



## Product Change Notification / JAON-31VIRB105

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**Date:**

03-Apr-2023

**Product Category:**

Clock and Timing - Clock and Data Distribution, Clock and Timing - High Speed Communication

**PCN Type:**

Manufacturing Change

**Notification Subject:**

CCB 6213 Final Notice: Qualification of MMT as a new final test site for selected SY84782xxx, SY88149xxx, SY88932xxx, SY88992xxx, SY89230xxx, SY89832xxx, SY89833xxx, SY89834xxx, SY89840xxx, SY89841xxx, SY89871xxx, SY89872xxx, SY89873xxx, SY89874xxx, SY89875xxx, SY89876xxx, and SYCUSTxxx device families available in 16L VQFN (3x3x1.00mm) package.

**Affected CPNs:**

[JAON-31VIRB105\\_Affected\\_CPN\\_04032023.pdf](#)

[JAON-31VIRB105\\_Affected\\_CPN\\_04032023.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 MMT as a new final test site for selected SY84782xxx, SY88149xxx, SY88932xxx, SY88992xxx, SY89230xxx, SY89832xxx, SY89833xxx, SY89834xxx, SY89840xxx, SY89841xxx, SY89871xxx, SY89872xxx, SY89873xxx, SY89874xxx, SY89875xxx, SY89876xxx, and SYCUSTxxx device families available in 16L VQFN (3x3x1.00mm) package.

**Pre and Post Change Summary:**

|                         |                                 | Pre Change                                  | Post Change                                     |
|-------------------------|---------------------------------|---------------------------------------------|-------------------------------------------------|
| Final Test Site         |                                 | Unisem (M) Berhad Perak, Malaysia<br>(UNIS) | Microchip Technology Thailand (Branch)<br>(MMT) |
| Tape and Reel           | Base Quantity Multiple<br>(BQM) | 1000 units per reel                         | 1000 units per reel                             |
|                         | Pin 1 Orientation               | Quadrant 1                                  | Quadrant 1                                      |
| Carrier Tape            |                                 | See attached Pre and Post Comparison        |                                                 |
| Cover Tape              |                                 | See attached Pre and Post Comparison        |                                                 |
| Plastic Reel            |                                 | White                                       | Blue                                            |
|                         |                                 | See attached Pre and Post Comparison        |                                                 |
| Desiccant and HIC       |                                 | See attached Pre and Post Comparison        |                                                 |
| Tube                    | Base Quantity Multiple<br>(BQM) | 100 units                                   | 100 units                                       |
|                         | Pin 1 Orientation               | See attached Pre and Post Comparison        |                                                 |
| Desiccant and HIC       |                                 | See attached Pre and Post Comparison        |                                                 |
| Packing Material/Method |                                 | See attached Pre and Post Comparison        |                                                 |

**Impacts to Data Sheet:**None

**Change Impact:**None

**Reason for Change:**To improve manufacturability by qualifying MMT as a new final test site.

**Change Implementation Status:**In Progress

**Estimated First Ship Date:**April 24, 2023 (date code: 2317)

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

**Time Table Summary:**

|                               | April 2023 |        |        |        |        |
|-------------------------------|------------|--------|--------|--------|--------|
| Workweek                      | 1<br>4     | 1<br>5 | 1<br>6 | 1<br>7 | 1<br>8 |
| 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:**April 3, 2023: Issued final 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\\_JAON-31VIRB105\\_Qual Report.pdf](#)

[PCN\\_JAON-31VIRB105\\_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.



## **QUALIFICATION REPORT SUMMARY**

**PCN#: JAON-31VIRB105**

**Date  
March 31, 2023**

**Qualification of MMT as a new final test site for selected  
SY84782xxx, SY88149xxx, SY88932xxx, SY88992xxx,  
SY89230xxx, SY89832xxx, SY89833xxx, SY89834xxx,  
SY89840xxx, SY89841xxx, SY89871xxx, SY89872xxx,  
SY89873xxx, SY89874xxx, SY89875xxx, SY89876xxx, and  
SYCUSTxxx device families available in 16L VQFN  
(3x3x1.00mm) package.**

**Purpose:** Qualification of MMT as a new final test site for selected SY84782xxx, SY88149xxx, SY88932xxx, SY88992xxx, SY89230xxx, SY89832xxx, SY89833xxx, SY89834xxx, SY89840xxx, SY89841xxx, SY89871xxx, SY89872xxx, SY89873xxx, SY89874xxx, SY89875xxx, SY89876xxx, and SYCUSTxxx device families available in 16L VQFN (3x3x1.00mm) package.

