Product Change Notification - JAON-25BPCT274

Date: 16 Mar 2015

Notification subject: CCB 1462 Final Notice: Qualification of 2025DSI epoxy die attach for the 4L SOT-143 packa

Notification text:

PCN Status:
Final notification

Microchip Parts Affected:
See attachments of affected catalog part numbers (CPN) labeled as…
PCN_JAON-25BPCT274_Affected_CPN.xls
PCN_JAON-25BPCT274_Affected_CPN.pdf

Description of Change:
Qualification of 2025DSI epoxy die attach for the 4L SOT-143 package at MMS (AT

Pre Change:
84-1 LMISR4 conductive epoxy die attach

Post Change:
2025DSI non-conductive epoxy die attach

Impacts to Data Sheet:
None

Reason for Change:
To Improve Manufacturability by qualifying a non-conductive epoxy die attach

Change Implementation Status:
In Progress

Estimated First Ship Date:
April 10, 2015 (date code: 1515)

NOTE: Please be advised that after the estimated first ship date customers may re

Markings to Distinguish Revised from Unrevised Devices:
Traceability code

Revision History:
October 31, 2014: Issued initial notification.
March 16, 2015: Issued final notification. Attached the qualification report. Revised
December 13, 2014 to April 10, 2015.

The change described in this PCN does not alter Microchip's current regulatory con
the applicable products.

Attachment(s):
PCN_JAON-25BPCT274_Qual_Report.pdf
PCN_JAON-25BPCT274_Affected_CPN.pdf
PCN_JAON-25BPCT274_Affected_CPN.xls

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

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QUALIFICATION REPORT
RELIABILITY LABORATORY

PCN #: JAON-25BPCT274

Date:
March 02, 2015

Qualification of 2025DSI epoxy die attach for the 4L SOT-143 package at MMS (ATES) assembly site.

Distribution

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PACKAGE QUALIFICATION REPORT

Purpose	Qualification of 2025DSI epoxy die attach for the 4L SOT-143 package at MMS (ATES) assembly site.
CN	BC141899
QUAL ID	Q14216
MP CODE	A7CF1YF7XA26
Part No.	TC1270ARVRCTR
Bonding No.	BDM-000649 Rev. A
CCB No.:	1462

<u>Package</u>

Type	4LSOT-143
Die thickness	8 mils
Die size	37.0 x 29.9 mils
<u>Lead Frame</u>	
Paddle size	50 x 39 mils
Material	A194
Surface	Ag spot
Process	Stamped
Lead Lock	No
Part Number	FI0111
<u>Die attach material</u>	
Epoxy	2025DSI non-conductive epoxy
Wire	Au wire
Mold Compound	G600F
Plating Composition	Matte Tin

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PACKAGE QUALIFICATION REPORT

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
ATES153400177.000	TMPE215208136.500	144755B
ATES153400178.000	TMPE215208136.500	144755B
ATES153500001.000	TMPE215208136.500	1448561

Result [X] Pass [ ] Fail [ ] ____________________

4L SOT-143 assembled by ATES 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:** March 02, 2015 **(Sr.Reliability Engineer)**

(Mr.Udom Suksansakul)

Approved By:____________________**Date:** March 02, 2015 **(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	
Precondition Prior Perform Reliability Tests (At MSL Level 1)	**Electrical Test :**+25°C and 125°C System: TTS Bake 150°C, 24 hrs System: CHINEE 85°C/85%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 125°C System: TTS	JESD22-A113	693(0)	693 693 693 693 0/693	Pass	Good Devices

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: + 125°C System: TTS		231(0)	0/231	Pass	77 units / lot
	Bond Strength: Wire Pull (>4.0 grams)		15 (0)	0/15	Pass	
	Bond Shear (>18.00 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: TTS		231(0)	0/231	Pass	77 units / lot
HAST	**Stress Condition:** +130°C/85%RH, 96 hrs. **Bias Volt:** 5.5 Volts System: HAST 6000X	JESD22-A110		231		Parts had been pre-conditioned at 260°C
	Electrical Test:+25°C and 125°C System: TTS		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 and 125°C System: TTS		45(0)	0/45	Pass	

PACKAGE QUALIFICATION REPORT						
Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
Bond Strength Data Assembly	Wire Pull (> 4.0 grams)	M2011	30 (0) Wires	0/30	Pass	
	Bond Shear (>18.00 grams)	JESD22-B116	30 (0) bonds	0/30	Pass	

PCN_JAON-25BPCT274
CATALOG_PART_NBR
TC1270ALAVRCTR
TC1270ALBVRCTR
TC1270ALVRCTR
TC1270AMAVRCTR
TC1270AMBVRCTR
TC1270AMVRCTR
TC1270ANLAVRCTR
TC1270ANLBVRCTR
TC1270ANLVRCTR
TC1270ANMAVRCTR
TC1270ANMBVRCTR
TC1270ANMVRCTR
TC1270ANRAVRCTR
TC1270ANRBVRCTR
TC1270ANRVRCTR
TC1270ANSAVRCTR
TC1270ANSBVRCTR
TC1270ANSVRCTR
TC1270ANTAVRCTR
TC1270ANTBVRCTR
TC1270ANTVRCTR
TC1270ARAVRCTR
TC1270ARBVRCTR
TC1270ARVRCTR
TC1270ARVRCTRAAA
TC1270ARVRCTR-VAO
TC1270ASAVRCTR
TC1270ASBVRCTR
TC1270ASVRCTR
TC1270ATAVRCTR
TC1270ATAVRCTR-V03
TC1270ATBVRCTR
TC1270ATVRCTR
TC1271ALAVRCTR
TC1271ALBVRCTR
TC1271ALVRCTR
TC1271AMAVRCTR
TC1271AMBVRCTR
TC1271AMVRCTR
TC1271ARAVRCTR
TC1271ARBVRCTR
TC1271ARVRCTR
TC1271ASAVRCTR
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TC1271ASVRCTR
TC1271ATAVRCTR
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