



## Product Change Notification / RMES-05OITM593

---

### Date:

06-Jan-2022

### Product Category:

Smart Energy SOC

### PCN Type:

Manufacturing Change

### Notification Subject:

CCB 3345.001 Initial Notice: Qualification of MPHL as an additional final test site for selected Atmel ATSAM4Cxxx device family available in 100L LQFP (14x14x1.4mm) package.

### Affected CPNs:

[RMES-05OITM593\\_Affected\\_CPN\\_01062022.pdf](#)  
[RMES-05OITM593\\_Affected\\_CPN\\_01062022.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 selected Atmel ATSAM4Cxxx device family available in 100L LQFP (14x14x1.4mm) package.

### Pre and Post Change Summary:

	Pre Change	Post Change	
Final Test Site	ASE Test (ASE9)	ASE Test (ASE9)	Microchip Technology Operations

				(Philippines) Corporation (MPHL)
<b>Base Quantity Multiple (BQM)</b>	Tape and Reel	3000 and 15000	3000 and 15000	3000 and 15000
	Tray	90	90	90
<b>Pin 1 orientation</b>	Tape and Reel	Quadrant 1	Quadrant 1	Quadrant 1
	Tray	Near Chamfer side	Near Chamfer side	Near Chamfer side
<b>Carrier Tape</b>		With dimensional changes (see attached)		
<b>Cover Tape</b>		With dimensional changes (see attached)		
<b>Reel</b>	<b>Color</b>	White & Blue	White	White
	<b>Dimension</b>	With dimensional changes. See attached Pre and Post comparison.		
<b>Packing Method</b>		See attached Pre and Post comparison		

**Impacts to Data Sheet:** None

**Change Impact:** None

**Reason for Change:** To improve manufacturability by qualifying MPHL as an additional final test site.

**Change Implementation Status:** In Progress

**Estimated Qualification Completion:** January 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:**

	January 2022				
Workweek	01	02	03	04	05
Initial PCN Issue Date		X			
Qual Report Availability					X
Final PCN Issue Date					X

**Method to Identify Change:** Traceability

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

**Revision History: January 06, 2021:** 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\_RMES-05OITM593\_Pre and Post Change Summary.pdf  
PCN\_RMES-05OITM593\_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.

Affected Catalog Part Numbers (CPN)

ATSAM4CMS32CB-AU  
ATSAM4CMP32CB-AU  
ATSAM4CMS32CB-AUR  
ATSAM4CMP32CB-AUR  
ATSAM4C16CB-AU  
ATSAM4C8CB-AU  
ATSAM4C4CB-AU  
ATSAM4C16CB-AUR  
ATSAM4C8CB-AUR  
ATSAM4C4CB-AUR

# CCB 3345.001

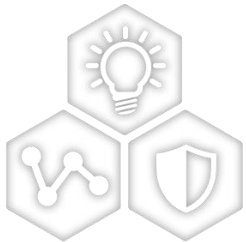
## Pre and Post Change Summary

### PCN #: RMES-05OITM593



---

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



SMART | CONNECTED | SECURE

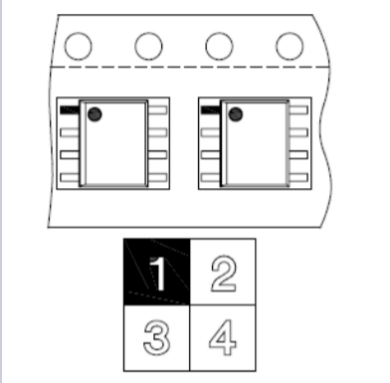
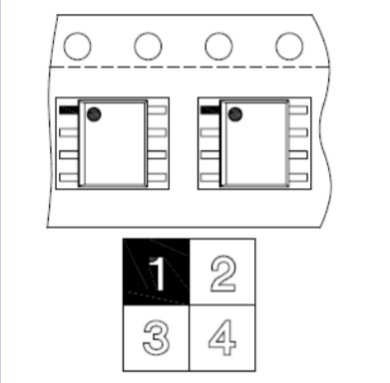
# List of Catalog Part Numbers

Catalog Part Number
ATSAM4C16CB-AUR
ATSAM4C8CB-AUR
ATSAM4C4CB-AUR

# 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	1500	1500

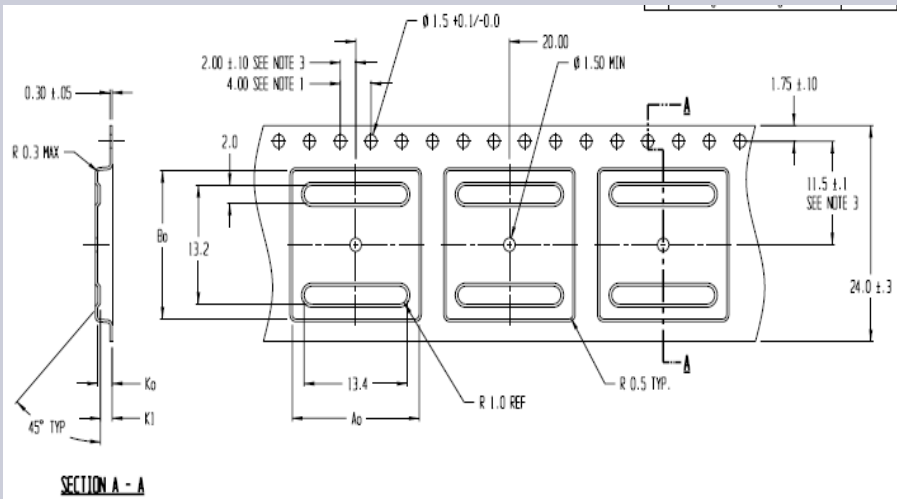
# Pre and Post Change Summary – Pin 1 Orientation