**CCB No.:** 6213

| Test / Evaluation                 | Test Conditions / Parameters                                                                                                                                                                                                                                                                                                                                    | Results |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|
| <b>Correlation Plan</b>           | 50 correlation units of each device type (original site/tester to new site/tester).<br>Parametric correlation of ATE measured data sheet parameters<br><br>5,000 units yield sample for bin comparison (original site/tester to new site/tester).<br><br>50 untested units sample (new site/tester to original site/tester) for bin comparison and correlation. | Pass    |
| <b>Equipment correlation plan</b> | Perform final test at original site record yield and bin data. Perform same final test using the same units at destination site. Compare data.                                                                                                                                                                                                                  | Pass    |

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JAON-31VIRB105 - CCB 6213 Final Notice: Qualification of MMT as a new final test site for selected SY84782xxx, SY88149xxx, SY88932xxx, SY88992xxx, SY89230xxx, SY89832xxx, SY89833xxx, SY89834xxx, SY89840xxx, SY89841xxx, SY89871xxx, SY89872xxx, SY89873xxx, SY89874xxx, SY89875xxx, SY89876xxx, and SYCUSTxxx device families available in 16L VQFN (3x3x1.00mm) package.

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Affected Catalog Part Numbers (CPN)

SY84782UMG  
SY84782UMG-TR  
SY88149HALMG  
SY88149HALMG-TR  
SY88149NDLMG  
SY88149NDLMG-TR  
SY88932LMG  
SY88932LMG-TR  
SY88992LMG  
SY88992LMG-TR  
SY89230UMG  
SY89230UMG-TR  
SY89832UMG  
SY89832UMG-TR  
SY89833ALMG  
SY89833ALMG-TR  
SY89833LMG  
SY89833LMG-TR  
SY89834UMG  
SY89834UMG-TR  
SY89840UMG  
SY89840UMG-TR  
SY89841UMG  
SY89841UMG-TR  
SY89871UMG  
SY89871UMG-TR  
SY89872UMG  
SY89872UMG-TR  
SY89873LMG  
SY89873LMG-TR  
SY89874AUMG  
SY89874AUMG-TR  
SY89874UMG  
SY89874UMG-TR  
SY89875UMG  
SY89875UMG-TR  
SY89876LMG  
SY89876LMG-TR  
SYCUSTDIP1-TR

# CCB 6213

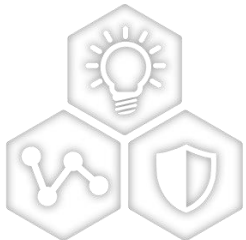
## Pre and Post Change Summary

PCN #: JAON-31VIRB105



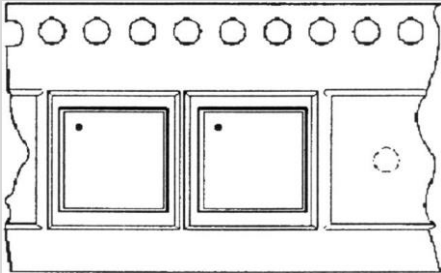
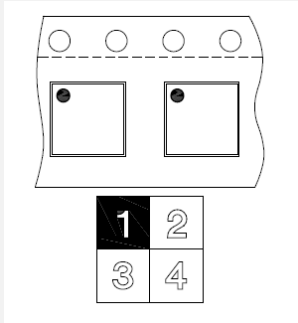
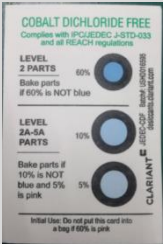
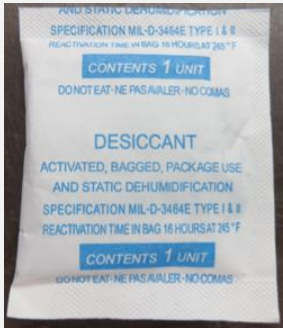
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# Packing Information - Tape and Reel

