



## Product Change Notification / MFOL-19PQSR188

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**Date:**

03-Oct-2022

**Product Category:**

8-bit Microcontrollers

**PCN Type:**

Manufacturing Change

**Notification Subject:**

CCB 3397.007 Initial Notice: Qualification of MPHL as an additional final test site for ATMEGA328PB-MU, ATMEGA328PB-MN, ATMEGA328PB-MNR, and ATMEGA328PB-MUR catalog part numbers available in 32L VQFN (5x5x0.9mm) package.

**Affected CPNs:**

[MFOL-19PQSR188\\_Affected\\_CPN\\_10032022.pdf](#)

[MFOL-19PQSR188\\_Affected\\_CPN\\_10032022.csv](#)

**Notification Text:**

**PCN Status:**Initial 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 MPHL as an additional final test site for ATMEGA328PB-MU, ATMEGA328PB-MN, ATMEGA328PB-MNR, and ATMEGA328PB-MUR catalog part numbers available in 32L VQFN (5x5x0.9mm) package.

**Pre and Post Change Summary:**

		Pre Change	Post Change	
Final Test Site		ASE Inc. (ASE)	ASE Inc. (ASE)	Microchip Technology Operations (Philippines) Corporation (MPHL)
Base Quantity Multiple (BQM)	Tape and Reel	6000	6000	6000
	Tray	490	490	490
Pin 1 Orientation	Tape and Reel	Quadrant 2	Quadrant 2	Quadrant 2
	Tray	Near chamfer tray	Near chamfer tray	Near chamfer tray
Carrier Tape		No dimensional change. See Pre and Post change comparison.		
Cover Tape		With minor dimensional change. See Pre and Post change comparison.		
Reel		With minor dimensional change. See Pre and Post change comparison.		
Tray		No dimensional change. See Pre and Post change comparison.		
Moisture Barrier Bag	Tape and Reel	With minor dimensional change. See Pre and Post change comparison.		
	Tray	See Pre and Post change comparison.		
Carton Box	Tape and Reel	With minor dimensional change. See Pre and Post change comparison.		
	Tray	With minor dimensional change. See Pre and Post change comparison.		

**Impacts to Data Sheet:**None

**Change Impact:**None

**Reason for Change:**To improve on-time delivery performance by qualifying MPHL as an additional final test site.

**Change Implementation Status:**In Progress

**Estimated Qualification Completion Date:**December 2022

Note: Please be advised the qualification completion times may be extended because of unforeseen business conditions however implementation will not occur until after qualification has completed and

a final PCN has been issued. The final PCN will include the qualification report and estimated first ship date. Also note that after the estimated first ship date guided in the final PCN customers may receive pre and post change parts.

#### Time Table Summary:

	October 2022					>	December 2022				
Workweek	4 1	4 2	4 3	4 4	4 5		49	50	51	52	53
Initial PCN Issue Date	x										
Qual Report Availability								x			
Final PCN Issue Date								x			

**Method to Identify Change:**Traceability code

**Qualification Plan:**Please open the attachments included with this PCN labeled as PCN\_#\_Qual\_Plan.

**Revision History:**October 03, 2022: Issued initial 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\\_MFOL-19PQSR188\\_Pre and Post\\_Change Summary.pdf](#)  
[PCN\\_MFOL-19PQSR188\\_Qual Plan.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.



**QUALIFICATION PLAN SUMMARY  
RELIABILITY LABORATORY**

**PCN #: MFOL-19PQSR188**

**Date:  
September 07, 2022**

**Qualification of MPHL as an additional final test site for  
ATMEGA328PB-MU, ATMEGA328PB-MN, ATMEGA328PB-  
MNR, and ATMEGA328PB-MUR catalog part numbers  
available in 32L VQFN (5x5x0.9mm) package.**



## **MICROCHIP**

### PACKAGE QUALIFICATION PLAN

**Purpose**      **Qualification of MPHL as an additional final test site for ATMEGA328PB-MU, ATMEGA328PB-MN, ATMEGA328PB-MNR, and ATMEGA328PB-MUR catalog part numbers available in 32L VQFN (5x5x0.9mm) package.**

**CCB No.**      **3397.007**

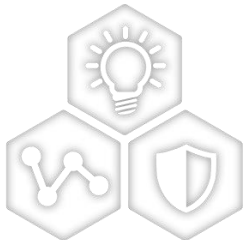
Test / Evaluation	Test Condition / Parameters
Datalog/Bin Comparison	<ul style="list-style-type: none"><li>• Compare test numbers, test names, test sequence bin assignments &amp; pass/fail results</li><li>• Accept if all match or justify the differences</li></ul>
Site by Site verification	<ul style="list-style-type: none"><li>• Verifies the channel map has the correct site assignments and tester/handler communications work correctly</li></ul>
Correlation Lot Report	<ul style="list-style-type: none"><li>• Yield at each step and reject analysis between systems. 5K units are tested for each program conversion we perform.</li><li>• Accept on yield match within 0.1%</li></ul>
Unit to Unit Parametric Correlation	<ul style="list-style-type: none"><li>• A full assembly strip characterized on both systems and graphed vs each other &amp; the data sheet limits</li></ul>
Test Stability	<ul style="list-style-type: none"><li>• 50 loop tests performed with no datalog delays</li><li>• Accept on 0 fails</li></ul>
Parametric Test Stability Verification	<ul style="list-style-type: none"><li>• Use Real Time Statistics software to create CPK report of all parametric tests</li></ul>