		ASE9	MPHL
Pin 1 Orientation	Tape and Reel		
		Quadrant 1	Quadrant1

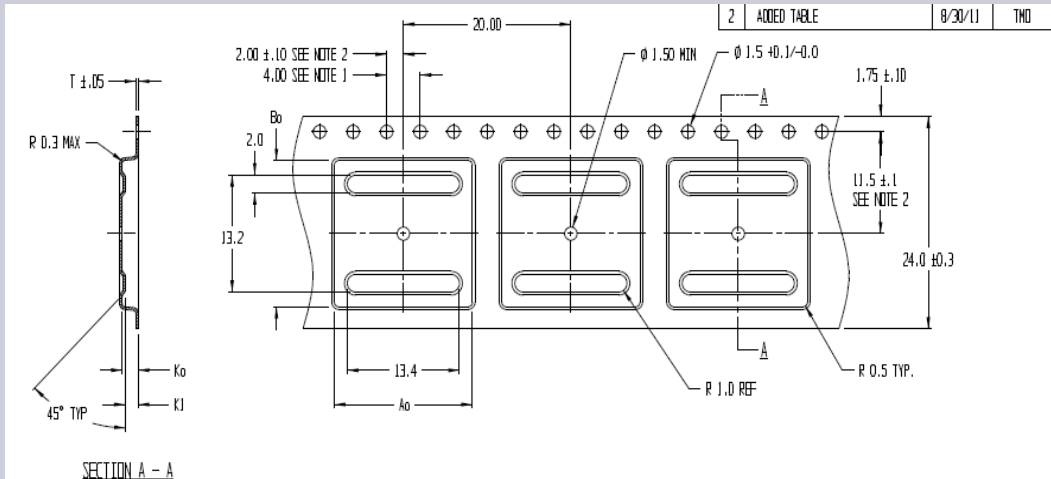


# Pre and Post Change Summary – Carrier Tape

ASE9



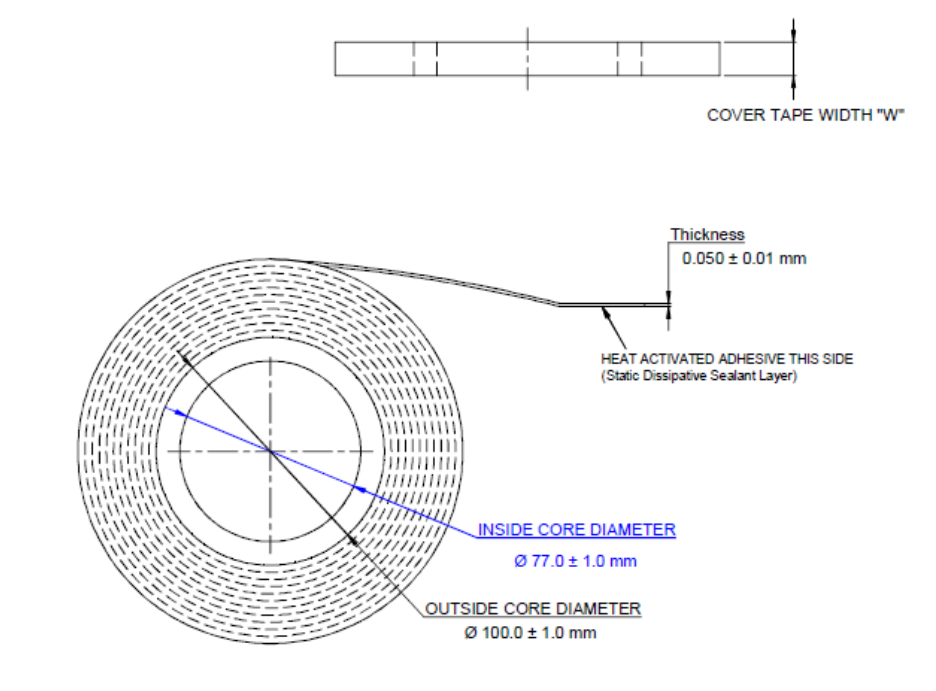
MPHL



Plant	Width (mm)	Pitch (mm)	A0 (mm)	B0 (mm)	K0 (mm)	T (mm)	Color
ASE9	24	20	16.50	16.50	1.90	0.3	Black
MPHL	24	20	16.50	16.50	1.90	0.3	Black

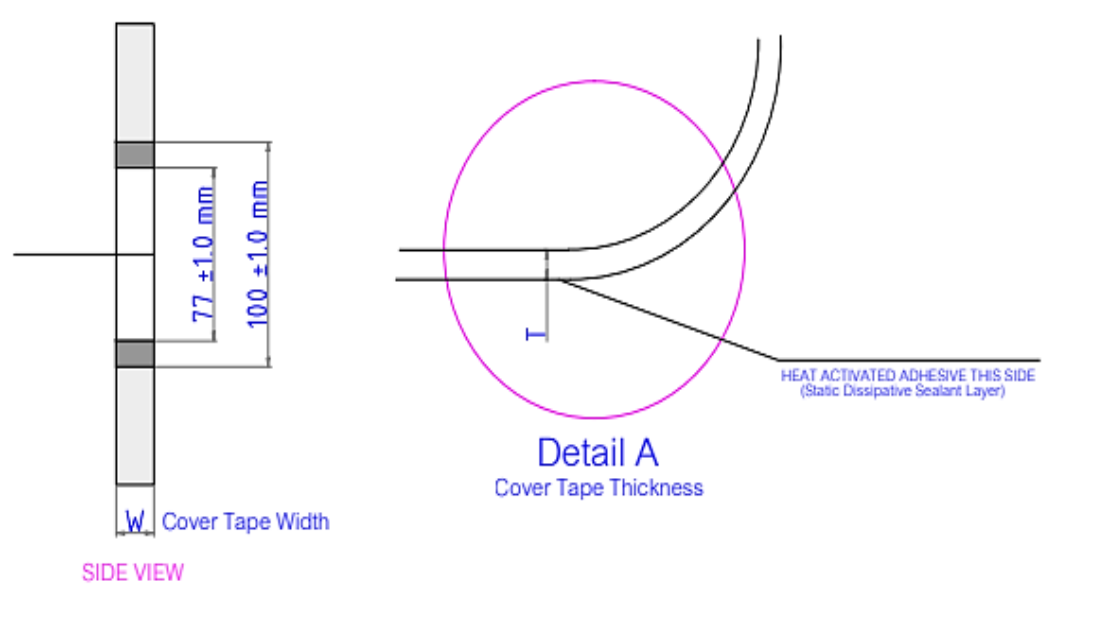
# Pre and Post Change Summary – Cover Tape

## ASE9



Cover tape color	Width $\pm 0.1$ (mm)	Thickness $\pm 0.005$ (mm)	Sealing Methodology
Clear	21	0.056	Heat Seal