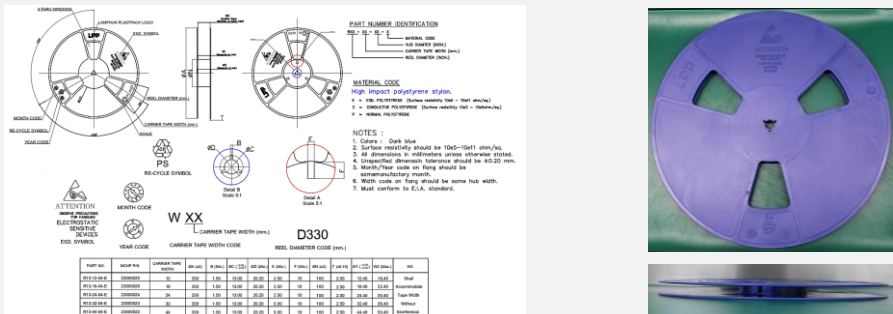
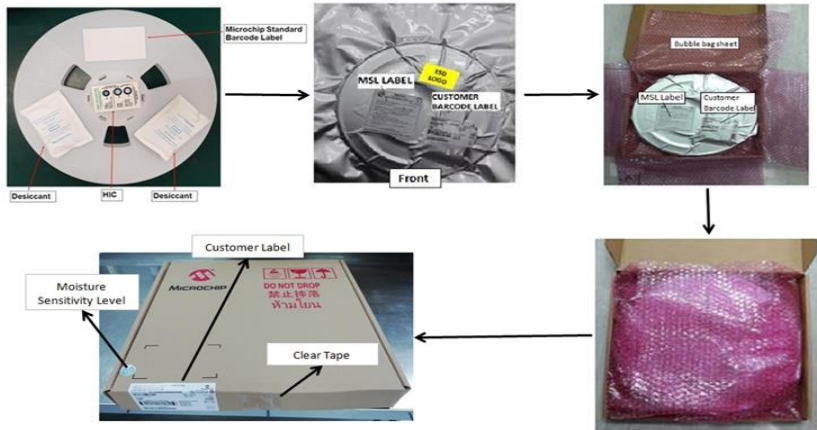
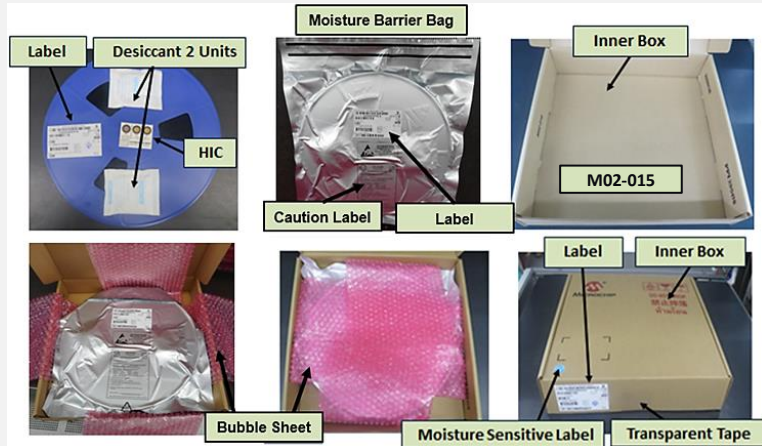
|                              | UNISEM (Pre)                                                                                                                                                                                                                               | MTAI (Post)                                                                                                                                                                                                                       |
|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Final Test Location          | Unisem (M) Bhd                                                                                                                                                                                                                             | Microchip Technology Thailand (MMT)                                                                                                                                                                                               |
| Packing Media                | Tape & Reel                                                                                                                                                                                                                                | Tape and Reel                                                                                                                                                                                                                     |
| Base Quantity Multiple (BQM) | 1000 per reel                                                                                                                                                                                                                              | 1000 per reel                                                                                                                                                                                                                     |
| Pin1 Orientation             |                                                                                                                                                          |  <div> <div>Pin 1 Orientation in T/R</div> <div>Quadrant 1</div> </div>                                                                        |
| Desiccant and HIC            | <div>  <div>2 X 1 unit Desiccant</div>  <div>3 Spot HIC</div> </div> | <div>  <div>Desiccant</div>  <div>HIC 3 dots</div> </div> |



