



Product Change Notification / NTDO-09RUGQ249

Date:

21-Oct-2021

Product Category:

Microprocessors

PCN Type:

Manufacturing Change

Notification Subject:

CCB 4645 Final Notice: Qualification of MPHL as additional final test site for selected ATSAMA5D3xA device families available in 324L LFBGA (15x15x1.4mm) package.

Affected CPNs:

[NTDO-09RUGQ249_Affected_CPN_10212021.pdf](#)

[NTDO-09RUGQ249_Affected_CPN_10212021.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 additional final test site for selected ATSAMA5D3xA device families available in 324L LFBGA (15x15x1.4mm) package.

Pre and Post Change Summary:

| | Pre Change | Post Change |
|--|---------------|-------------|
| | | |

| Final Test Site | | ASE-Shanghai (ASSH) | ASE-Shanghai (ASSH) | Microchip Technology Operations (Philippines) Corporation (MPHL) |
|------------------------------|-----------|--|---------------------|--|
| Base Quantity Multiple (BQM) | T/R | 500 | 500 | 500 |
| | Tray | 126 | 126 | 126 |
| Pin 1 Orientation | | Quadrant 2 | Quadrant 2 | Quadrant 2 |
| Carrier Tape | | No dimensional changes* | | |
| Cover Tape | | Minor dimensional changes* | | |
| Plastic Reel | Dimension | No dimensional changes* | | |
| | Color | White | White | White |
| Tray | Dimension | No dimensional changes* | | |
| | Color | Black | Black | Black |
| Packing Method | | See Pre and Post Change Summary for comparison | | |

* See Pre and Post Change Summary for comparison

Impacts to Data Sheet:None

Change Impact:None

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

Change Implementation Status:In Progress

Estimated First Ship Date:November 23, 2021 (date code: 2148)

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

Time Table Summary:

| | September 2021 | | | | | October 2021 | | | | November 2021 | | | | |
|--------------------------|----------------|--------|--------|--------|--------|--------------|--------|--------|--------|---------------|--------|--------|--------|--------|
| Workweek | 3 6 | 3 7 | 3 8 | 3 9 | 4 0 | 4 1 | 4 2 | 4 3 | 4 4 | 4 5 | 4 6 | 4 7 | 4 8 | 4 9 |
| Initial PCN Issue Date | | | | x | | | | | | | | | | |
| Qual Report Availability | | | | | | | | x | | | | | | |
| Final PCN Issue | | | | | | | | x | | | | | | |

| | | | | | | | | | | | | | | |
|-------------------------------|--|--|--|--|--|--|--|--|--|--|--|--|---|--|
| Date | | | | | | | | | | | | | | |
| 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:September 14, 2021: Issued Initial Notification

October 21, 2021: Issued final notification. Attached the Qualification Report. Provided estimated first ship date to be on November 23, 2021.

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

Attachments:

[PCN_NTDO-09RUGQ249_Qual_Report.pdf](#)

[PCN_NTDO-09RUGQ249_Pre and Post Change Summary.pdf](#)

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

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QUALIFICATION REPORT SUMMARY

PCN #: NTDO-09RUGQ249

**Date:
October 12, 2021**

**Qualification of MPHL as additional final test site for selected
ATSAMA5D3xA device families available in 324L LFBGA
(15x15x1.4mm) package.**

Purpose: Qualification of MPHL as additional final test site for selected ATSAMA5D3xA device families available in 324L LFBGA (15x15x1.4mm) package.

CCB No.: 4645

| Test / Evaluation | Test Conditions / Parameters | Results |
|------------------------|---|---------|
| Datalog/Bin Comparison | <ul style="list-style-type: none">• Compare test numbers, test names, test sequence bin assignments & pass/fail results• Accept if all match or justify the differences | PASSED |
| Correlation lot report | <ul style="list-style-type: none">• Yield at each step and reject analysis between systems. 3K units are tested for each program conversion we perform.• Accept on yield match within 1% | PASSED |
| Parametric comparison | <ul style="list-style-type: none">• 100% test at room, hot, cold temperature if applicable based on production flow. | PASSED |

CCB 4645
Pre and Post Change Summary
PCN #: NTDO-09RUGQ249



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



SMART | CONNECTED | SECURE

**Qualification of MPHL as additional final test site for selected ATSAMA5D3xA
device families available in 324L LFBGA (15x15x1.4mm) package**

Pre and Post Change Summary

| Final Test Location | | ASSH | MPHL |
|------------------------------|------|------------|------------|
| Base Quantity Multiple (BQM) | T/R | 500 | 500 |
| | Tray | 126 | 126 |
| Pin 1 Orientation | | Quadrant 2 | Quadrant 2 |