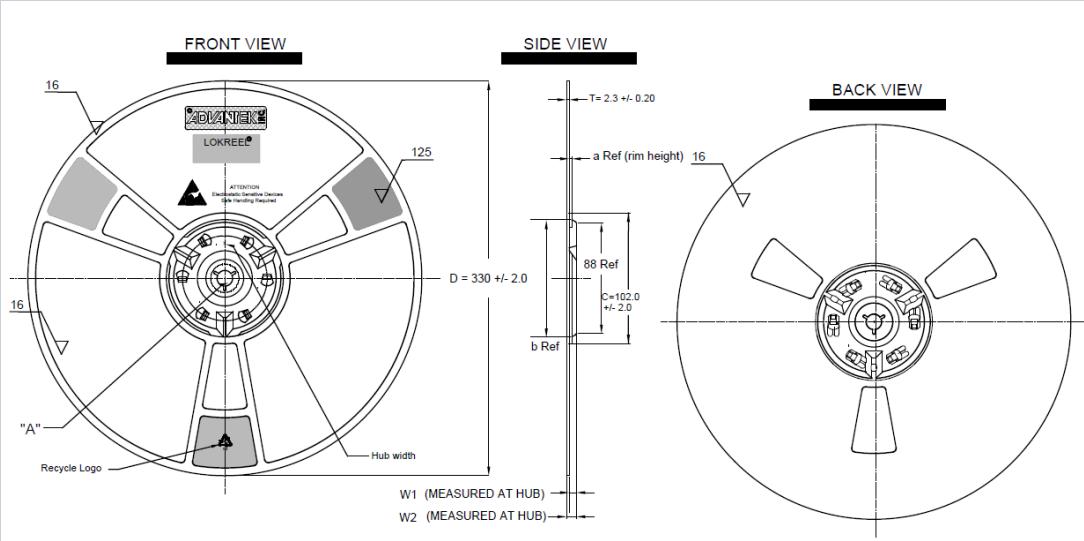
## MPHL



Cover tape color	Width $\pm 0.1$ (mm)	Thickness $\pm 0.005$ (mm)	Sealing Methodology
Clear	21.3	0.050 +/-0.005	Pressure Seal Activated

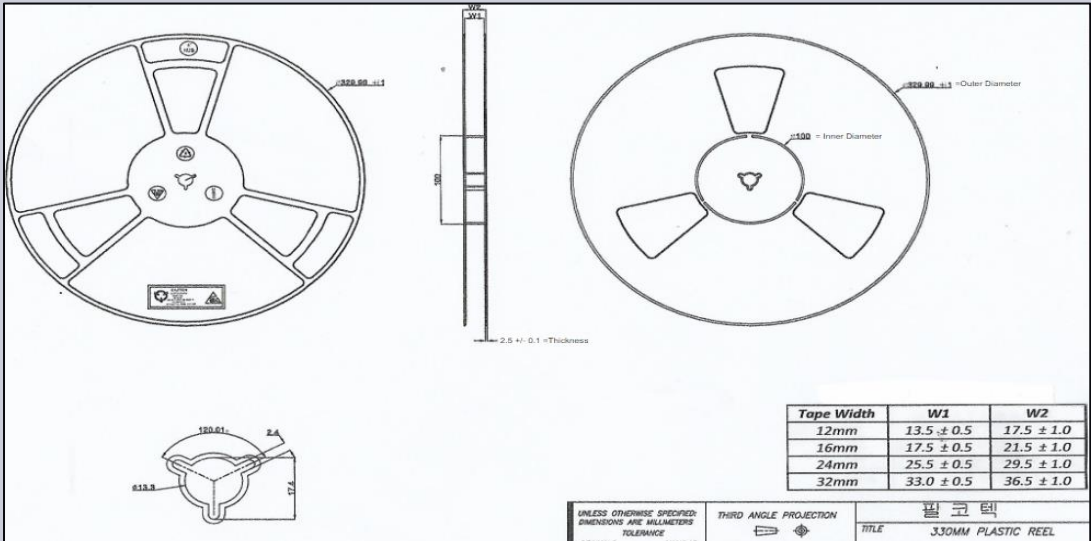
# Pre and Post Change Summary – Plastic Reel