# Packing Information - Tape and Reel

|                     | UNISEM (Pre)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | MTAI (Post)                         |      |             |      |    |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |     |             |      |    |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|------|-------------|------|----|---|---|------------|------|-----|---|---|------------|------|-----|---|---|------------|------|-----|---|---|------------|------|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----|-------------|------|----|---|---|------------|------|-----|---|---|------------|------|-----|---|---|------------|------|-----|---|---|------------|------|-----|
| Final Test Location | Unisem (M) Bhd                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Microchip Technology Thailand (MMT) |      |             |      |    |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |     |             |      |    |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |
| Packing Media       | Tape & Reel                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Tape and Reel                       |      |             |      |    |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |     |             |      |    |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |
| Carrier Tape        | <div><p>Section A-A</p><p>Notes:</p><ol style="list-style-type: none"><li>1. 10 sprocket hole pitch cumulative tolerance <math>\pm 0.2</math>.</li><li>2. Camber not to exceed 1mm in 100mm.</li><li>3. Material: PS + C.</li><li>4. <math>A_0</math> and <math>B_0</math> measured as indicated.</li><li>5. <math>K_0</math> measured from a plane on the inside bottom of the pocket to the top surface of the carrier.</li><li>6. Pocket position relative to sprocket hole measured as true position of pocket, not pocket hole.</li></ol><p>-All Dimensions in Millimeters-</p><table><tr><th>REVISIONS</th><th>NO.</th><th>DESCRIPTION</th><th>DATE</th><th>BY</th></tr><tr><td>1</td><td>1</td><td>ECO NUMBER</td><td>2006</td><td>2.0</td></tr><tr><td>2</td><td>2</td><td>ECO NUMBER</td><td>2006</td><td>2.0</td></tr><tr><td>3</td><td>3</td><td>ECO NUMBER</td><td>2006</td><td>2.0</td></tr><tr><td>4</td><td>4</td><td>ECO NUMBER</td><td>2006</td><td>2.0</td></tr></table></div> | REVISIONS                           | NO.  | DESCRIPTION | DATE | BY | 1 | 1 | ECO NUMBER | 2006 | 2.0 | 2 | 2 | ECO NUMBER | 2006 | 2.0 | 3 | 3 | ECO NUMBER | 2006 | 2.0 | 4 | 4 | ECO NUMBER | 2006 | 2.0 | <div><p>Section A-A</p><p>Notes:</p><ol style="list-style-type: none"><li>1. 10 sprocket hole pitch cumulative tolerance <math>\pm 0.2</math>.</li><li>2. Carrier not to exceed 1mm in 100mm.</li><li>3. Material: PS + C.</li><li>4. <math>A_0</math> and <math>B_0</math> measured as indicated.</li><li>5. <math>K_0</math> measured from a plane on the inside bottom of the pocket to the top surface of the carrier.</li><li>6. Pocket position relative to sprocket hole measured as true position of pocket, not pocket hole.</li></ol><p>-All Dimensions in Millimeters-</p><table><tr><th>REVISIONS</th><th>NO.</th><th>DESCRIPTION</th><th>DATE</th><th>BY</th></tr><tr><td>1</td><td>1</td><td>ECO NUMBER</td><td>2006</td><td>2.0</td></tr><tr><td>2</td><td>2</td><td>ECO NUMBER</td><td>2006</td><td>2.0</td></tr><tr><td>3</td><td>3</td><td>ECO NUMBER</td><td>2006</td><td>2.0</td></tr><tr><td>4</td><td>4</td><td>ECO NUMBER</td><td>2006</td><td>2.0</td></tr></table></div> | REVISIONS | NO. | DESCRIPTION | DATE | BY | 1 | 1 | ECO NUMBER | 2006 | 2.0 | 2 | 2 | ECO NUMBER | 2006 | 2.0 | 3 | 3 | ECO NUMBER | 2006 | 2.0 | 4 | 4 | ECO NUMBER | 2006 | 2.0 |
| REVISIONS           | NO.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | DESCRIPTION                         | DATE | BY          |      |    |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |     |             |      |    |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |
| 1                   | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ECO NUMBER                          | 2006 | 2.0         |      |    |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |     |             |      |    |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |
| 2                   | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ECO NUMBER                          | 2006 | 2.0         |      |    |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |     |             |      |    |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |
| 3                   | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ECO NUMBER                          | 2006 | 2.0         |      |    |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |     |             |      |    |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |
| 4                   | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ECO NUMBER                          | 2006 | 2.0         |      |    |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |     |             |      |    |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |
| REVISIONS           | NO.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | DESCRIPTION                         | DATE | BY          |      |    |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |     |             |      |    |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |
| 1                   | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ECO NUMBER                          | 2006 | 2.0         |      |    |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |     |             |      |    |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |
| 2                   | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ECO NUMBER                          | 2006 | 2.0         |      |    |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |     |             |      |    |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |
