



Product Change Notification / GBNG-09BQZG101

Date:

11-May-2022

Product Category:

32-bit Microcontrollers

PCN Type:

Manufacturing Change

Notification Subject:

CCB 5083 Initial Notice: Qualification of MPHL as an additional final test site for selected ATSAMD21J17 and ATSAMD21J18 device families available in 64L VQFN (9x9x1mm) package.

Affected CPNs:

[GBNG-09BQZG101_Affected_CPN_05112022.pdf](#)
[GBNG-09BQZG101_Affected_CPN_05112022.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 ATSAMD21J17 and ATSAMD21J18 device families available in 64L VQFN (9x9x1mm) 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)	Tray	260	260	260
	Tape and Reel	4000	4000	4000
Pin 1 orientation	Tray	Near tray chamfer	Near tray chamfer	Near tray chamfer
	Tape and Reel	Quadrant 1	Quadrant 1	Quadrant 1
Reel	Color	White	White	White
	Dimension	Minor dimensional changes. See attached pre and post change comparison.		
Carrier Tape		No dimensional changes. See attached pre and post change comparison.		
Cover Tape		No dimensional changes. See attached pre and post change comparison.		
Tray		No dimensional changes. See attached pre and post change comparison.		
Packing Method		See attached pre and post change comparison.		

Impacts to Data Sheet:None

Change ImpactNone

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:June 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:

	May 2022				June 2022				
Workweek	19	20	21	22	23	24	25	26	27
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:May 11, 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_GBNG-09BQZG101_Qual_Plan.pdf](#)

[PCN_GBNG-09BQZG101_Pre_and_Post_Change_Summary.pdf](#)

Please contact your local **Microchip sales office** with questions or concerns regarding this notification.

Terms and Conditions:

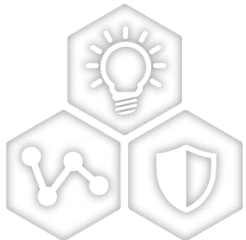
If you wish to receive Microchip PCNs via email please register for our PCN email service at our **PCN home page** select register then fill in the required fields. You will find instructions about registering for Microchips PCN email service in the **PCN FAQ** section.

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.

CCB 5083
Pre and Post Change Summary
PCN #: GBNG-09BQZG101

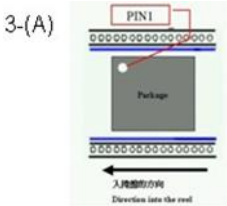
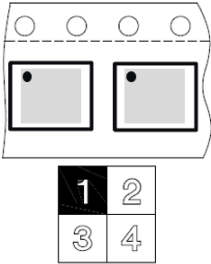


A Leading Provider of Smart, Connected and Secure Embedded Control Solutions



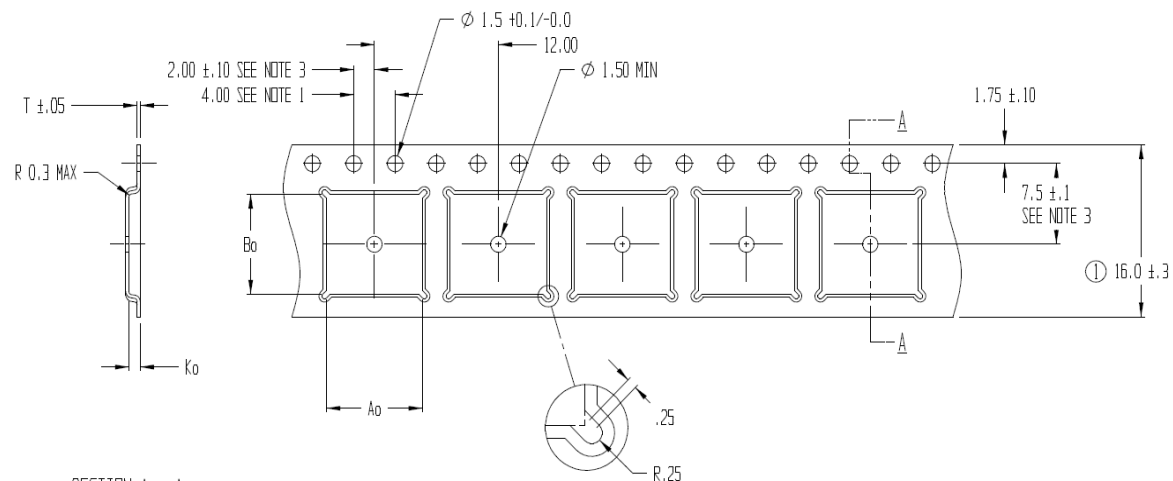
SMART | CONNECTED | SECURE

Pre and Post Change: Tape and Reel

Final Test Location	ASE9	MPHL
BQM (Base Quantity Multiple)	4000	4000
MSL Level	3	3
Pin1 Orientation	Quadrant 1 	Quadrant 1 
Carrier Tape	W: 16 mm P1: 12mm A0: 9.3 mm B0: 9.3 mm K0: 1.1 mm	W: 16 mm P1: 12mm A0: 9.3 mm B0: 9.3 mm K0: 1.1 mm

