



## Product Change Notification / RMES-02XQHS264

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**Date:**

30-Jan-2023

**Product Category:**

32-bit Microcontrollers

**PCN Type:**

Manufacturing Change

**Notification Subject:**

CCB 3658.006 Final Notice: Qualification of MPHL as an additional final test site for selected ATSAML21G1xB device family available in 48L VQFN (7x7x0.9mm) package.

**Affected CPNs:**

[RMES-02XQHS264\\_Affected\\_CPN\\_01302023.pdf](#)  
[RMES-02XQHS264\\_Affected\\_CPN\\_01302023.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 MPHL as an additional final test site for selected ATSAML21G1xB device family available in 48L VQFN (7x7x0.9mm) package.

**Pre and Post Change Summary:**

	Pre Change	Post Change
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Final Test Site		ASE Test (ASE9)	ASE Test (ASE9)	Microchip Technology Operations (Philippines) Corporation (MPHL)
Base Quantity Multiple (BQM)	Tape and Reel	4000 units per reel	4000 units per reel	4000 units per reel
Pin Orientation	Tape and Reel	Quadrant 1	Quadrant 1	Quadrant 1
Carrier Tape		No dimensional changes. See pre and post change comparison.		
Cover Tape		With dimensional changes. See pre and post change comparison.		
Reel		With dimensional changes. See pre and post change comparison.		
Packing Process		See pre and post change comparison.		

**Impacts to Data Sheet:**None

**Change Impact:**None

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

**Change Implementation Status:**In Progress

**Estimated First Ship Date:**July 12, 2022 (date code: 2229)

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

**Time Table Summary:**

	December 2021				>	June 2022					July 2022				
Workweek	49	50	51	52		23	24	25	26	27	28	29	30	31	32
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:**

**December 10, 2021:** Issued initial notification.

**June 11, 2022:** Issued final notification. Attached is the qualification report. Provided estimated first ship date on July 12, 2022.

**January 30, 2023:** Re-issued final notification. Corrected ASE9 plastic reel W1 and W2 in Pre and Post change summary.

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-02XQHS264\\_Pre\\_and Post\\_Change Summary.pdf](#)

[PCN\\_RMES-02XQHS264\\_Qual\\_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.

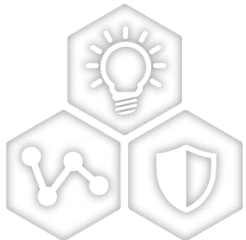
If you wish to change your PCN profile, including opt out, please go to the [PCN home page](#) select login and sign into your myMicrochip account. Select a profile option from the left navigation bar and make the applicable selections.

**CCB 3658.006**  
**Pre and Post Change Summary**  
**PCN #: RMES-02XQHS264**



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# Pre and Post Change Summary

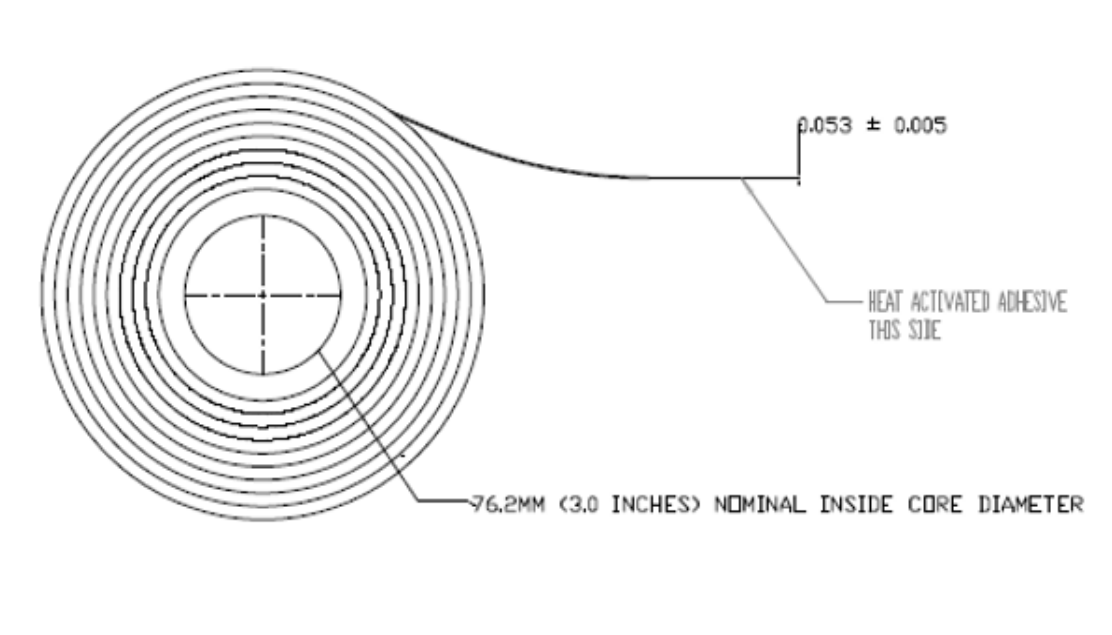
		ASE9	MPHL
Final Test Location		ASE Test (ASE9)	Microchip Technology Operations (Philippines) Corporation (MPHL)
Base Quantity Multiple (BQM)	Tape and Reel	4000 units per reel - No changes	
Pin 1 Orientation		Quadrant 1 – No changes	