## ASE9



Reel Color	Reel diameter (mm)	Hub (mm)
White	330	102

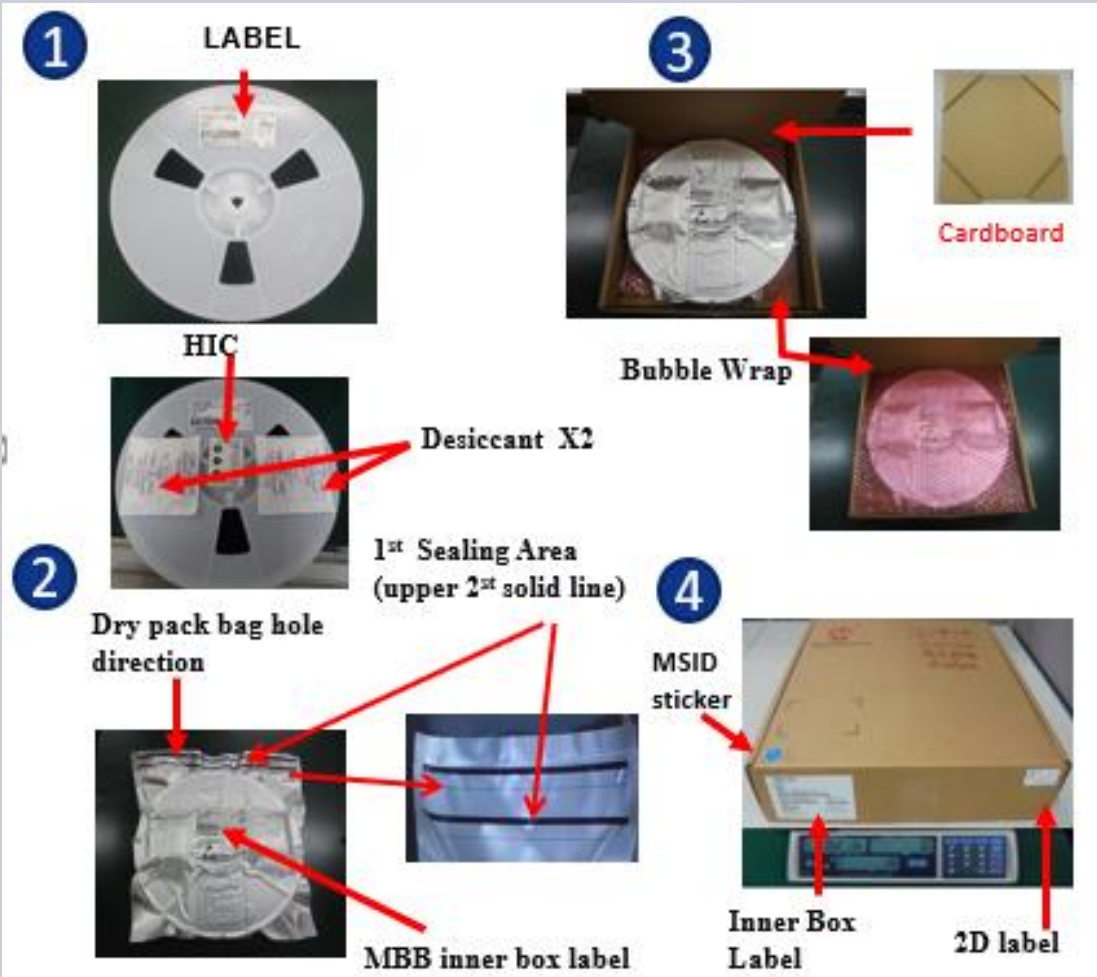
## MPHL



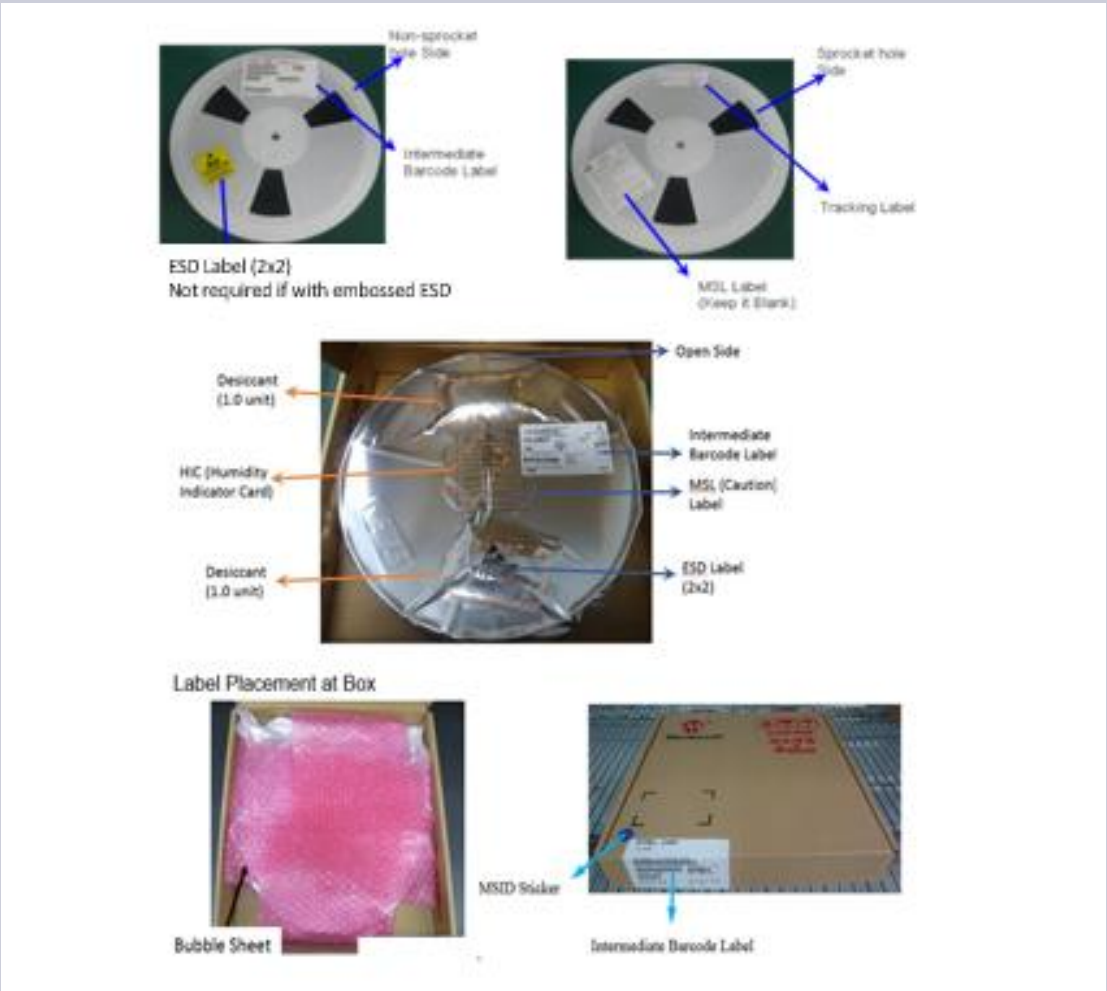
Reel Color	Reel diameter (mm)	Hub (mm)
White	330	100

# Packing Method – Tape and Reel

## ASE9



## MPHL



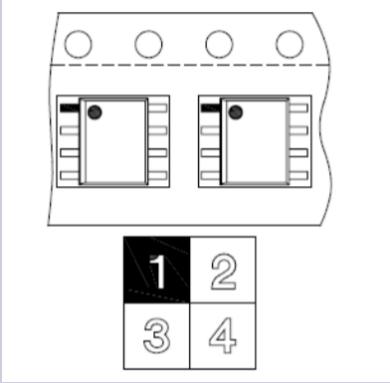
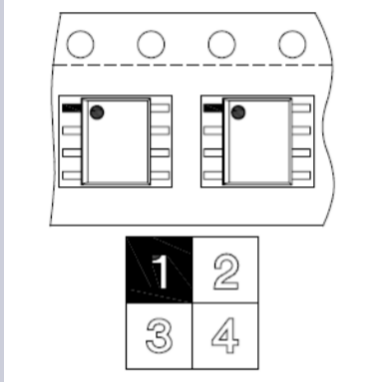
# List of Catalog Part Numbers