Pre and Post Change: Carrier Tape

ASE9



SECTION A - A

$A_0 = 9.30$
 $B_0 = 9.30$
 $K_0 = 1.10$

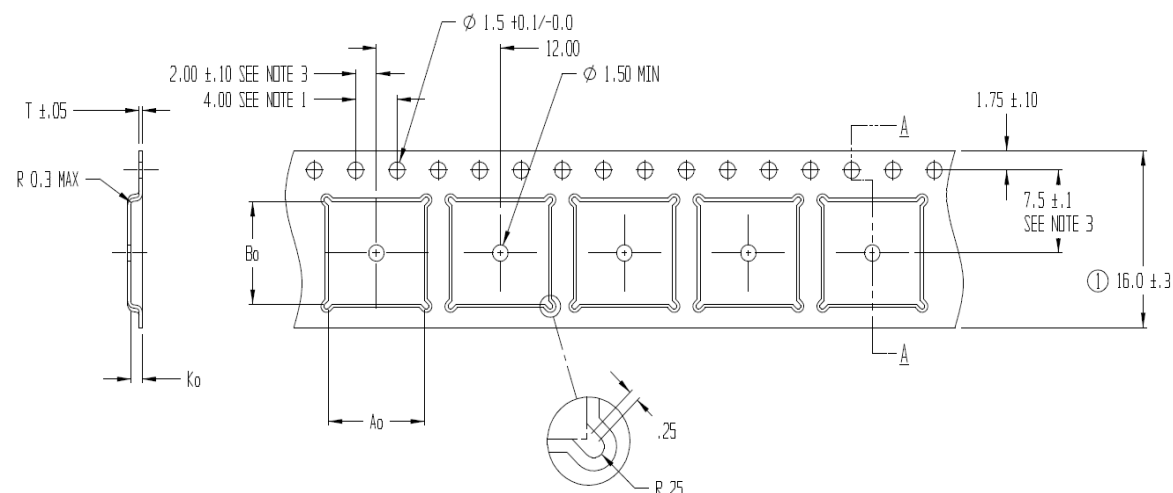
NOTES:

1. 10 SPROCKET HOLE PITCH CUMULATIVE TOLERANCE ± 0.2
2. CAMBER IN COMPLIANCE WITH EIA 481
3. POCKET POSITION RELATIVE TO SPROCKET HOLE MEASURED AS TRUE POSITION OF POCKET, NOT POCKET HOLE

PART#	T	MATERIAL	DRAWING NO.
ML0909-BC	0.30	PS+C	T102535AT
ML0909-BD	0.30	PS+C	T102535AT

TOLERANCES - UNLESS NOTED 1PL ± 2 2PL ± 10	MATERIAL PS+E		
	ALL DIMENSIONS IN MILLIMETERS		DWG SIZE B
DRAWN BY TMD/BTH	DATE 10/08/99	SCALE 3:1	SHEET 1 OF 1

