



Product Change Notification: MFOL-25LWZY479

Date:

31-Jul-2025

Product Category:

8-Bit Microcontrollers

Notification Subject:

CCB 6818 Final Notice: Qualification of ASEM as an additional assembly site for selected ATMEGA128x, ATMEGA165xx, ATMEGA169xx, ATMEGA64x, ATMEGA645xx, ATMEGA649xx, ATMEGA329xx, and ATMEGA325xx device families available in 64L VQFN (9x9x1mm) package.

Affected CPNs:

[MFOL-25LWZY479_Affected_CPN_07312025.pdf](#)

[MFOL-25LWZY479_Affected_CPN_07312025.csv](#)

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 ASEM as an additional assembly site for selected ATMEGA128x, ATMEGA165xx, ATMEGA169xx, ATMEGA64x, ATMEGA645xx, ATMEGA649xx, ATMEGA329xx, and ATMEGA325xx device families available in 64L VQFN (9x9x1mm) package.

Pre and Post Summary Changes:

	Pre Change	Post Change	
Assembly Site	ASE Group Chung-Li (ASCL)	ASE Group Chung-Li (ASCL)	ASE Group - Malaysia (ASEM)
Wire Material	Au, Cu, AuPd, CuPd	Au, Cu, AuPd, CuPd	Au*, CuPdAu**

Die Attach Material	EN-4900G, EN-4900GC	EN-4900G, EN-4900GC	CRM1076DS
Molding Compound Material	G700LA	G700LA	EMEG770HCD
Lead-Frame Material	C194	C194	C194FH

Note* : Au wire material affects parts with 35.4k wafer technology

Note** : CuPdAu wire material affects parts with 35.5k wafer technology

Impacts to Datasheet: None

Change Impact: None

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

Change Implementation Status: In Progress

Estimated First Ship Date: 11 August 2025 (date code: 2533)

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

Timetable Summary:

	January 2024					>	July 2025					August 2025			
Work Week	01	02	03	04	05		27	28	29	30	31	32	33	34	35
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: January 26, 2024: Issued initial notification.

July 31, 2025: Issued final notification. Attached Qualification Report. Provided estimated first ship date to be on August 11, 2025.

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

Attachments:

[PCN_MFOL-25LWZY479_Qual_Report.pdf](#)

[PCN_MFOL-25LWZY479_Pre and Post Change Summary.pdf](#)

Please contact your local [Microchip sales office](#) with questions or concerns regarding this notification.

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Affected Catalog Part Numbers (CPN)

ATMEGA64A-MN
ATMEGA325P-20MU
ATMEGA329PV-10MN
ATMEGA329P-20MN
ATMEGA329P-20MNR
ATMEGA329PV-10MU
ATMEGA329P-20MU
ATMEGA329P-20MUR
ATMEGA329PV-10MUR
ATMEGA645-16MUR
ATMEGA325PV-10MU
ATMEGA325PV-10MUR
ATMEGA165P-16MU
ATMEGA165P-16MN
ATMEGA165P-16MNR
ATMEGA165P-16MUR
ATMEGA128L-8MUA5
ATMEGA128L-8MURA3
ATMEGA128-16MURA3
ATMEGA329A-MU
ATMEGA169PV-8MURA1
ATMEGA329V-8MU
ATMEGA329-16MU
ATMEGA325-16MU
ATMEGA325V-8MU
ATMEGA329V-8MUR
ATMEGA329-16MUR