| 3                   | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ECO NUMBER                          | 2006 | 2.0         |      |    |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |     |             |      |    |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |
| 4                   | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ECO NUMBER                          | 2006 | 2.0         |      |    |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |     |             |      |    |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |
| Cover Tape          | <div><p>NOTE:</p><ol style="list-style-type: none"><li>1. REEL TO CONTAIN 300 METERS OF SPLICE FREE MATERIAL.</li><li>2. MATERIAL: ANTISTATIC POLYESTER FILM.</li><li>3. COLOR: TRANSPARENT, PALE BLUE.</li></ol><p>△ THESE WIDTHS ARE ALSO AVAILABLE IN 500 METER LENGTHS.</p><p>- All Dimensions in Millimeters -</p><table><tr><th>REVISIONS</th><th>NO.</th><th>DESCRIPTION</th><th>DATE</th><th>BY</th></tr><tr><td>1</td><td>1</td><td>ECO NUMBER</td><td>2006</td><td>2.0</td></tr><tr><td>2</td><td>2</td><td>ECO NUMBER</td><td>2006</td><td>2.0</td></tr><tr><td>3</td><td>3</td><td>ECO NUMBER</td><td>2006</td><td>2.0</td></tr><tr><td>4</td><td>4</td><td>ECO NUMBER</td><td>2006</td><td>2.0</td></tr></table></div>                                                                                                                                                                                                                                                              | REVISIONS                           | NO.  | DESCRIPTION | DATE | BY | 1 | 1 | ECO NUMBER | 2006 | 2.0 | 2 | 2 | ECO NUMBER | 2006 | 2.0 | 3 | 3 | ECO NUMBER | 2006 | 2.0 | 4 | 4 | ECO NUMBER | 2006 | 2.0 | <div><p>NOTE:</p><ol style="list-style-type: none"><li>1. REEL TO CONTAIN 300 METERS OF SPLICE FREE MATERIAL.</li><li>2. MATERIAL: ANTISTATIC POLYESTER FILM.</li><li>3. COLOR: TRANSPARENT, PALE BLUE.</li></ol><p>△ THESE WIDTHS ARE ALSO AVAILABLE IN 500 METER LENGTHS.</p><p>- All Dimensions in Millimeters -</p><table><tr><th>REVISIONS</th><th>NO.</th><th>DESCRIPTION</th><th>DATE</th><th>BY</th></tr><tr><td>1</td><td>1</td><td>ECO NUMBER</td><td>2006</td><td>2.0</td></tr><tr><td>2</td><td>2</td><td>ECO NUMBER</td><td>2006</td><td>2.0</td></tr><tr><td>3</td><td>3</td><td>ECO NUMBER</td><td>2006</td><td>2.0</td></tr><tr><td>4</td><td>4</td><td>ECO NUMBER</td><td>2006</td><td>2.0</td></tr></table></div>                                                                                                                                                                                                                                                               | REVISIONS | NO. | DESCRIPTION | DATE | BY | 1 | 1 | ECO NUMBER | 2006 | 2.0 | 2 | 2 | ECO NUMBER | 2006 | 2.0 | 3 | 3 | ECO NUMBER | 2006 | 2.0 | 4 | 4 | ECO NUMBER | 2006 | 2.0 |
| REVISIONS           | NO.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | DESCRIPTION                         | DATE | BY          |      |    |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |     |             |      |    |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |
| 1                   | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ECO NUMBER                          | 2006 | 2.0         |      |    |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |     |             |      |    |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |
| 2                   | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ECO NUMBER                          | 2006 | 2.0         |      |    |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |     |             |      |    |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |
| 3                   | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ECO NUMBER                          | 2006 | 2.0         |      |    |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |     |             |      |    |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |
| 4                   | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ECO NUMBER                          | 2006 | 2.0         |      |    |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |     |             |      |    |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |
| REVISIONS           | NO.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | DESCRIPTION                         | DATE | BY          |      |    |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |     |             |      |    |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |
| 1                   | 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ECO NUMBER                          | 2006 | 2.0         |      |    |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |     |             |      |    |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |
| 2                   | 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ECO NUMBER                          | 2006 | 2.0         |      |    |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |     |             |      |    |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |
| 3                   | 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ECO NUMBER                          | 2006 | 2.0         |      |    |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |     |             |      |    |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |
| 4                   | 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | ECO NUMBER                          | 2006 | 2.0         |      |    |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |     |             |      |    |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |   |   |            |      |     |