MPHL



SECTION A - A

$A_0 = 9,30$
 $B_0 = 9,30$
 $K_0 = 1,10$

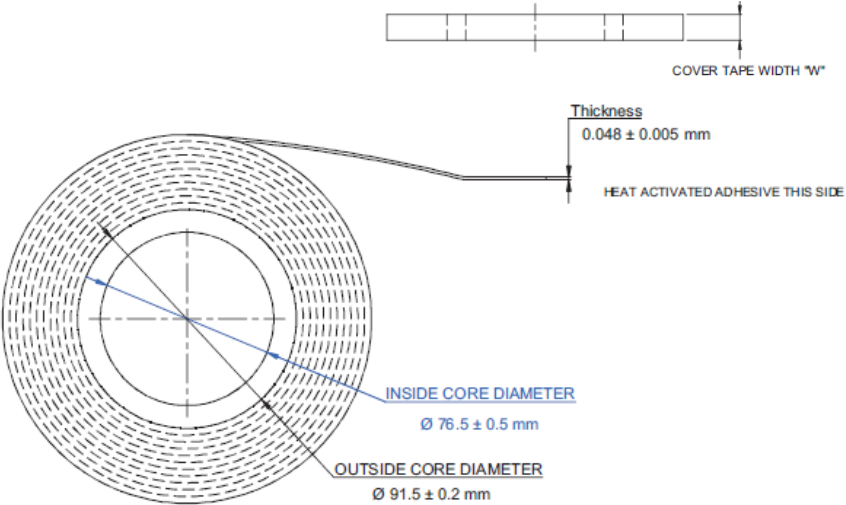
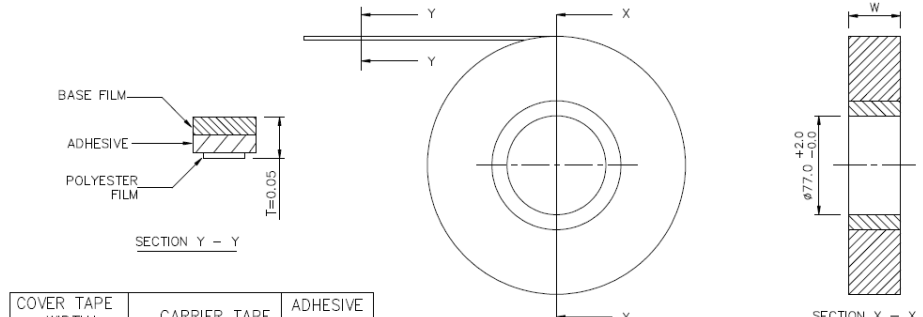
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	ALL DIMENSIONS IN MILLIMETERS	DWG SIZE B
DRAWN BY TMD/BTH	DATE 10/08/99	SCALE 3:1 SHEET 1 OF

Pre and Post Change: Cover Tape

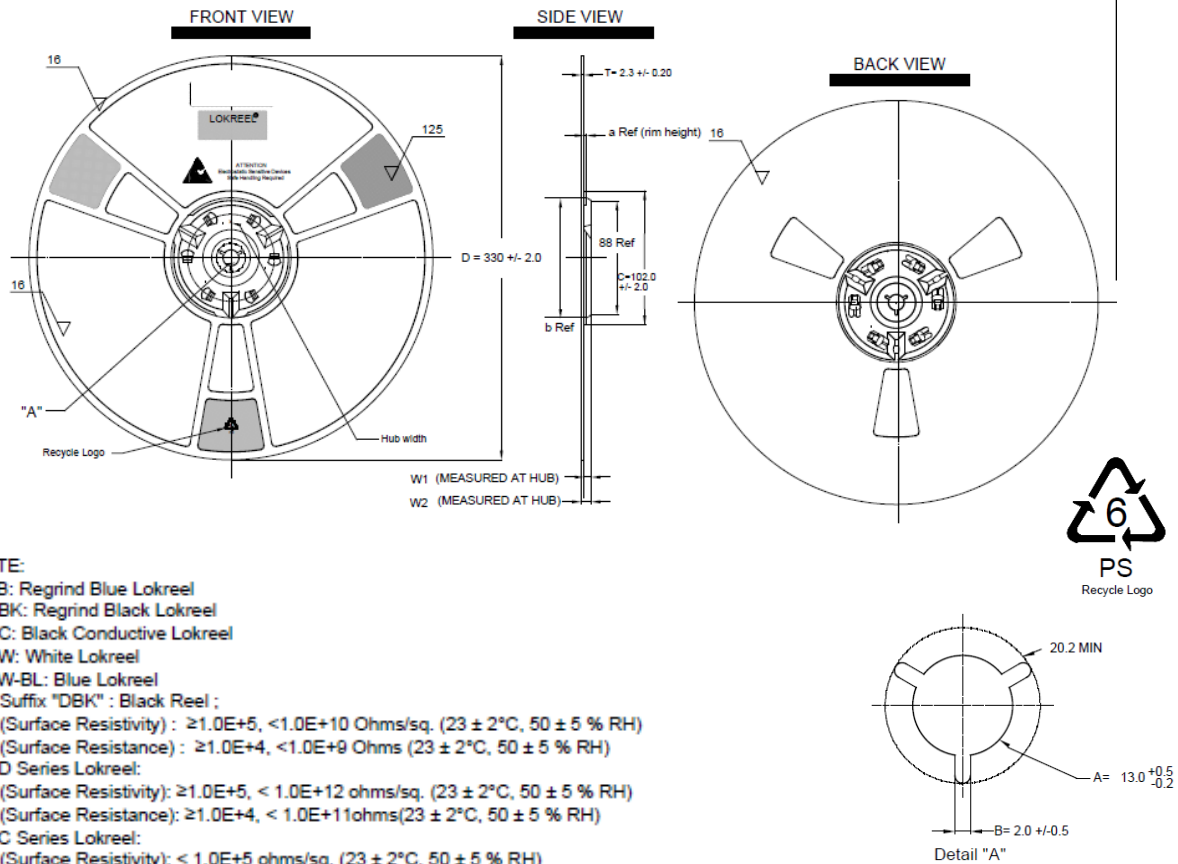
Final Test Location	ASE9	MPHL																														
Dimension	<p>W: 13.3 mm</p>  <p>NOTE:</p> <ol style="list-style-type: none"> ADV P/N: HUBxxxx-yyy or HUBxxxx-yyy Width tolerance ± 0.10 mm Length (M): -yyy +1 /-0 M or -yyyy +1/-0 M, where yyy or yyyy=Length Please refer to Tech Bulletins for related properties Overall (Roll) Diameter: <ul style="list-style-type: none"> - For 300 meter length roll = 163 ± 5 mm - For 500 meter length roll = 197 ± 5 mm Core width dimension = Nomal cover tape width ± 0.1 mm <p>TOLERANCES UNLESS - SPECIFIED 1 PL ± 0.2 2 PL ± 0.10 DIA./ RAD. $\pm .003$</p>	<p>W: 13.3 mm</p>  <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</p> <ol style="list-style-type: none"> THICKNESS : 0.045–0.055mm. LIGHT TRANSMITTANCE : >80% TENSILE STRENGTH : 9.7kg/mm sq. ELONGATION : >120% SURFACE RESISTIVITY UNDERSIDE : 10^9 OHMS/SQ MAX. TOPSIDE : 10^6 OHMS/SQ *6 OTHER COVER TAPE WIDTH REFER TO W14.08–04. <p>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
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65.5	72	1.65x2																														

