Product Change Notification / RMES-11GYOB585

Date:

18-Apr-2023

Product Category:

PoE PSE

PCN Type:

Manufacturing Change

Notification Subject:

CCB 4854 Final Notice: Qualification of ATP7 as an additional assembly site for Microsemi PD69104xx and PD69108xx device families available in 48L VQFN (8x8x1.0mm) package.

Affected CPNs:

RMES-11GYOB585_Affected_CPN_04182023.pdf
RMES-11GYOB585_Affected_CPN_04182023.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 ATP7 as an additional assembly site for Microsemi PD69104xx and PD69108xx device families available in 48L VQFN (8x8x1.0mm) package.

Pre and Post Change Summary:

	Pre Change	Post Change

Assembly Site	UTAC Thai Limited (UTL-1) LTD. (NSEB	UTAC Thai Limited (UTL-1) LTD. (NSEB	Amkor Technology Philippines (P3/P4), INC. (ATP7)
Wire Material	CuPdAu	CuPdAu	CuPdAu
Die Attach Material	8600	8600	CRM-1085A
Molding Compound Material	G700LTD	G700LTD	G631BQF
Lead-Frame Material	EFTEC-64T	EFTEC-64T	C194 FH
DAP Surface Prep	Spot Plating (Ag on lead only)	Spot Plating (Ag on lead only)	Ring Plating
Lead frame design	Refer to attached Pre and Post Change Summary		

Impacts to Data Sheet: None

Change Impact None

Reason for Change: To improve on-time delivery performance by qualifying ATP7 as an additional assembly site.

Change Implementation Status: In Progress

Estimated First Ship Date: May 15, 2023 (date code: 2320)

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

Time Table Summary:

	October 2021					**>**	**April 2023**					**May 2023**				
Workweek	40	41	42	43	44		13	14	15	16	17	18	19	20	21	22
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: October 12, 2021: Issued initial notification.
April 18, 2023: Issued final notification. Attached the Qualification Report. Provided estimated first ship date to be on May 15, 2023.

The change described in this PCN does not alter Microchip's current regulatory compliance regarding the material content of the applicable products.

Attachments:

PCN_RMES-11GYOB585_Qual Report.pdf
PCN_RMES-11GYOB585_Pre and Post Change Summary.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)

PD69104B1ILQ-TR
PD69104B1FILQ-TR
PD69104ILQ-TR
PD69108ILQ-TR
PD69108FILQ-TR

QUALIFICATION REPORT SUMMARY

RELIABILITY LABORATORY

PCN #: RMES-11GYOB585

Date:
April 5, 2023

Qualification of ATP7 as an additional assembly site for Microsemi PD69104xx and PD69108xx device families available in 48L VQFN (8x8x1.0mm) package.

MICROCHIP

PACKAGE QUALIFICATION REPORT

Purpose	Qualification of ATP7 as an additional assembly site for Microsemi PD69104xx and PD69108xx device families available in 48L VQFN (8x8x1.0mm) package.
CN	E000111101
QUAL ID	R2200772 Rev. A
MP CODE	U0153Q5GCA02
Part No.	PD69108ILQ-TR
Bonding No.	BD-000204 Rev.01
CCB No.	4854
Package	
Type	48L VQFN
Package size	8 x 8 x 1.0 mm
Lead Frame	
Paddle size	268 x 268 mils (6.8 x 6.8 mm)
Material	C194 FH
Surface	Ring Plating
Process	Etched
Lead Lock	No
Part Number	101419865
Material	
Epoxy	CRM-1085A
Wire	CuPdAu
Mold Compound	G631BQ Type F
Plating Composition	Matte Sn

MICROCHIP

PACKAGE QUALIFICATION REPORT

Manufacturing Information

Assembly Lot No.	Wafer Lot No.	Date Code
ATP7230600001.000	MC04922113297.100	2219C8G
ATP7230600002.000	MC04922113297.100	2219C8H
ATP7230600003.000	MC04922113297.100	2219C8J

Result [X] Pass [ ] Fail [ ] _____

48L VQFN (8x8x1.0 mm) assembled by ATP 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-020E standard.

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS	Result	Remarks
Precondition Prior Perform Reliability Tests (At MSL Level 3)	**Electrical Test:** +25°C and 85°C System: ETS364B	JESD22-A113	693(0)	0/693		Good Devices
	Bake 150°C, 24 hrs. System: CHINEE	JIP/ IPC/JEDEC J-STD-020E		0/693		
	30°C/60%RH Moisture Soak 192 hrs. System: TABAI ESPEC Model PR-3SPH			0/693		
	3x Convection-Reflow 265°C max System: Vitronics Soltec MR1243			0/693		
	Electrical Test: +25°C and 85°C System: ETS364B		693(0)	0/693	Pass	