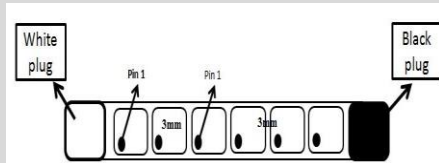
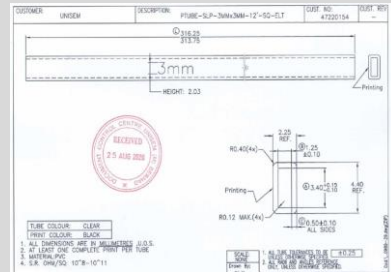
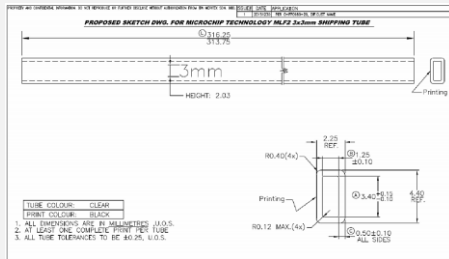
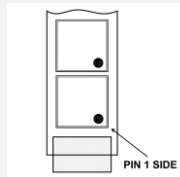
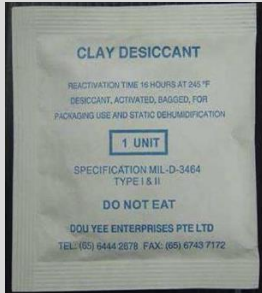
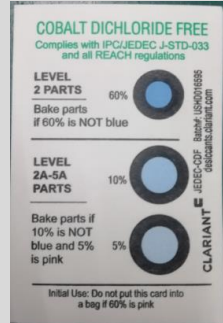
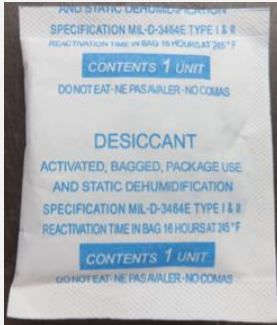
# Packing Information - Tape and Reel

|                                                               | UNISEM (Pre)                                                                                   | MTAI (Post)                                                                                                                                                                                                                                                          |                |           |              |       |     |     |       |           |
|---------------------------------------------------------------|------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|-----------|--------------|-------|-----|-----|-------|-----------|
| Final Test Location                                           | Unisem (M) Bhd                                                                                 | Microchip Technology Thailand (MMT)                                                                                                                                                                                                                                  |                |           |              |       |     |     |       |           |
| Packing Media                                                 | Tape & Reel                                                                                    | Tape and Reel                                                                                                                                                                                                                                                        |                |           |              |       |     |     |       |           |
| Reel                                                          | <div></div>  | <div></div> <table><tr><th>Diameter (mm.)</th><th>Hub (mm.)</th><th>W2 Max (mm.)</th><th>Color</th></tr><tr><td>330</td><td>100</td><td>18.40</td><td>Dark Blue</td></tr></table> | Diameter (mm.) | Hub (mm.) | W2 Max (mm.) | Color | 330 | 100 | 18.40 | Dark Blue |
| Diameter (mm.)                                                | Hub (mm.)                                                                                      | W2 Max (mm.)                                                                                                                                                                                                                                                         | Color          |           |              |       |     |     |       |           |
| 330                                                           | 100                                                                                            | 18.40                                                                                                                                                                                                                                                                | Dark Blue      |           |              |       |     |     |       |           |
| Antistatic Shielding Bag/Moisture Barrier Bag/Packing Process | <div></div> | <div><p>Inner Box:</p></div>                                                                                                                                                     |                |           |              |       |     |     |       |           |