Pre and Post Change: Reel

Final Test Location	ASE9	MPHL
Dimension	D: 330 mm Hub: 102mm	D: 330 mm Hub: 100mm
Color	White	White
Photo		

Pre and Post Change: Reel

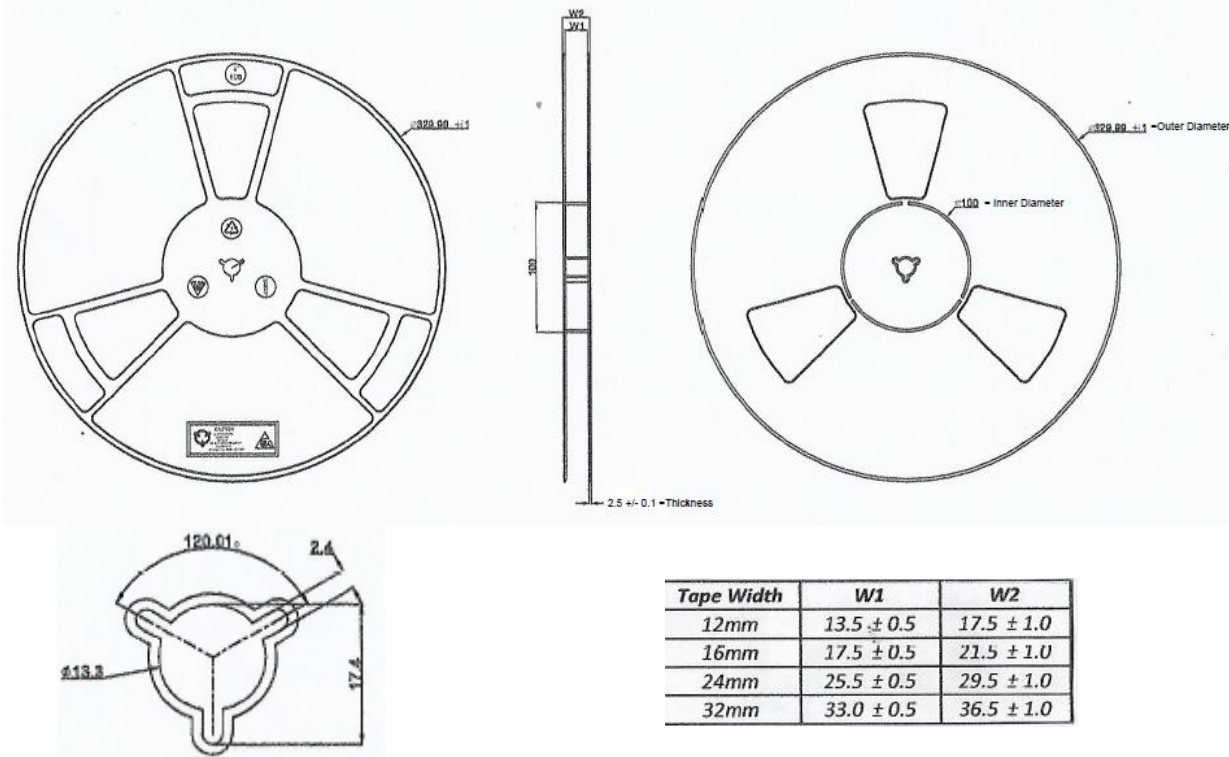
ASE9



-All Dimensions in Millimeters-


Part Number	Nominal Hub Width	W1 +0.3mm -0.2mm	W2 MAX	a	b
RD33004SW	4mm	4.4mm	7.1mm	1.5	96.5
RD33008SW	8mm	8.4mm	11.1mm	1.5	96.5