PACKAGE QUALIFICATION REPORT

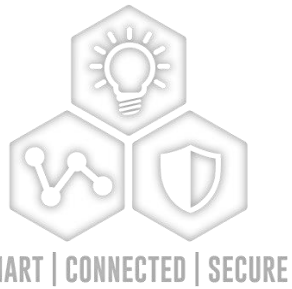
Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
Temp Cycle	**Stress Condition:** -65°C to +150°C, 500 Cycles System: TABAI ESPEC TSA-70H	JESD22-A104		0/231		Parts had been pre-conditioned at 260°C
	Electrical Test: +85°C System: ETS364B		231(0)	0/231	Pass	77 units / lot
	Bond Strength: Wire Pull (>2.50 grams)		15(0)	0/15	Pass	
UNBIASED-HAST	**Stress Condition:** +130°C/85%RH, 96 hrs. System: HAST 6000X	JESD22-A118		0/231		Parts had been pre-conditioned at 260°C
	Electrical Test: +25°C System: ETS364B		231(0)	0/231	Pass	77 units / lot
			5(0) Units	0/5	Pass	

PACKAGE QUALIFICATION REPORT

Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS.	Result	Remarks
High Temperature Storage Life	**Stress Condition:** Bake 150°C, 1008 hrs. System: SHEL LAB **Electrical Test:** +25°C and 85°C System: ETS364B	JESD22-A103	135(0)	0/135 0/135	Pass	45 units / lot
Solderability **Temp 245°C**	**Steam Aging:** Temp 93°C,8Hrs System: SAS-3000 Solder Dipping: Solder Temp.245°C Solder material: Pb Free Sn 95.5Ag3.9 Cu0.6 System: ERSA RA 2200D Visual Inspection: External Visual Inspection	J-STD-002	22(0)	0/22 0/22 0/22	Pass	
Physical Dimensions	Physical Dimension, 10 units / 1 lot	JESD22-B100/B108	30(0) Units	0/30	Pass	
Bond Strength Data Assembly	Wire Pull (>6.00 grams)	Mil. Std. 883-2011	30(0) Wires	0/30	Pass	
	Bond Shear (>20.00 grams)	CDF-AEC-Q100-001	30(0) bonds	0/30	Pass	

CCB 4854
Pre and Post Change Summary
PCN #: RMES-11GYOB585

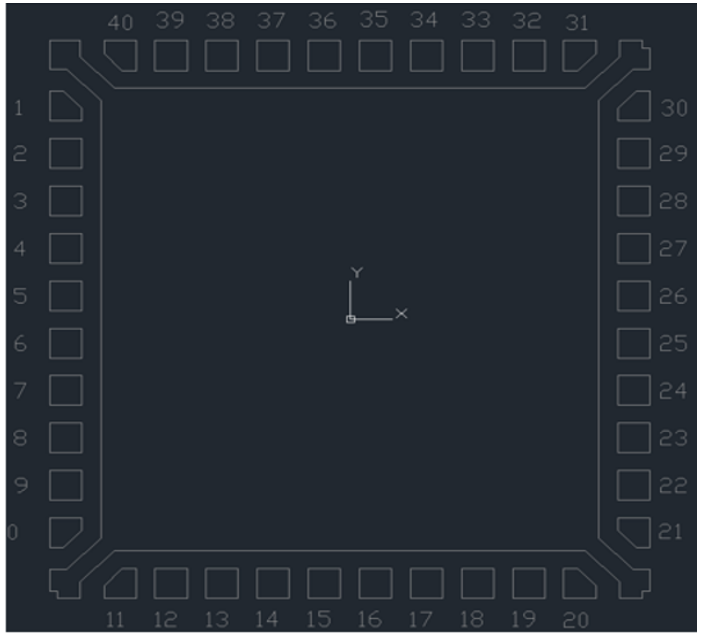
A Leading Provider of Smart, Connected and Secure Embedded Control Solutions



Qualification of ATP7 as an additional assembly site for Microsemi PD69104xx and PD69108xx device families available in 48L VQFN (8x8x1.0mm) package.

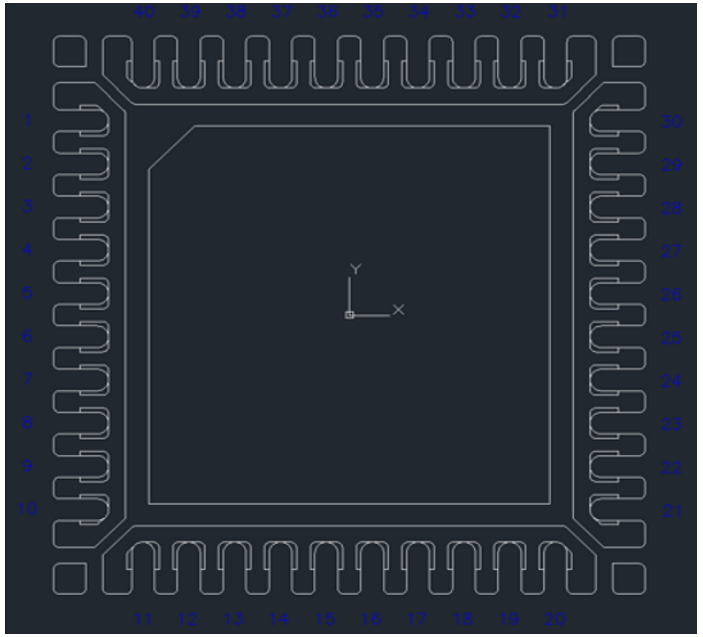
LEAD FRAME COMPARISON

NSEB



Lead Frame Material	EFTEC-64T
DAP Surface Prep	Spot Plating (Ag on lead only)

ATP7



Lead Frame Material	C194 FH
DAP Surface Prep	Ring Plating

MICROCHIP