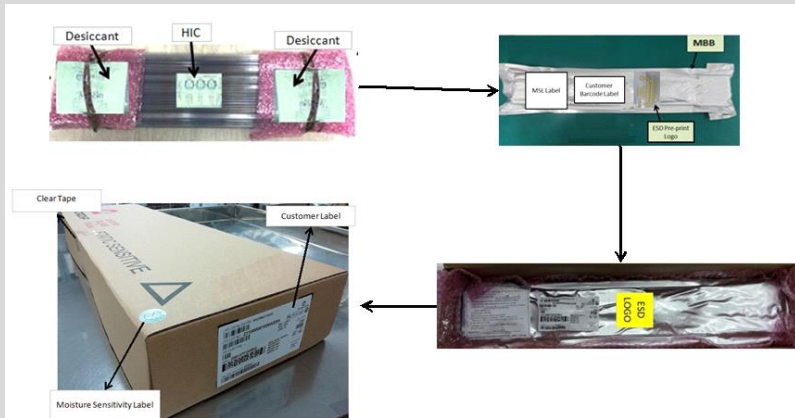
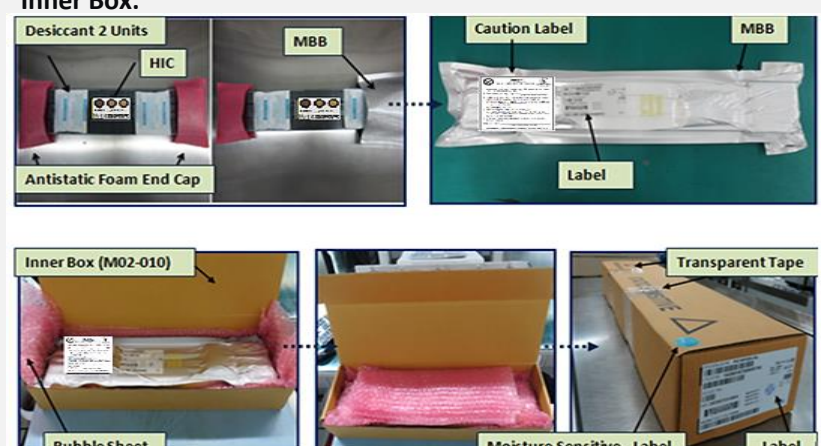
# Packing Information - Tape and Reel