# Pre and Post Change Summary – Carrier Tape

Plant	Width (mm)	Pitch (mm)	A0 (mm)	B0 (mm)	K0 (mm)
ASE9	16	12	7.25 +/-0.10	7.25 +/-0.10	1.10 +/-0.10
MPHL	16	12	7.25 +/-0.10	7.25 +/-0.10	1.10 +/-0.10

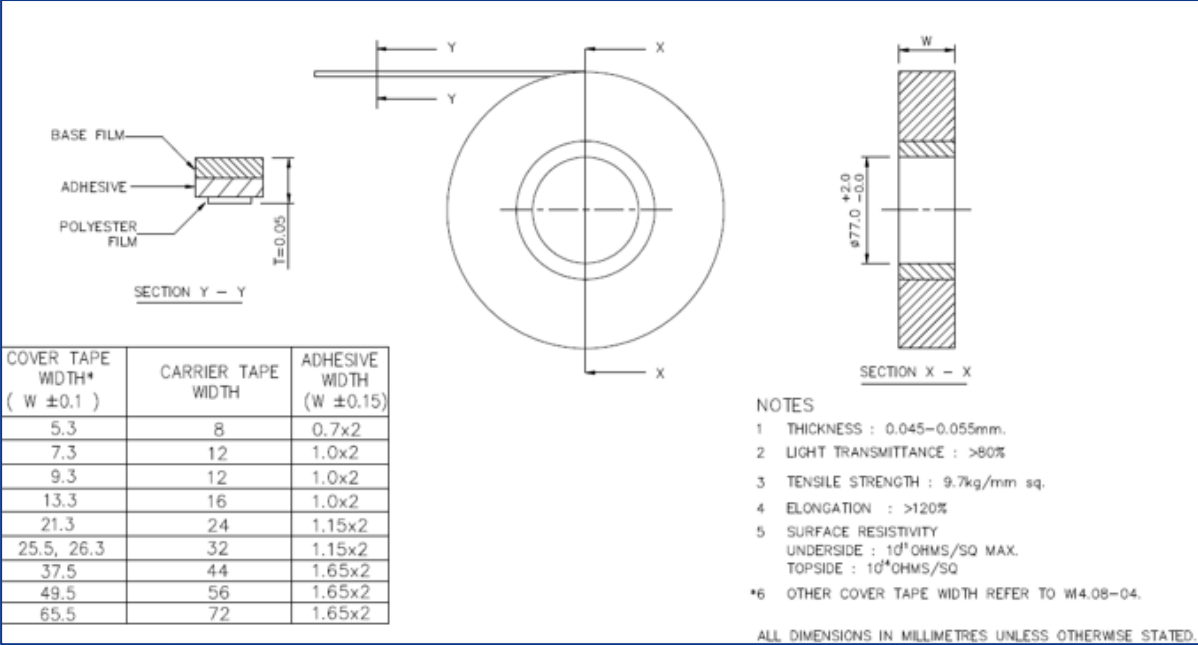
# Pre and Post Change Summary – Cover Tape

## ASE9



Cover tape color	Width $\pm 0.1$ (mm)	Thickness $\pm 0.005$ (mm)	Sealing Methodology
Clear	13.3 mm	0.053+/-0.005	Heat Seal

## MPHL



Cover tape color	Width $\pm 0.1$ (mm)	Thickness $\pm 0.005$ (mm)	Sealing Methodology
Clear	13.3 mm	0.050	Pressure Seal Activated

# Pre and Post Change Summary – Plastic Reel

ASE9



Reel Color	Reel diameter (mm)	Hub (mm)	W1 +0.3 /-0	W2 (mm) Max
White	330	102	16.8	22.2

MPHL



Reel Color	Reel diameter (mm)	Hub (mm)	W1 +0.3 /-0	W2 (mm) Max
White	330	100	17.5	21.5