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ATMEGA325-16MUR

ATMEGA325V-8MUR

ATMEGA649-16MU

ATMEGA645V-8MU

ATMEGA645V-8MUR

ATMEGA649-16MUR

ATMEGA128L-8MN

ATMEGA128A-MN

ATMEGA128-16MN

ATMEGA128-16MNR

ATMEGA128L-8MNR

ATMEGA128A-MNR

ATMEGA64L-8MQA5

ATMEGA649V-8MU

ATMEGA645-16MU

ATMEGA649V-8MUR

ATMEGA169P-16MU

ATMEGA169PV-8MU

ATMEGA165PV-8MU

ATMEGA169P-16MUR

ATMEGA169PV-8MUR

ATMEGA165PV-8MUR

ATMEGA64L-8MQ

ATMEGA64L-8MQR

ATMEGA165PA-MU

ATMEGA165A-MU

ATMEGA169PA-MU

ATMEGA169A-MU

ATMEGA165PA-MN

ATMEGA169PA-MN

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ATMEGA169PA-MNR

ATMEGA165PA-MNR

ATMEGA165PA-MUR

ATMEGA165A-MUR

ATMEGA169A-MUR

ATMEGA169PA-MUR

ATMEGA645P-MU

ATMEGA649A-MU

ATMEGA645A-MU

ATMEGA649A-MUR

ATMEGA645P-MUR

ATMEGA645A-MUR

ATMEGA649P-MU

ATMEGA649P-MUR

ATMEGA64A-MU

ATMEGA64-16MU

ATMEGA64L-8MU

ATMEGA64A-MUR

ATMEGA64-16MUR

ATMEGA64L-8MUR

ATMEGA128-16MU

ATMEGA128A-MU

ATMEGA128L-8MU

ATMEGA128A-MUR

ATMEGA128L-8MUR

ATMEGA128-16MUR

ATMEGA329PA-MU

ATMEGA325A-MU

ATMEGA325PA-MU

ATMEGA325A-MN

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ATMEGA325A-MNR

ATMEGA329PA-MUR

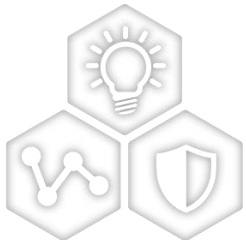
ATMEGA325A-MUR

ATMEGA325PA-MUR

CCB 6818
PCN ID#: MFOL-25LWZY479



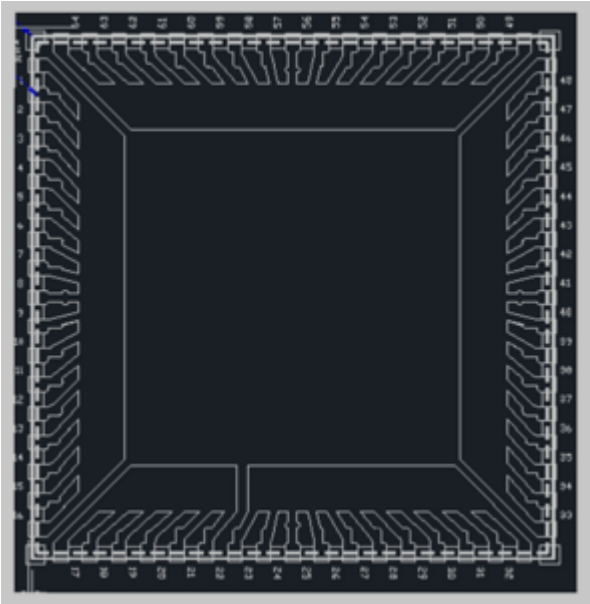
A Leading Provider of Smart, Connected and Secure Embedded Control Solutions



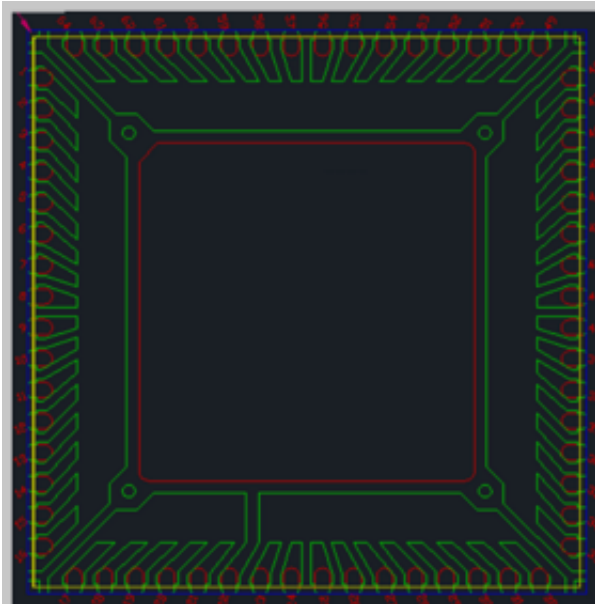
SMART | CONNECTED | SECURE

Pre and Post Summary – Leadframe Comparison

ASCL



ASEM



Leadframe Material

C194

Leadframe Material

C194FH

Note: Not to scale



QUALIFICATION REPORT SUMMARY
RELIABILITY LABORATORY

PCN #: MFOL-25LWZY479

Date:
July 4, 2025

**Qualification of ASEM as an additional assembly site for selected
ATMEGA128x, ATMEGA165xx, ATMEGA169xx, ATMEGA64x,
ATMEGA645xx, ATMEGA649xx, ATMEGA329xx, and ATMEGA325xx
device families available in 64L VQFN (9x9x1mm) package.**

Purpose: Qualification of ASEM as an additional assembly site for selected ATMEGA128x, ATMEGA165xx, ATMEGA169xx, ATMEGA64x, ATMEGA645xx, ATMEGA649xx, ATMEGA329xx, and ATMEGA325xx device families available in 64L VQFN (9x9x1mm) package.

