Product Change Notification / CAAN-24HZHK819

Date:

26-Jan-2023

Product Category:

Power Management - System Supervisors/Voltage Detectors

PCN Type:

Manufacturing Change

Notification Subject:

CCB 6064 Final Notice: Qualification of 84-3J/8006NS as a new die attach material for selected MCP10xT, MCP12xT and MCP13xT device families available in 3L SOT-23 (1.3mm) package at MTAI assembly site.

Affected CPNs:

CAAN-24HZHK819_Affected_CPN_01262023.pdf
CAAN-24HZHK819_Affected_CPN_01262023.csv

Notification Text:

PCN Status: Final Notification

PCN Type: Manufacturing Change

Microchip Parts Affected: Please open one of the files found in the Affected CPNs section.
Note: For your convenience Microchip includes identical files in two formats (.pdf and .xls)

Description of Change: Qualification of 84-3J/8006NS as a new die attach material for selected MCP10xT, MCP12xT and MCP13xT device families available in 3L SOT-23 (1.3mm) package at MTAI assembly site.

Pre and Post Change Summary:

	Pre Change	Post Change
Assembly Site	Microchip Technology Thailand (HQ) (MTAI)	Microchip Technology Thailand (HQ) (MTAI)
Wire Material	Au	Au
Die Attach Material	8390A	84-3J/8006NS
Molding Compound Material	G600V	G600V
Lead-Frame Material	CDA194	CDA194

Impacts to Data Sheet: None

Change Impact None

Reason for Change: To improve manufacturability by qualifying 84-3J/8006NS as a new die attach material.

Change Implementation Status: In Progress

Estimated First Ship Date: February 28, 2023 (date code: 2309)

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

Time Table Summary:

	January 2023				February 2023				
Workweek	1	2	3	4	5	6	7	8	9
Final PCN Issue Date				x					
Qual Report Availability				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:
January 26, 2023: 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.

Attachments:

PCN_CAAN-24HZHK819_Qualification 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)

MCP130T-270I/TT
MCP130T-300I/TT
MCP130T-315I/TT
MCP130T-450I/TT
MCP130T-460I/TT
MCP130T-475I/TT
MCP130T-485I/TT
MCP100T-270I/TT
MCP100T-300I/TT
MCP100T-315I/TT
MCP100T-450I/TT
MCP100T-460I/TT
MCP100T-475I/TT
MCP100T-485I/TT
MCP100T-270I/TTAAA
MCP100T-315I/TT-HCM
MCP101T-270I/TT
MCP101T-300I/TT
MCP101T-315I/TT
MCP101T-450I/TT
MCP101T-460I/TT
MCP101T-475I/TT
MCP101T-485I/TT
MCP120T-270I/TT
MCP120T-300I/TT
MCP120T-315I/TT
MCP120T-450I/TT
MCP120T-460I/TT
MCP120T-475I/TT
MCP120T-485I/TT
MCP120T-450I/TTS01
MCP102T-195I/TT
MCP102T-240E/TT
MCP102T-270E/TT
MCP102T-300E/TT
MCP102T-315E/TT
MCP102T-450E/TT
MCP102T-475E/TT
MCP131T-195I/TT
MCP131T-240E/TT
MCP131T-250E/TT
MCP131T-270E/TT
MCP131T-300E/TT
MCP131T-315E/TT
MCP131T-450E/TT
MCP131T-475E/TT

MCP121T-195I/TT

MCP121T-240E/TT

MCP121T-270E/TT

MCP121T-300E/TT

MCP121T-315E/TT

MCP121T-416E/TT

MCP121T-450E/TT

MCP121T-475E/TT

MCP121T-315E/TTAAA

QUALIFICATION REPORT SUMMARY

RELIABILITY LABORATORY

PCN#: CAAN-24HZHK819

Date:
February 27, 2015

Qualification of 84-3J/8006NS as a new die attach material for selected MCP10xT, MCP12xT and MCP13xT device families available in 3L SOT-23 (1.3mm) package at MTAI assembly site. This is a qualification by similarity (QBS).

PACKAGE QUALIFICATION REPORT

Purpose	Qualification of 84-3J/8006NS as a new die attach material for selected MCP10xT, MCP12xT and MCP13xT device families available in 3L SOT-23 (1.3mm) package at MTAI assembly site. This is a qualification by similarity (QBS).
CN	BC140876
QUAL ID	Q14068 Rev. A
MP CODE	A7BZ1YC8XD00
Part No.	MCP6283T-E/CH
Bonding No.	A-037195 Rev. E
CCB No:	6064
Package	
Type	6L SOT-23
Lead Frame	
Paddle size	72 x 41 mils
Material	CDA194
Part Number	10100602
Die attach material	
Epoxy	84-3J/8006NS
Wire	Au wire
Mold Compound	G600V
Plating Composition	Matte Tin

PACKAGE QUALIFICATION REPORT

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
MTAI151003359.000	TMPE214245104.200	1423JAQ
MTAI151003459.000	TMPE214245104.200	1423JAP
MTAI151003460.000	TMPE214245104.200	1423JAQ

Result [X] Pass [ ] Fail [ ] _____

6L SOT-23 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.

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 and 125°C System: ETS300	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 125°C System: ETS300			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:** + 125°C System: ETS300	JESD22-A104	231(0)	231 0/231	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: ETS300	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:** 3.6 Volts System: HAST 6000X **Electrical Test:**+25°C and 125°C System: ETS300	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 and 125°C System: ETS300	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
Bond Strength Data Assembly	Wire Pull (> 2.5 grams)	M2011	30 (0) Wires	0/30	Pass	
	Bond Shear (13.00 grams)	JESD22-B116	30 (0) bonds	0/30	Pass	