS	Result	Remarks
Moisture/Reflow Sensitivity Classification Test (At MSL Level 1)	85°C/ 85%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-020D)	IPC/JEDEC J-STD-020D	135	0/135	Pass	
<u>Precondition Prior Perform Reliability Tests</u> (At MSL Level 1)	**Electrical Test :**+25°C,85°C and 125°C System: NEXTEST_PT	JESD22-A113	693(0)	693		Good Devices
	Bake 150°C, 24 hrs System: CHINEE			693		
	85°C/85%RH Moisture Soak 168 hrs. System: TABAI ESPEC Model PR-3SPH			693		
	3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243			693		
	Electrical Test :+25°C and 85°C (With 1 lot 125°C on MTAI171702428.000) System: NEXTEST_PT			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 **Electrical Test:** + 85°C (With 1 lot 125°C on MTAI171702428.000) System: NEXTEST_PT **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: NEXTEST_PT	JESD22-A118	 231(0)	231 0/231	 Pass	Parts had been pre-conditioned at 260°C 77 units / lot
HAST	**Stress Condition:** +130°C/85%RH, 96 hrs. **Bias Volt:** 2.2 Volts System: HAST 6000X **Electrical Test:**+25°C and 85°C (With 1 lot 125°C on MTAI171702428.000) System: NEXTEST_PT	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 175°C, 504 hrs System: SHEL LAB **Electrical Test :**+25°C,85°C and 125°C System: NEXTEST_PT	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
Lead Integrity	45 Leads from a minimum of 5 units, 1 lot. System: Strain	JESD22-B105D	45(0) Leads	0/45	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	Pass	