CCB No.: 6818

<u>Misc.</u>	Assembly site	ASEM
	BD Number	BD-002128-01
	MP Code (MPC)	355597TEBC03
	Part Number (CPN)	ATMEGA645V-8MU
	MSL information	MSL1
	Assembly Shipping Media (T/R, Tube/Tray)	Tray
	Base Quantity Multiple (BQM)	260
	Reliability Site	MPHIL
<u>Lead-Frame</u>	Paddle size	228 X 228 mils (5.8 x 5.8mm)
	Material	C194FH
	DAP Surface Prep	Ring Ag plating
	Treatment	Roughened
	Process	Etched
	Lead-lock	Yes
	Part Number	170064226135UHD
	Lead Plating	Matte Sn
	Strip Size	258 x 78mm
	Strip Density	182 units/strip
<u>Bond Wire</u>	Material	CuPdAu
<u>Die Attach</u>	Part Number	CRM1076DS
	Conductive	Yes
<u>MC</u>	Part Number	EMEG770HCD
<u>PKG</u>	Package Type	VQFN
	Pin/Ball Count	64
	PKG width/size	9x9x1mm

Manufacturing Information:

Assembly Lot #
ASEM244900059.000
ASEM244900061.000
ASEM244900062.000

☒

Pass

☐

Fail

☐

Qualification for 35559 MCSO 350nm mask in 64L VQFN 9x9x1mm at ASEM is qualified Moisture/ Reflow Sensitivity Classification Level 1 at 260°C reflow temperature per IPC/JEDEC J-STD-020E standard. Pre-Conditioning, HAST, UHAST, TCT and HTSL Passed.

Package Qualification Report						
Test Number (Reference)	Test Condition	Standard/ Method	Qty. (Acc.)	Def/SS	Result	Remarks
Precondition Prior Perform Reliability Tests MSL-1 @ 260°C	External Visual inspection System: Luxo Lamp	JESD22-A113 JIP/ IPC/JEDEC J-STD-020E	693(0)	0/693	Pass	Good Devices
	Bake: 150°C, 24hrs System: HERAEUS	231 units per Lot	693(0)			
	Moisture Soak: 85°C/85%RH Moisture Soak 168hrs. System: Climats Excal 5423-HE		693(0)			
	Reflow: 3x Convection-Reflow 260°C max System: Mancorp CR.5000F		693(0)			
	Electrical Test: 25°C, 85°C ATE Testing: AMKOR, Shanghai		693(0)	0/693	Pass	

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: VOTSCH VT 7012 S2	JESD22-A104	231(0)			Parts had been pre-conditioned at 260°C
	Electrical Test: 85°C AMKOR, Shanghai		231(0)	0/231	Pass	
	Bond Strength: Wire Pull (min. bond strength of 3gram)		30bonds (0)	0/30		
UFAST	Stress Condition: +130°C/85%RH, 96H System: HIRAYAMA HASTEST PC-422R8	JESD22-A110	231(0)			Parts had been pre-conditioned at 260°C
	Electrical Test: 25°C AMKOR, Shanghai		231(0)	0/231	Pass	
HAST	Stress Condition: +130°C/85%RH, 96H System: HIRAYAMA HASTEST PC-422R8	JESD22-A118	231(0)			Parts had been pre-conditioned at 260°C
	Electrical Test: 25°C, 85°C AMKOR, Shanghai		231(0)	0/231	Pass	
HTSL	Stress Condition: Bake 175°C, 504H System: HERAEUS	JESD22-A103	45 (0)			
	Electrical Test: 25°C, 85°C AMKOR, Shanghai		45 (0)	0/45	Pass	
Solderability Temp 245°C	Bake: Temp 155°C,4Hrs System: Oven Solder Bath: Temp.245°C	J-STD-002	22 (0)	0/22	Pass	
Bond Strength	Wire Pull 1 lot, 30 bonds from 5 units min	M2011.8 MIL-STD-883	30(0) bonds	0/30	Pass	
	Bond Shear 1 lot, 20 bonds from 5 units min	M2011.8 MIL-STD-883	20(0) bonds	0/30	Pass	