



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

CAAN-24HZHK819 - 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.

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).



MICROCHIP

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
<u>Package</u>	
Type	6L SOT-23
<u>Lead Frame</u>	
Paddle size	72 x 41 mils
Material	CDA194
Part Number	10100602
<u>Die attach material</u>	
Epoxy	84-3J/8006NS
Wire	Au wire
Mold Compound	G600V
Plating Composition	Matte Tin



MICROCHIP **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

☒ 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 C J-STD- 020D	135	0/135	Pass	

<u>Precondition Prior Perform Reliability Tests (At MSL Level 1)</u>	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	