MPHL



Tape Width	W1	W2
12mm	13.5 ± 0.5	17.5 ± 1.0
16mm	17.5 ± 0.5	21.5 ± 1.0
24mm	25.5 ± 0.5	29.5 ± 1.0
32mm	33.0 ± 0.5	36.5 ± 1.0

Pre and Post Change: Tape and Reel - Antistatic Shielding Bag / Moisture Barrier Bag

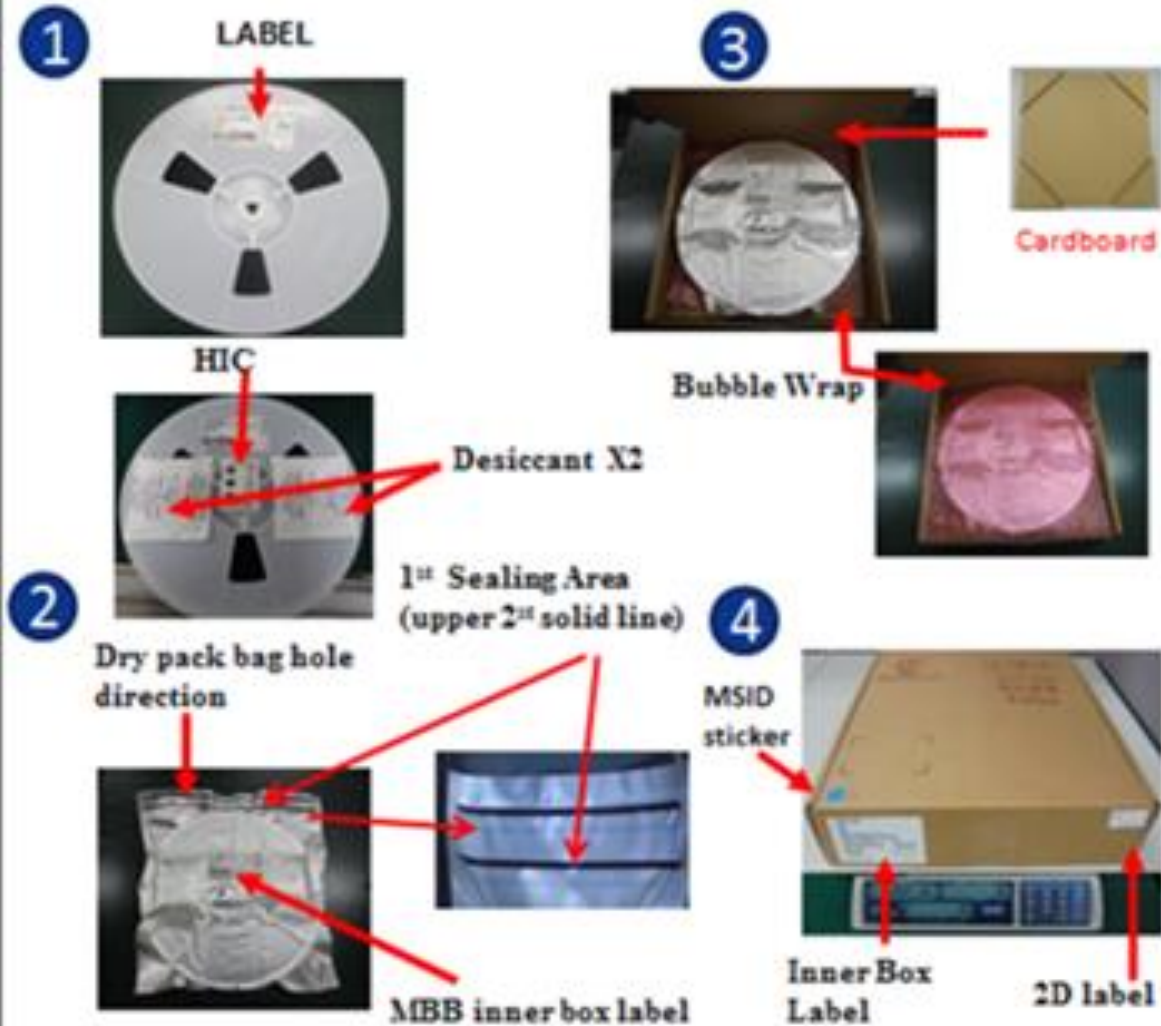
ASE9	MPHL
Dimension: 450mm x 420mm x 0.18mm	Bag Size: 406 x 457 mm
 A technical drawing of the ASE9 bag. It shows a rectangular bag with a central label area. The label contains a warning symbol (a triangle with an exclamation mark) and text. Dimensions are indicated with blue lines and labels: 450mm for the width, 420mm for the height, and 0.18mm for the thickness. There are also labels for 'Top Sealing & Straps' and 'Bottom Sealing & Straps'.	 A photograph of the MPHL bag. It is a white, rectangular bag with a central label area. The label contains a warning symbol (a triangle with an exclamation mark) and text. The bag is shown in a slightly crumpled state.