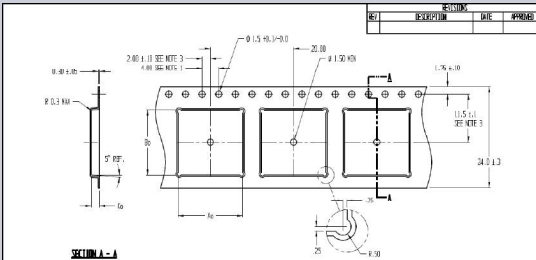
Pre and Post Change Summary

Final Test Location

ASSH

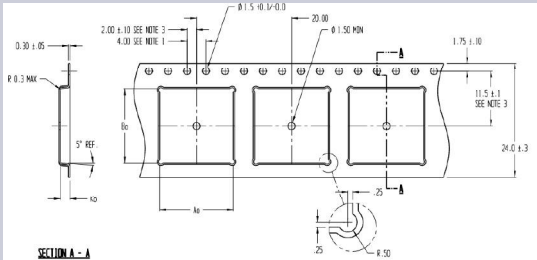
MPHL

Carrier Tape for T/R



Technical drawing of ASSH carrier tape showing dimensions and a table of parameters. The drawing includes a side view and a top view. Dimensions are given in millimeters (mm). The table below summarizes the key parameters:

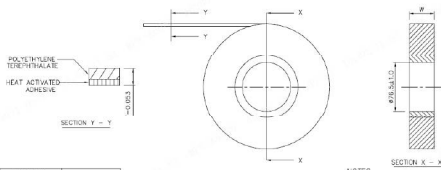
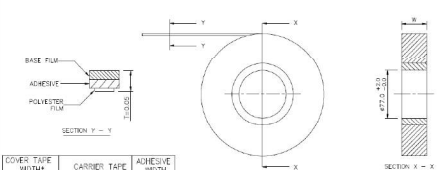
| Width (mm) | Pitch (mm) | A0 (mm) | B0 (mm) | K0 (mm) | Thickness |
|------------|------------|---------|---------|---------|-----------|
| 24 | 20 | 15.5 | 15.5 | 2.0 | 0.3 |



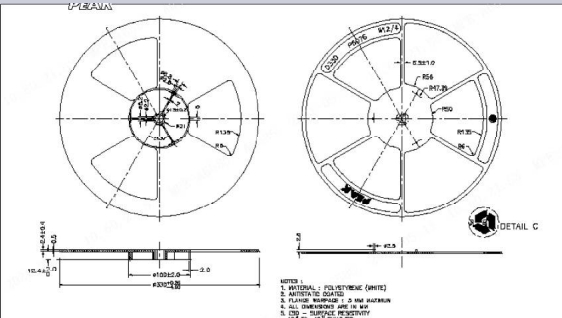
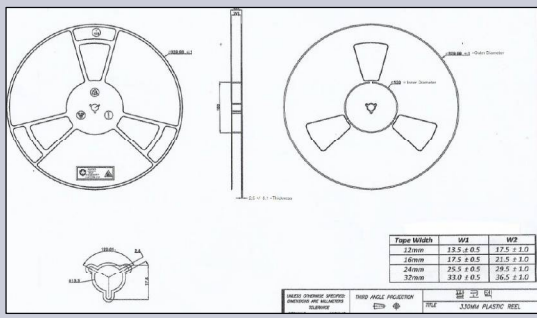
Technical drawing of MPHL carrier tape showing dimensions and a table of parameters. The drawing includes a side view and a top view. Dimensions are given in millimeters (mm). The table below summarizes the key parameters:

| Width (mm) | Pitch (mm) | A0 (mm) | B0 (mm) | K0 (mm) | Thickness |
|------------|------------|---------|---------|---------|-----------|
| 24 | 20 | 15.5 | 15.5 | 2.0 | 0.3 |