Catalog Part Number
ATSAM4CMS32CB-AUR
ATSAM4CMP32CB-AUR

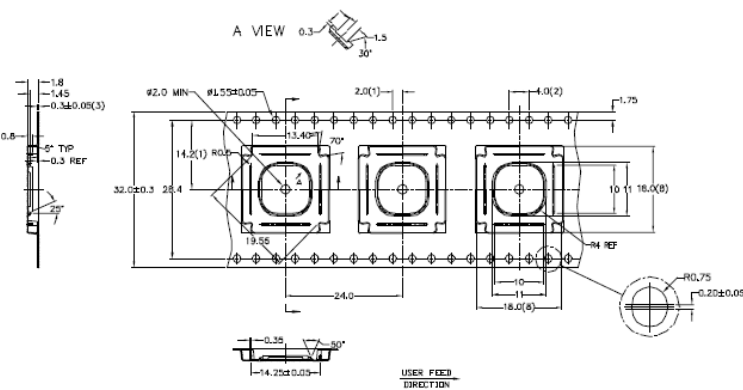
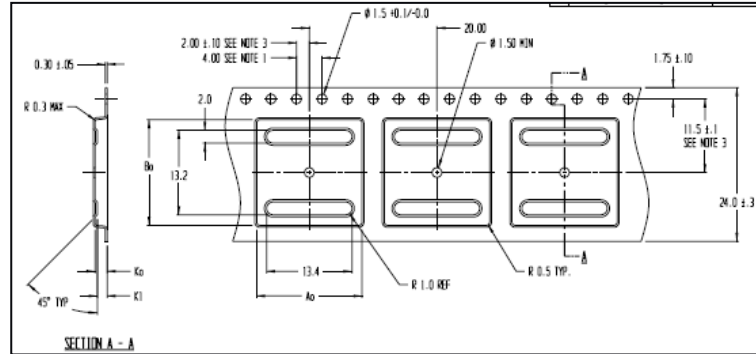
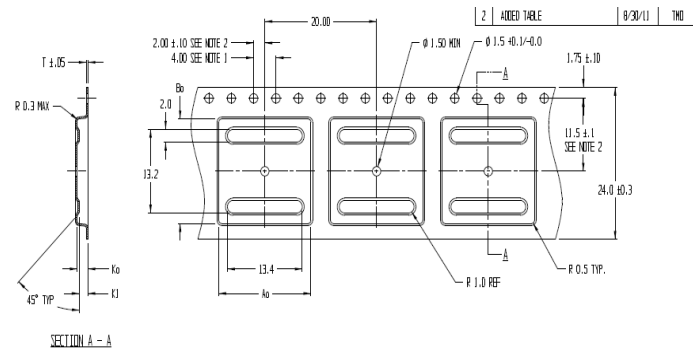
# Pre and Post Change Summary

		ASE9	MPHL
Final Test Location		ASE Test (ASE9)	Microchip Technology Operations (Philippines) Corporation (MPHL)
Base Quantity Multiple (BQM)	Tape and Reel	1000	1000

# Pre and Post Change Summary – Pin 1 Orientation

		ASE9	MPHL
Pin 1 Orientation	Tape and Reel	 <p>Diagram showing the ASE9 package pin 1 orientation. The package is shown in a top-down view with four pins. The pin 1 orientation is indicated by a black square with the number 1 in the top-left corner of a 2x2 grid. The grid is labeled 1, 2, 3, 4.</p>	 <p>Diagram showing the MPHL package pin 1 orientation. The package is shown in a top-down view with four pins. The pin 1 orientation is indicated by a black square with the number 1 in the top-left corner of a 2x2 grid. The grid is labeled 1, 2, 3, 4.</p>
		Quadrant 1	Quadrant1

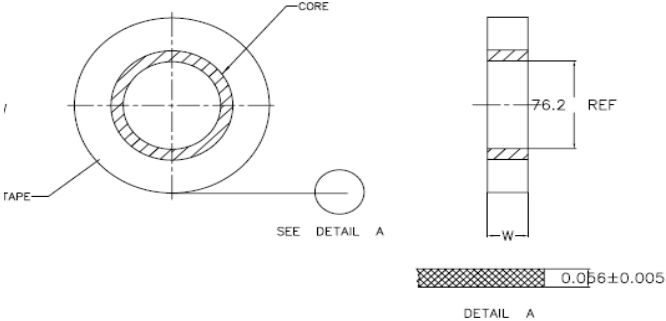
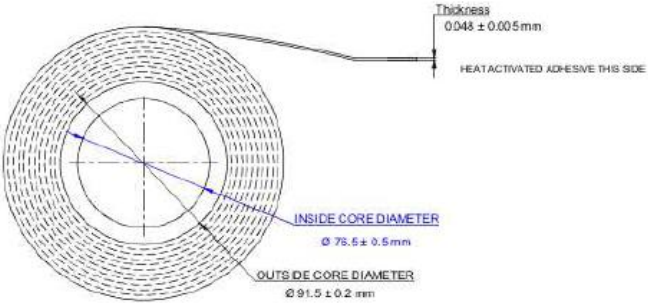
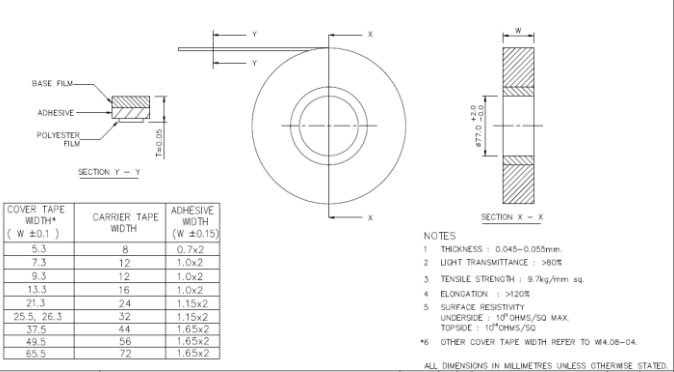
# Pre and Post Change Summary – Carrier Tape