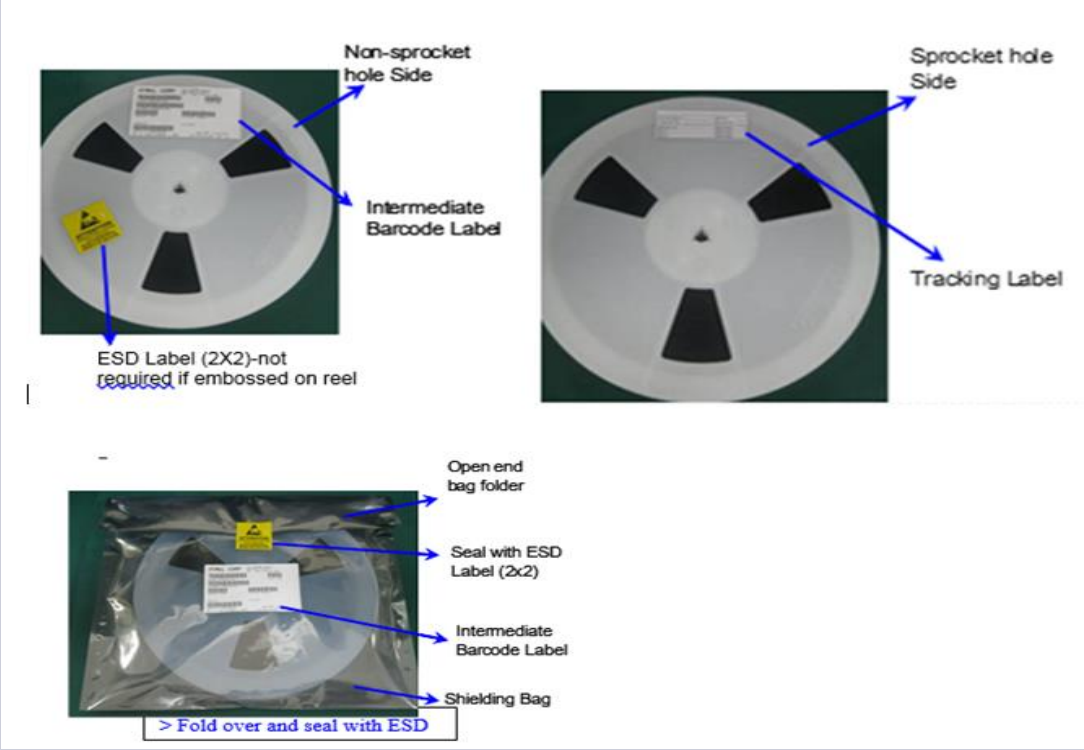


# Packing Method – Tape and Reel

## ASE9



## MPHL (MSL 1 – No inner box)



Affected Catalog Part Numbers (CPN)

ATSAML21G16B-MNT

ATSAML21G17B-MNT

ATSAML21G18B-MNT

ATSAML21G18B-MNT-SLL

ATSAML21G17B-MNT-SLL

ATSAML21G16B-MUT

ATSAML21G17B-MUT

ATSAML21G18B-MUT

ATSAML21G18B-MUT-SLL



## **QUALIFICATION REPORT SUMMARY**

**PCN #: RMES-02XQHS264**

**Date:**  
**June 3, 2022**

**Qualification of MPHL as an additional final test site for selected  
ATSAML21G1xB device family available in 48L VQFN (7x7x0.9mm)  
package.**

**Purpose:** Qualification of MPHL as an additional final test site for selected ATSAM L21G1xB device family available in 48L VQFN (7x7x0.9mm) package.

**CCB No.:** 3658.006

Test / Evaluation	Test Conditions / Parameters	Result
Loadboard Validation and Test Program Validation	<ul style="list-style-type: none"><li>FS@25°C: All 60 Sites Pass All Tests</li><li>RS@25°C: All 60 Sites Pass All Tests</li></ul>	PASSED
Site by Site Verification	<ul style="list-style-type: none"><li>New LB, New adaptor board (Channel Map)</li><li>Verify the communication among Tester OI - Handler - Cell Controller</li></ul>	PASSED
Datalog Comparison	<ul style="list-style-type: none"><li>FS@25°C: All 60 Sites Pass All Tests</li><li>RS@25°C: All 60 Sites Pass All Tests</li></ul>	PASSED
Stability Test	To be done on all insertion FS@25°C and RS@25°C, <ul style="list-style-type: none"><li>50 loops on 1 Touch Down (60 Sites) with No Datalog (Accept on 0 Failure)</li><li>Cpk Analysis on All Parametric Tests - 50 loops (CalOnce) on 1 Touch Down (60 Sites) with CSV (Accept on Cpk &gt; 1.67 or Explainable)</li></ul>	PASSED
Parametric Correlation	To be done on all insertion FS@25°C and RS@25°C <ul style="list-style-type: none"><li>Compare MagnumSV and D2X_TH measurements on all Parametric Tests on 1 Touch Down (60 Sites)</li></ul>	PASSED
Lot Cross Correlation	Test 1 lot in D2X Strip Test in MPHL <ul style="list-style-type: none"><li>Compare Results, Accept on (Final Yield - 1st Pass Yield) &lt; 2%, Tester Summary matches Cell Controller Summary, Correlated Good/Rejected units)</li><li>Retest Same Lot at SINGL in MPHL for cross-correlation, result must be 100% correlated or explainable</li></ul>	PASSED