Pre and Post Change Summary

| Final Test Location | ASSH | MPLH | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------|---|------------------------------------|--------------------|---------------------|------|--------------------|------------------|--|---------------|-------------------|---------------------|------------------|-------------|-------------------------|----|------|----|---|---------------------------|--------------------|--------------------------|-----|---|-------|-----|----|-------|-----|----|-------|------|----|-------|------|----|--------|------------|----|--------|------|----|--------|------|----|--------|------|----|--------|
| Cover Tape for T/R | <div><table><tr><th>STANDARD COVER TAPE WIDTH (W ±0.1)</th><th>CARRIER TAPE WIDTH</th></tr><tr><td>5.3, 5.8, 5.5</td><td>8</td></tr><tr><td>6.3, 6.8, 6.5, 6.9</td><td>12</td></tr><tr><td>13.3, 13.5</td><td>16</td></tr><tr><td>15.3, 15.5</td><td>24</td></tr><tr><td>21.3, 21.5, 25.5</td><td>32</td></tr><tr><td>27.3</td><td>44</td></tr><tr><td>49.5</td><td>72</td></tr></table><p>NOTES</p><ol style="list-style-type: none">1. THICKNESS : 0.048-0.058mm.2. STICKING LENGTH : 200mm.3. TENSILE STRENGTH : 8.0N/25mm sq.4. ELONGATION : 100% min.5. SURFACE RESISTIVITY : 10¹² OHM/25mm sq.6. TENSILE STRENGTH : 8.0N/25mm sq.7. ELONGATION : 100% min.8. SURFACE RESISTIVITY : 10¹² OHM/25mm sq.9. TENSILE STRENGTH : 8.0N/25mm sq.10. ELONGATION : 100% min.11. OTHER COVER TAPE WIDTH REFER TO M8306-04.<p>ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE STATED.</p></div> | STANDARD COVER TAPE WIDTH (W ±0.1) | CARRIER TAPE WIDTH | 5.3, 5.8, 5.5 | 8 | 6.3, 6.8, 6.5, 6.9 | 12 | 13.3, 13.5 | 16 | 15.3, 15.5 | 24 | 21.3, 21.5, 25.5 | 32 | 27.3 | 44 | 49.5 | 72 | <div><table><tr><th>COVER TAPE WIDTH (W ±0.1)</th><th>CARRIER TAPE WIDTH</th><th>ADHESIVE WIDTH (W ±0.15)</th></tr><tr><td>5.3</td><td>8</td><td>0.752</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>27.3</td><td>44</td><td>1.05x2</td></tr><tr><td>49.5</td><td>56</td><td>1.05x2</td></tr><tr><td>55.5</td><td>72</td><td>1.65x2</td></tr></table><p>NOTES</p><ol style="list-style-type: none">1. THICKNESS : 0.048-0.058mm.2. LIGHT TRANSMITTANCE : 98%3. TENSILE STRENGTH : 8.0N/25mm sq.4. ELONGATION : 100% min.5. SURFACE RESISTIVITY : 10¹² OHM/25mm sq.6. TENSILE STRENGTH : 8.0N/25mm sq.7. ELONGATION : 100% min.8. SURFACE RESISTIVITY : 10¹² OHM/25mm sq.9. TENSILE STRENGTH : 8.0N/25mm sq.10. ELONGATION : 100% min.11. OTHER COVER TAPE WIDTH REFER TO M8306-04.<p>ALL DIMENSIONS IN MILLIMETERS UNLESS OTHERWISE STATED.</p></div> | COVER TAPE WIDTH (W ±0.1) | CARRIER TAPE WIDTH | ADHESIVE WIDTH (W ±0.15) | 5.3 | 8 | 0.752 | 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 | 27.3 | 44 | 1.05x2 | 49.5 | 56 | 1.05x2 | 55.5 | 72 | 1.65x2 |
| | STANDARD COVER TAPE WIDTH (W ±0.1) | CARRIER TAPE WIDTH | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5.3, 5.8, 5.5 | 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 6.3, 6.8, 6.5, 6.9 | 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 13.3, 13.5 | 16 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15.3, 15.5 | 24 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 21.3, 21.5, 25.5 | 32 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 27.3 | 44 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 49.5 | 72 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| COVER TAPE WIDTH (W ±0.1) | CARRIER TAPE WIDTH | ADHESIVE WIDTH (W ±0.15) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 5.3 | 8 | 0.752 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 27.3 | 44 | 1.05x2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 49.5 | 56 | 1.05x2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 55.5 | 72 | 1.65x2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | <table><tr><th>Width W (mm.)</th><th>Thickness T (mm.)</th><th>Sealing Methodology</th></tr><tr><td>21.3</td><td>0.048-0.058</td><td>Heat Active Type</td></tr></table> | Width W (mm.) | Thickness T (mm.) | Sealing Methodology | 21.3 | 0.048-0.058 | Heat Active Type | <table><tr><th>Width W (mm.)</th><th>Thickness T (mm.)</th><th>Sealing Methodology</th></tr><tr><td>21.3</td><td>0.045-0.055</td><td>Pressure Seal Activated</td></tr></table> | Width W (mm.) | Thickness T (mm.) | Sealing Methodology | 21.3 | 0.045-0.055 | Pressure Seal Activated | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Width W (mm.) | Thickness T (mm.) | Sealing Methodology | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 21.3 | 0.048-0.058 | Heat Active Type | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Width W (mm.) | Thickness T (mm.) | Sealing Methodology | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 21.3 | 0.045-0.055 | Pressure Seal Activated | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