Pre Change		Post Change	
ASE9		ASE9	MPHL
			

	Plant	Width (mm)	Pitch (mm)	A0 (mm)	B0 (mm)	K0 (mm)	Thickness (mm)
PRE CHANGE	ASE9	32	24	14	14	1.80	0.30
POST CHANGE	ASE9	24	20	16.5	16.5	1.90	0.30
	MPHL	24	20	16.50	16.50	1.90	0.30



# Pre and Post Change Summary – Cover Tape

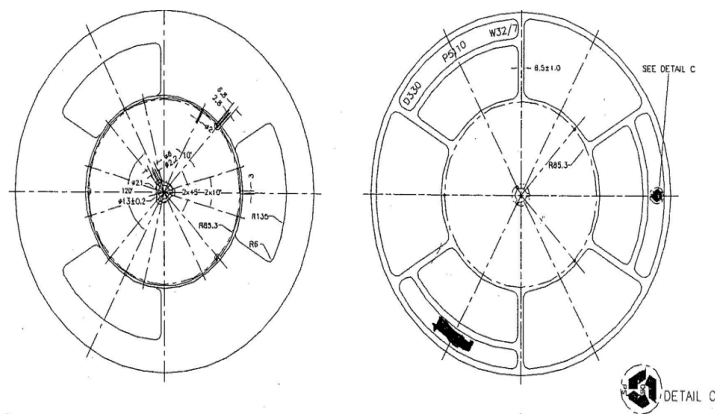
Pre Change	Post Change																															
ASE9	ASE9	MPHL																														
		 <table border="1"><thead><tr><th>COVER TAPE WIDTH* (W ±0.1)</th><th>CARRIER TAPE WIDTH</th><th>ADHESIVE WIDTH (W ±0.15)</th></tr></thead><tbody><tr><td>5.3</td><td>8</td><td>0.7x2</td></tr><tr><td>7.3</td><td>12</td><td>1.0x2</td></tr><tr><td>9.3</td><td>12</td><td>1.0x2</td></tr><tr><td>13.3</td><td>16</td><td>1.0x2</td></tr><tr><td>21.3</td><td>24</td><td>1.15x2</td></tr><tr><td>25.5, 26.3</td><td>32</td><td>1.15x2</td></tr><tr><td>37.5</td><td>44</td><td>1.65x2</td></tr><tr><td>49.5</td><td>56</td><td>1.65x2</td></tr><tr><td>65.5</td><td>72</td><td>1.65x2</td></tr></tbody></table> <p>NOTES 1 THICKNESS : 0.045-0.055mm. 2 LIGHT TRANSMITTANCE : &gt;80% 3 TENSILE STRENGTH : 9.7kg/mm sq. 4 ELONGATION : &gt;120% 5 SURFACE RESISTIVITY UNDERSIDE : 10<sup>10</sup> OHMS/SQ MAX. TOPSIDE : 10<sup>10</sup> OHMS/SQ. *6 OTHER COVER TAPE WIDTH REFER TO W4.08-04. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE STATED.</p>	COVER TAPE WIDTH* (W ±0.1)	CARRIER TAPE WIDTH	ADHESIVE WIDTH (W ±0.15)	5.3	8	0.7x2	7.3	12	1.0x2	9.3	12	1.0x2	13.3	16	1.0x2	21.3	24	1.15x2	25.5, 26.3	32	1.15x2	37.5	44	1.65x2	49.5	56	1.65x2	65.5	72	1.65x2
COVER TAPE WIDTH* (W ±0.1)	CARRIER TAPE WIDTH	ADHESIVE WIDTH (W ±0.15)																														
5.3	8	0.7x2																														
7.3	12	1.0x2																														
9.3	12	1.0x2																														
13.3	16	1.0x2																														
21.3	24	1.15x2																														
25.5, 26.3	32	1.15x2																														
37.5	44	1.65x2																														
49.5	56	1.65x2																														
65.5	72	1.65x2																														

	Plant	Cover tape Width "W" (mm)	Thickness (mm)	Cover tape color	Sealing Methodology
PRE CHANGE	ASE9	25.5	0.056	Clear	Heat
POST CHANGE	ASE9	21.0	0.048 +/- 0.005	Clear	Heat Seal Activated
	MPHIL	21.3	0.050 +/- 0.005	Clear	Pressure Seal Activated