Pre and Post Change: Tape and Reel

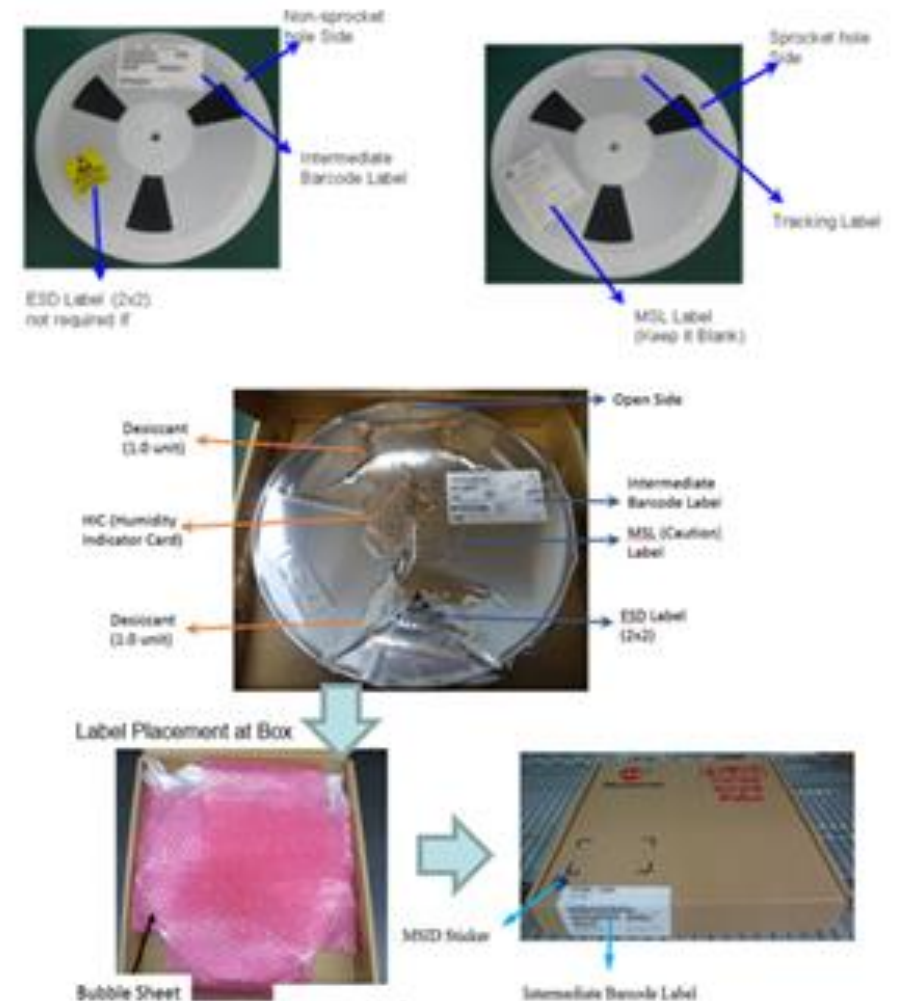
Final Test Location	ASE9	MPHL
Desiccant	<div>A white desiccant bag with black and red text. The text includes 'UNITPAK', 'DESICCANT MEETS MIL-D-3884 TYPE I & II', 'REACTIVATION TIME IN BAG 16 HOURS AT 245 °F', 'CONTENTS 2 UNIT', 'PACKAGE USE AND STATIC DEHUMIDIFICATION', 'PACKAGED BY TAICHANG CHEMICAL IND. CO., LTD.', 'DO NOT EAT', and 'COBALT DICHLORIDE FREE'.</div> <p>2 units x 2 Per MBB bag</p>	<div>A white desiccant bag with blue text. The text includes 'UNITPAK', 'DESICCANT MEETS MIL-D-3884 TYPE I & II', 'REACTIVATION TIME IN BAG 16 HOURS AT 245 °F', 'CONTENTS 1 UNIT', 'PACKAGE USE AND STATIC DEHUMIDIFICATION', 'PACKAGED BY TAICHANG CHEMICAL IND. CO., LTD.', 'DO NOT EAT', and 'COBALT DICHLORIDE FREE'.</div> <p>2 pcs of 1 unit desiccant per bag</p>
HIC	<div>A humidity indicator card with three circular windows. The text includes 'HUMIDITY INDICATOR', 'Complies with IPC/JEDEC J-STD-033B', 'LEVEL 2 PARTS', '60%', 'Bake parts if 60% is NOT brown', 'LEVEL 2A-5A PARTS', '10%', 'Bake parts if 10% is NOT brown and 5% is pale-green', 'HUMISCOPE', 'ITEM NO. : AH3110', 'COBALT DICHLORIDE FREE', '5%', 'Initial Use : Do not put this card into a bag if 60% is pale-green.'</div>	<div>A humidity indicator card with three circular windows. The text includes '5%', '10%', '60%', 'LEVEL 2A-5A PARTS', 'Bake parts if 10% IS NOT BROWN and 5% IS AZURE', 'DOU YEE ENTERPRISES', 'BROWN-DRY AZURE-WET', 'COBALT FREE HUMIDITY INDICATOR CARD', 'AVOID METAL CONTACT', 'COMPLIES WITH IPC/JEDEC J-STD-033 H16 5 4 3 2', 'Initial use: DO NOT put this card into a bag if 5%, 10% or 60% dot are azure.'</div>