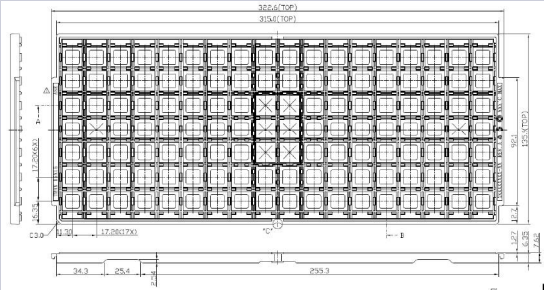
Pre and Post Change Summary

| Final Test Location | ASSH | MPHL | | | | | | | | | | | | | | | | |
|----------------------|--|---------------|---------------|----------|-------|----|-----|-----|-------|---|------------|---------------|----------|-------|----|-----|-----|-------|
| Plastic Reel for T/R |  <table><tr><th>Width (mm)</th><th>Diameter (mm)</th><th>Hub (mm)</th><th>Color</th></tr><tr><td>24</td><td>330</td><td>100</td><td>White</td></tr></table> | Width (mm) | Diameter (mm) | Hub (mm) | Color | 24 | 330 | 100 | White |  <table><tr><th>Width (mm)</th><th>Diameter (mm)</th><th>Hub (mm)</th><th>Color</th></tr><tr><td>24</td><td>330</td><td>100</td><td>White</td></tr></table> | Width (mm) | Diameter (mm) | Hub (mm) | Color | 24 | 330 | 100 | White |
| | Width (mm) | Diameter (mm) | Hub (mm) | Color | | | | | | | | | | | | | | |
| 24 | 330 | 100 | White | | | | | | | | | | | | | | | |
| Width (mm) | Diameter (mm) | Hub (mm) | Color | | | | | | | | | | | | | | | |
| 24 | 330 | 100 | White | | | | | | | | | | | | | | | |











Pre and Post Change Summary

| Final Test Location | ASSH | MPHL |
|------------------------|--|--|
| Packing Method for T/R |  |  |

Pre and Post Change Summary

| Final Test Location | ASSH | MPHL | | | | | | | | | | | | | | | | |
|-------------------------|---|--|------------------------|----------------------|-------|----------|----------|---------|-------|---|-------------------------|------------------------|----------------------|-------|----------|----------|---------|-------|
| Tray |  |  | | | | | | | | | | | | | | | | |
| | <table><tr><th>Length – max outer (mm)</th><th>Width – max outer (mm)</th><th>Thickness – max (mm)</th><th>Color</th></tr><tr><td>322.6 mm</td><td>135.9 mm</td><td>7.62 mm</td><td>Black</td></tr></table> | Length – max outer (mm) | Width – max outer (mm) | Thickness – max (mm) | Color | 322.6 mm | 135.9 mm | 7.62 mm | Black | <table><tr><th>Length – max outer (mm)</th><th>Width – max outer (mm)</th><th>Thickness – max (mm)</th><th>Color</th></tr><tr><td>322.6 mm</td><td>135.9 mm</td><td>7.62 mm</td><td>Black</td></tr></table> | Length – max outer (mm) | Width – max outer (mm) | Thickness – max (mm) | Color | 322.6 mm | 135.9 mm | 7.62 mm | Black |
| | Length – max outer (mm) | Width – max outer (mm) | Thickness – max (mm) | Color | | | | | | | | | | | | | | |
| 322.6 mm | 135.9 mm | 7.62 mm | Black | | | | | | | | | | | | | | | |
| Length – max outer (mm) | Width – max outer (mm) | Thickness – max (mm) | Color | | | | | | | | | | | | | | | |
| 322.6 mm | 135.9 mm | 7.62 mm | Black | | | | | | | | | | | | | | | |

Pre and Post Change Summary

| Final Test Location | ASSH | MPHL |
|-------------------------|--|--|
| Packing Method for Tray | <div></div> | <div><div><div>Pin 1 Orientation / Tray Bundling</div><div>1. Pin 1 Orientation – near tray chamfer 2. Tray Bundling > 10 full trays + 1 empty tray cover > PP Strapping: 3 crosswise & 1 lengthwise</div><div>3. Moisture Barrier Bag Labels</div></div><div><div>Inner Box Packing</div><div>4. Wrap bag with bubble pack</div><div>5. Tray Box Packing</div><div>Inner Box Tray: 16.2x37.1x3.8 cm</div></div></div> |

Affected Catalog Part Numbers(CPN)

ATSAMA5D31A-CU
ATSAMA5D31A-CUR
ATSAMA5D33A-CU
ATSAMA5D33A-CUR
ATSAMA5D34A-CU
ATSAMA5D34A-CUR
ATSAMA5D35A-CU
ATSAMA5D35A-CUR
ATSAMA5D36A-CU
ATSAMA5D36A-CUR
ATSAMA5D31A-CUC21
ATSAMA5D35A-CUC22
ATSAMA5D36A-CUC23
ATSAMA5D31A-CURC21
ATSAMA5D35A-CURC22
ATSAMA5D36A-CURC23