**CCB# 3397.007**  
**PCN #: MFOL-19PQSR188**



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# Pre and Post Change Summary – Tape and Reel

	ASE9	MPHL
<b>Base Quantity Multiple (BQM)</b>	Units per reel: 6000 1 reel per bag	Units per reel: 6000 1 reel per bag
<b>Pin 1 Orientation</b>	Quadrant 2	Quadrant 2

# Pre and Post Change Summary – Reel

ASE9	MPHL
	

Plant	Reel Diameter (mm)	Reel Hub Suze (mm)	Reel Width 1 Max (mm)		Reel Width 2 Max (mm)		Reel Color
ASE9	330 mm	102 mm	4.4 mm	8.4 mm	7.1 mm	11.1 mm	White
MPHL	330 mm	100 mm +/- 1.5	12.4 mm		18.4 mm		White



# Pre and Post Summary (T/R) Carrier Tape

Plant	W (mm)	P (mm)	A0 (mm)	B0 (mm)	K0 (mm)
ASE9	12 mm	8 mm	5.25 mm	5.25 mm	1.1 mm
MPHL	12.0 +0.3/- .1 mm	8.0 +/- 0.1 mm	5.25 +/- 0.1 mm	5.25 +/- 0.1 mm	1.10 +/- 0.1 mm

## Pre and Post Summary (T/R) Cover Tape

Plant	W (mm)	Color	Sealing Mythology
ASE9	9.2 mm	Clear White	Heat Seal
MPHL	9.3 mm	Clear White	Pressure Seal

# Pre and Post Change Summary – T/R Moisture Barrier Bag

**ASE9**



**MPHL**



Plant	Length (mm)	Width (mm)
ASE9	495 mm	430 mm
MPHL	457 mm	406 mm

# Pre and Post Change Summary – T/R Carton Box

ASE9



MPHL



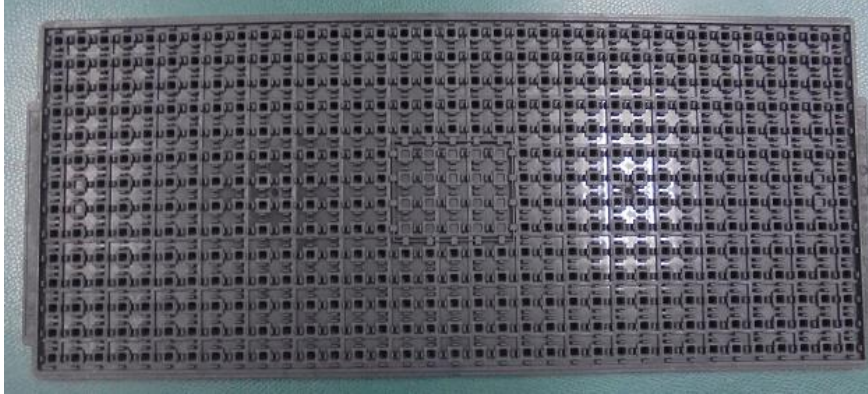
Plant	Length (mm)	Width (mm)	Height (mm)
ASE9	370 mm	351 mm	53 mm
MPHL	375 mm	352 mm	53 mm

## Pre and Post Change Summary - Tray

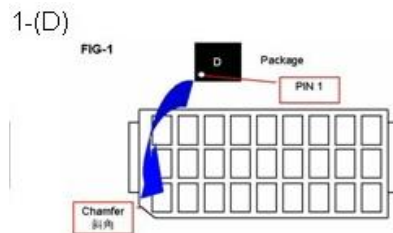
	ASE9	MPHL
<b>Base Quantity Multiple (BQM)</b>	Units per tray: 490	Units per tray: 490
<b>Pin 1 Orientation</b>	Near tray chamfer	Near tray chamfer

# Pre and Post Change Summary – Tray

## ASE9



10+1



## MPHL

10 full trays + 1  
empty tray cover

PP Strapping: 3  
crosswise & 1  
lengthwise



# Pre and Post Change Summary – Tray Moisture Barrier Bag

ASE9



MPHL



# Pre and Post Change Summary – Tray Carton Box

ASE9



MPHL



Plant	Length (mm)	Width (mm)	Height (mm)
ASE9	371.5 mm	162 mm	88 mm
MPHL	371 mm	162 mm	88 mm



MFOL-19PQSR188 - CCB : ATMEGA3: ATMEGA3: and ATMEGA328PB-MUR catalog part numbers available

Affected Catalog Part Numbers(CPN)

ATMEGA328PB-MU  
ATMEGA328PB-MN  
ATMEGA328PB-MNR  
ATMEGA328PB-MUR