Pre and Post Change: Tape and Reel Packing Method

ASE9



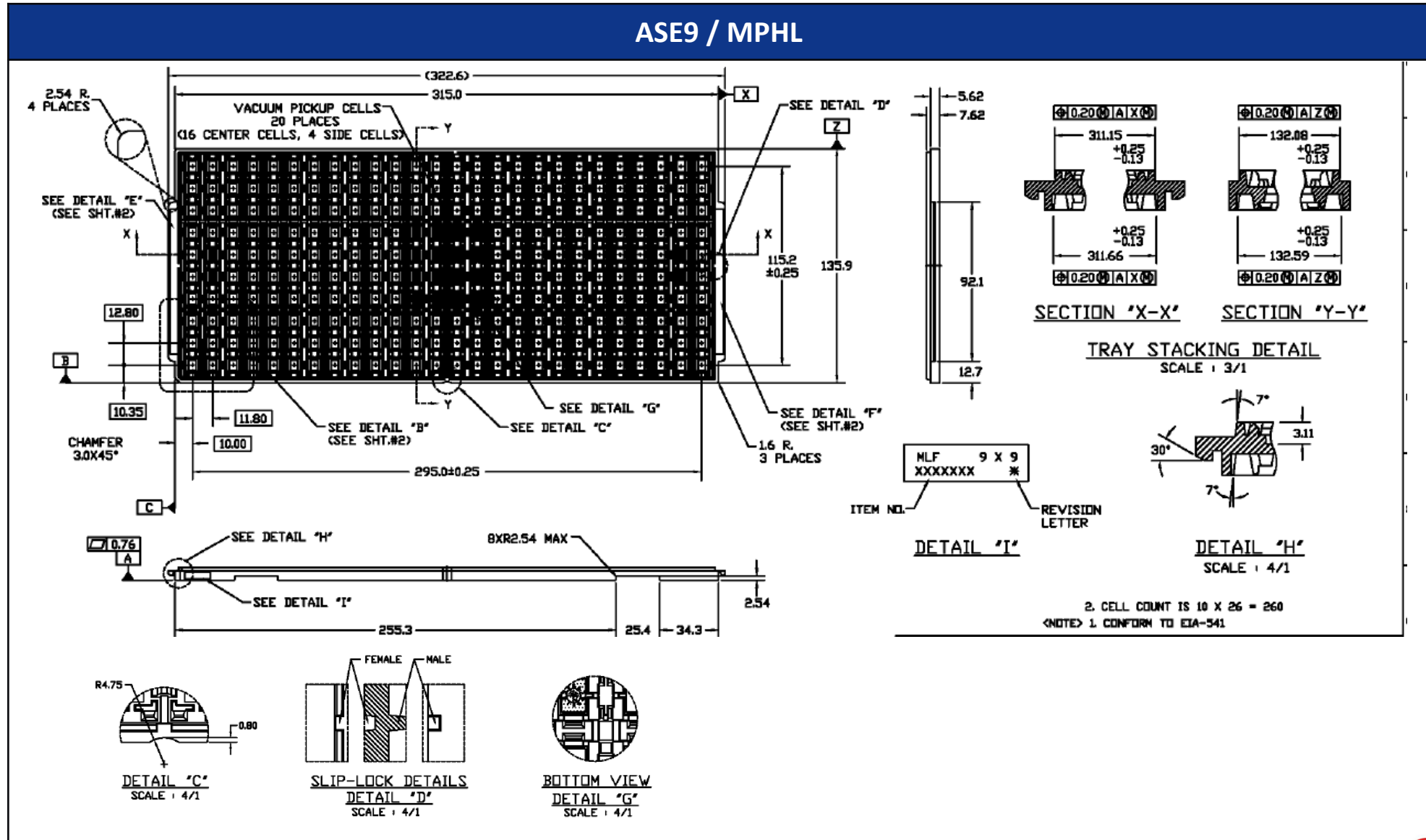
MPHL



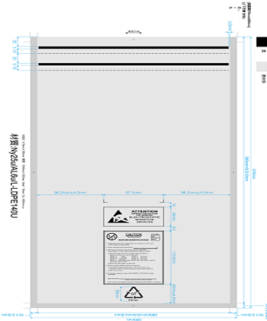





Pre and Post Change: Tray

Final Test Location	ASE9	MPHL
BQM (Base Quantity Multiple)	260	260
MSL Level	3	3
Pin1 Orientation	<div><div>1-(D)</div><div><div>FIG-1</div><div><div>Package</div><div>PIN 1</div></div><div><div>Chamfer</div><div>斜角</div></div></div><div>Near Tray Chamfer</div></div>	<div><div>1-(D)</div><div><div>FIG-1</div><div><div>Package</div><div>PIN 1</div></div><div><div>Chamfer</div><div>斜角</div></div></div><div>Near Tray Chamfer</div></div>
Tray	Tray Length qty: 26 Tray Width qty: 10 Pocket on Tray: 260 (BQM) Tray Stack: 10 + 1 (10 + Cover)	Tray Length qty: 26 Tray Width qty: 10 Pocket on Tray: 260 (BQM) Tray Stack: 10 + 1 (10 + Cover)

Pre and Post Change: Tray



Pre and Post Change: Tray

Final Test Location	ASE9	MPHL
Antistatic Shielding Bag / Moisture Barrier Bag		
Desiccant	 1 unit x 2 per MBB bag	 2 units of 1unit desiccant
Box	 371.5mmx162mmx88mm	 371mm x 162mm x 88 mm

Pre and Post Change: Tray Packing Method

ASE9	MPHL
<div><div><div><div><div>1</div><div></div><div>10 LAYERS 10層 STRAPS (3SIL) 打包帶 (3起1長)</div></div><div><div>CHAMFER 斜角</div><div></div><div>CHAMFER 斜角</div></div><div><div><div>2</div><div></div><div>Desiccant 1 unit x 2 1單位乾燥劑 x2</div><div>innerboxLabel 真空袋標籤</div><div>MBB 真空袋</div></div><div><div><div>3</div><div></div><div>Bubble Wrap 粉紅氣泡布</div></div><div><div><div>4</div><div></div><div>MSID sticker MSID 