# Pre and Post Change Summary – Plastic Reel

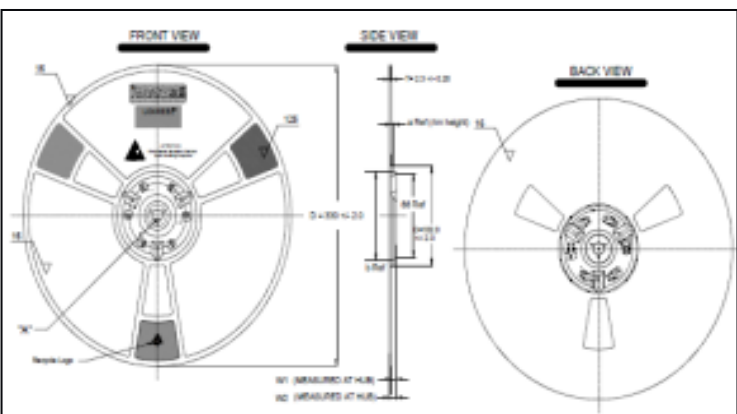
## Pre Change

ASE9

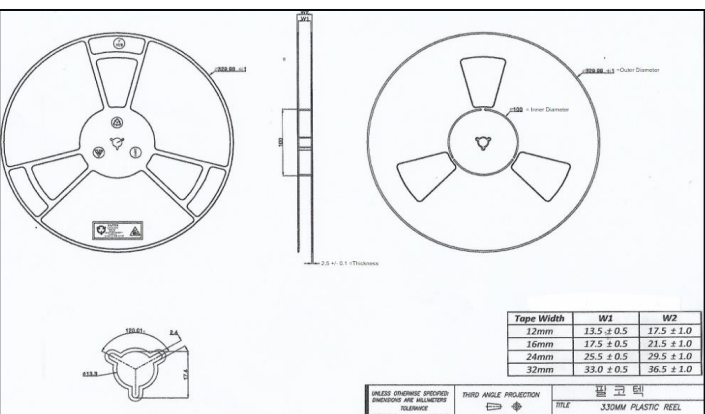


## Post Change

ASE9



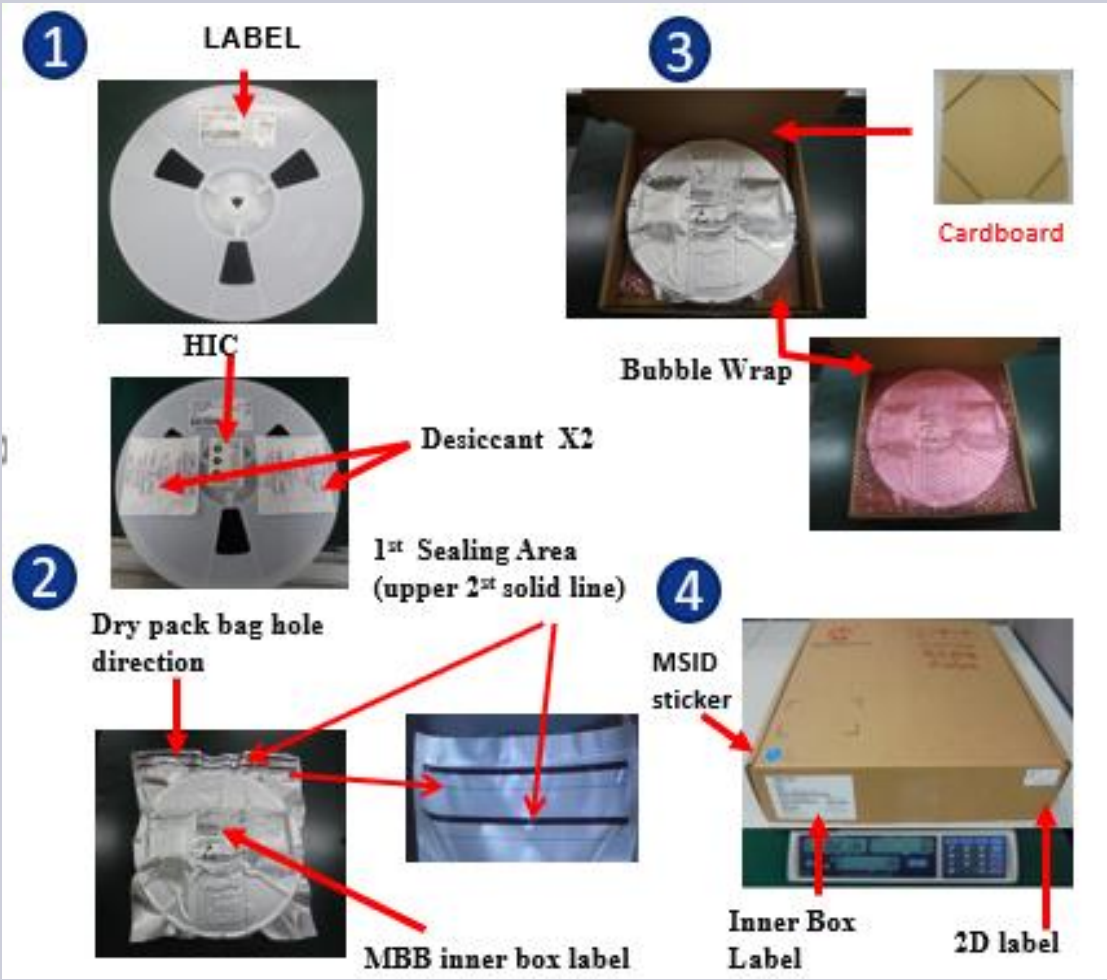
MPHL



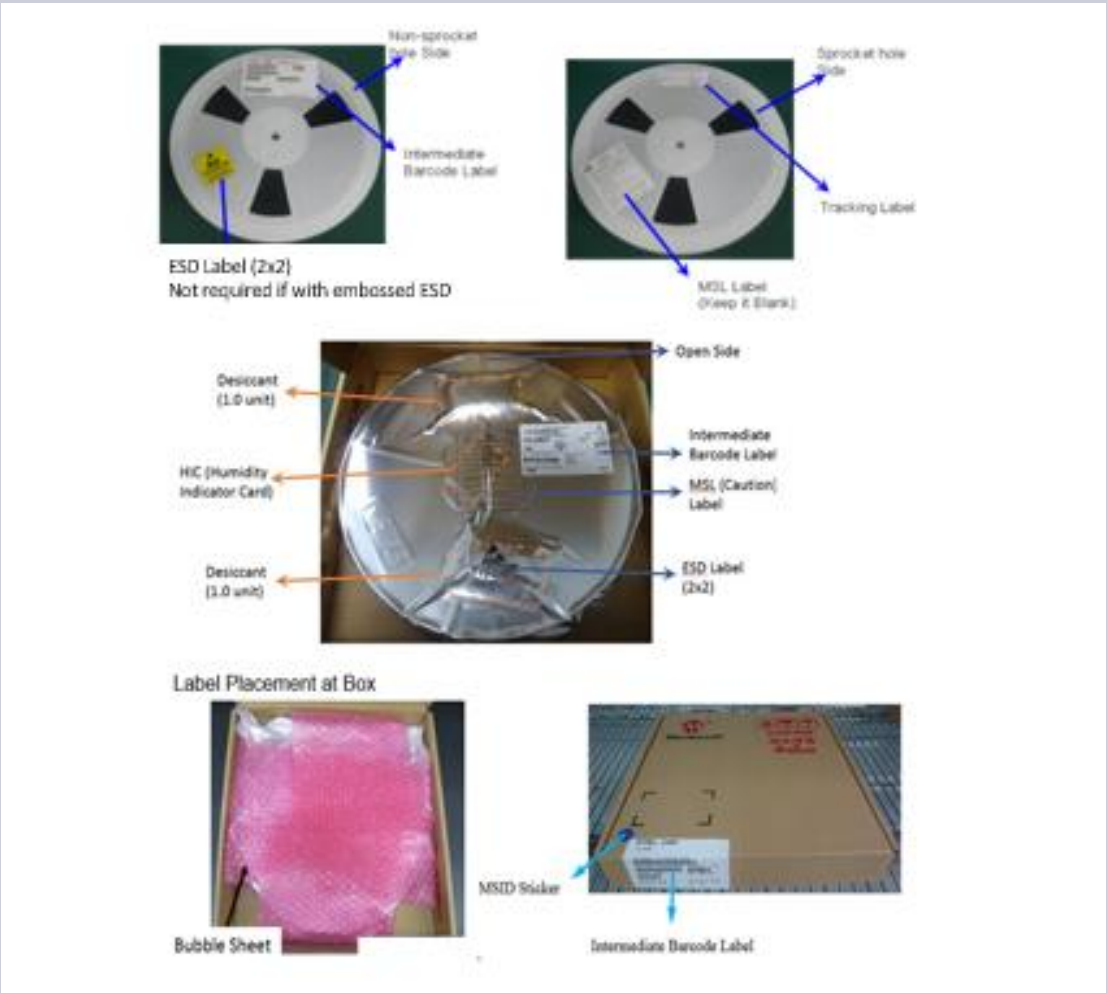
	Plant	Diameter	Hub	Color
PRE CHANGE	ASE9	330	177	BLUE
POST CHANGE	ASE9	330	102	White
	MPHL	13" (330mm)	4"(100mm)	White