標籤</div><div>Tray Inner Box Label 內盒標籤</div><div>ASET small bar code ASET2維小標籤</div><div>膠帶 Tape</div></div></div></div></div></div></div></div>	<div><div><div></div><div>Max: 10 full trays + 1 empty tray cover PP Strapping: 3 crosswise & 1 lengthwise</div></div><div><div><div></div><div>Bubble Sheet</div></div><div><div><div></div><div>Open Side of Box</div><div>Intermediate Label</div></div><div><div></div><div>Open Side</div><div>Desiccant (1.0 unit)</div><div>MSL (Caution) Label</div><div>ESD Label (2x2)</div><div>Intermediate Barcode Label</div><div>HIC (Humidity Indicator Card)</div><div>Desiccant (1.0 unit)</div></div></div></div></div>



QUALIFICATION PLAN SUMMARY

PCN #: GBNG-09BQZG101

Date
March 22, 2022

**Qualification of MPHL as an additional final test site for selected
ATSAMD21J17 and ATSAMD21J18 device families available in
64L VQFN (9x9x1mm) package.**

Purpose: Qualification of MPHL as an additional final test site for selected ATSAMD21J17 and ATSAMD21J18 device families available in 64L VQFN (9x9x1mm) package.

CCB No.: 5083

Test / Evaluation	Test Conditions / Parameters
Bin Comparison	3,000 units matching to 0.1% yield and 33 (10% correlated) units of parametric data comparison
Yield Comparison	
Parametric Comparison	

Affected Catalog Part Numbers (CPN)

ATSAMD21J17A-MF
ATSAMD21J18A-MF
ATSAMD21J17A-MU
ATSAMD21J18A-MU
ATSAMD21J18A-MUA1
ATSAMD21J17A-MUA1
ATSAMD21J18A-MU-SLL
ATSAMD21J17A-MUT
ATSAMD21J18A-MUT
ATSAMD21J18A-MUTA1
ATSAMD21J17A-MUTA1
ATSAMD21J18A-MUTN01
ATSAMD21J17A-MFT
ATSAMD21J18A-MFT