# Packing Method – Tape and Reel

## ASE9



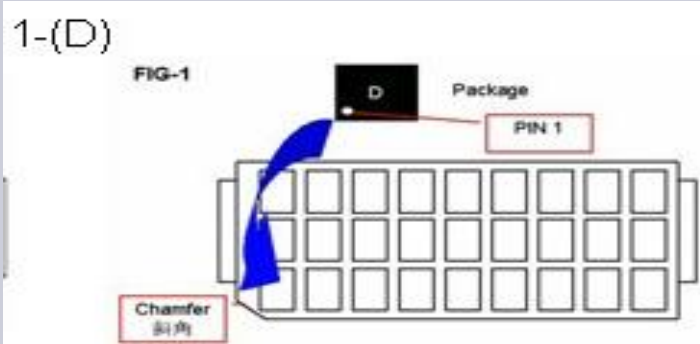
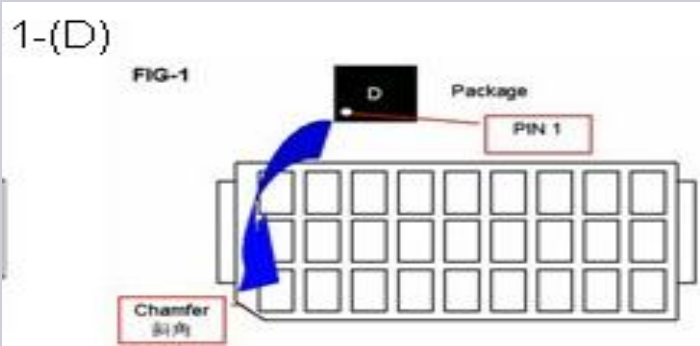
## MPHL



# List of Catalog Part Numbers

Catalog Part Number
ATSAM4C16CB-AU
ATSAM4C8CB-AU
ATSAM4C4CB-AU
ATSAM4CMS32CB-AU
ATSAM4CMP32CB-AU

# Pre and Post Change Summary –Tray

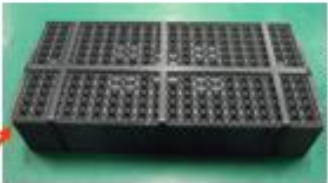
		ASE9	MPHL
Final Test Location		ASE Test (ASE9)	Microchip Technology Operations (Philippines) Corporation (MPHL)
Base Quantity Multiple (BQM)	Tray	90	90
Pin 1 Orientation		<div><p>1-(D)</p><p>FIG-1</p><p>Near Chamfer side</p></div>	<div><p>1-(D)</p><p>FIG-1</p><p>Near Chamfer side</p></div>



# Packing Method – Tray

## ASE9

1




10+1 stack  
STRAPS (3SIL)  
打包帶 (3短1長)

CHAMFER  
斜角

HIC 溼度指示卡

2




Chamfer  
斜角

Desiccant 1 units x 2  
1單位乾燥劑 x2

inner box Label  
真空袋標籤

MBB  
真空袋


3



Bubble Wrap  
粉紅氣泡布

MSID sticker  
MSID 標籤

4







Tray Inner Box Label  
內盒標籤


ASET small bar code  
ASET2維小標籤

膠帶  
Tape

## MPHL

Pin 1 Orientation / Tray Bundling	Inner Box Packing
<div>1. Pin 1 Orientation – near tray chamfer</div> <div>2. Tray Bundling &gt; 10 full trays + 1 empty tray cover &gt; PP Strapping: 3 crosswise &amp; 1 lengthwise</div> <div></div> <div>3. Moisture Barrier Bag Labels</div> <div><p>Open Side</p><p>Desiccant (1.0 unit)</p><p>HIC (Humidity Indicator Card)</p><p>Desiccant (1.0 unit)</p><p>Intermediate Barcode Label</p><p>MSL (Caution) Label</p><p>ESD Label (2x2)</p></div>	<div>4. Wrap bag with bubble pack</div> <div><p>Bubble Sheet</p></div> <div>5. Tray Box Packing</div> <div><p>Open Side of Box</p><p>Intermediate Label</p></div> <div>Inner Box Tray: 16.2x37.1x8.8 cm</div>

18





## **QUALIFICATION PLAN SUMMARY**

**PCN #: RMES-05OITM593**

**Date:  
November 23, 2021**

**Qualification of MPHL as an additional final test site for selected  
Atmel ATSAM4Cxxx device family available in 100L LQFP  
(14x14x1.4mm) package.**

**Purpose:** Qualification of MPHL as an additional final test site for selected Atmel ATSAM4Cxxx device family available in 100L LQFP (14x14x1.4mm) package.

**CCB No.:** 3345.001

Test Name	Test Conditions
Datalog/Bin Comparison	Test the same units at existing and destination locations and compare BIN and Yield data. FT Yield and bin-to-bin difference should be 0.1% and accepted QC yield should be 100%
Parametric Comparison	Characterize at least 33 good units at original test site to be re-characterize at destination test site
Cross Correlation	Run at least 33 untested parts at destination test site, to be retested at original test site
Correlation lot report	Run 1 qualification lot with 3000 units at currently qualified test site (original site – ASE9) to be retested at new test site (destination site – MPHL)