|                     | UNISEM (Pre)                                                                                                                                                                                                                                | MTAI (Post)                         |                          |                                    |     |     |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |  |        |  |                                    |                |                          |                |                          |                 |             |              |                |     |              |                |     |              |                |     |              |                |      |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|--------------------------|------------------------------------|-----|-----|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|--|--------|--|------------------------------------|----------------|--------------------------|----------------|--------------------------|-----------------|-------------|--------------|----------------|-----|--------------|----------------|-----|--------------|----------------|-----|--------------|----------------|------|
| Final Test Location | Unisem (M) Bhd                                                                                                                                                                                                                              | Microchip Technology Thailand (MMT) |                          |                                    |     |     |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |  |        |  |                                    |                |                          |                |                          |                 |             |              |                |     |              |                |     |              |                |     |              |                |      |
| Packing Media       | Tape & Reel                                                                                                                                                                                                                                 | Tape and Reel                       |                          |                                    |     |     |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |  |        |  |                                    |                |                          |                |                          |                 |             |              |                |     |              |                |     |              |                |     |              |                |      |
| Carton Box          | <div></div> <div><table><tr><th>Length (mm)</th><th>Width (mm)</th><th>Thickness (mm)</th></tr><tr><td>356</td><td>340</td><td>50</td></tr></table></div> | Length (mm)                         | Width (mm)               | Thickness (mm)                     | 356 | 340 | 50 | <div>Outer Box:</div> <table><tr><th colspan="2">Inner box</th><th colspan="2">Carton</th><th rowspan="2">Number of Inner box(es) per carton</th></tr><tr><th>Drawing number</th><th>Dimension W x L x H (cm)</th><th>Drawing number</th><th>Dimension W x L x H (cm)</th></tr><tr><td rowspan="4">M02-015 (Small)</td><td rowspan="4">37x35.1x5.3</td><td>M01-044 (SM)</td><td>37.0x38.0x11.0</td><td>1:1</td></tr><tr><td>M01-045 (S4)</td><td>37.0x38.0x22.5</td><td>3:1</td></tr><tr><td>M01-046 (S5)</td><td>37.0x39.0x39.0</td><td>6:1</td></tr><tr><td>M01-047 (S3)</td><td>42.0x66.0x39.0</td><td>11:1</td></tr></table> | Inner box |  | Carton |  | Number of Inner box(es) per carton | Drawing number | Dimension W x L x H (cm) | Drawing number | Dimension W x L x H (cm) | M02-015 (Small) | 37x35.1x5.3 | M01-044 (SM) | 37.0x38.0x11.0 | 1:1 | M01-045 (S4) | 37.0x38.0x22.5 | 3:1 | M01-046 (S5) | 37.0x39.0x39.0 | 6:1 | M01-047 (S3) | 42.0x66.0x39.0 | 11:1 |
|                     | Length (mm)                                                                                                                                                                                                                                 | Width (mm)                          | Thickness (mm)           |                                    |     |     |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |  |        |  |                                    |                |                          |                |                          |                 |             |              |                |     |              |                |     |              |                |     |              |                |      |
| 356                 | 340                                                                                                                                                                                                                                         | 50                                  |                          |                                    |     |     |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |  |        |  |                                    |                |                          |                |                          |                 |             |              |                |     |              |                |     |              |                |     |              |                |      |
| Inner box           |                                                                                                                                                                                                                                             | Carton                              |                          | Number of Inner box(es) per carton |     |     |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |  |        |  |                                    |                |                          |                |                          |                 |             |              |                |     |              |                |     |              |                |     |              |                |      |
| Drawing number      | Dimension W x L x H (cm)                                                                                                                                                                                                                    | Drawing number                      | Dimension W x L x H (cm) |                                    |     |     |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |  |        |  |                                    |                |                          |                |                          |                 |             |              |                |     |              |                |     |              |                |     |              |                |      |
| M02-015 (Small)     | 37x35.1x5.3                                                                                                                                                                                                                                 | M01-044 (SM)                        | 37.0x38.0x11.0           | 1:1                                |     |     |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |  |        |  |                                    |                |                          |                |                          |                 |             |              |                |     |              |                |     |              |                |     |              |                |      |
|                     |                                                                                                                                                                                                                                             | M01-045 (S4)                        | 37.0x38.0x22.5           | 3:1                                |     |     |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |  |        |  |                                    |                |                          |                |                          |                 |             |              |                |     |              |                |     |              |                |     |              |                |      |
|                     |                                                                                                                                                                                                                                             | M01-046 (S5)                        | 37.0x39.0x39.0           | 6:1                                |     |     |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |  |        |  |                                    |                |                          |                |                          |                 |             |              |                |     |              |                |     |              |                |     |              |                |      |
|                     |                                                                                                                                                                                                                                             | M01-047 (S3)                        | 42.0x66.0x39.0           | 11:1                               |     |     |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |           |  |        |  |                                    |                |                          |                |                          |                 |             |              |                |     |              |                |     |              |                |     |              |                |      |

## Packing Information - TUBE

|                              | UNISEM (Pre)                                                                                                                                                                                  | MTAI (Post)                                                                                                                                                                                                                                                                                                             |                      |                          |      |      |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|--------------------------|------|------|
| Final Test Location          | Unisem (M) Bhd                                                                                                                                                                                | Microchip Technology Thailand (MMT)                                                                                                                                                                                                                                                                                     |                      |                          |      |      |
| Packing Media                | TUBE                                                                                                                                                                                          | TUBE                                                                                                                                                                                                                                                                                                                    |                      |                          |      |      |
| Base Quantity Multiple (BQM) | 100 units per tube                                                                                                                                                                            | 100 units per tube                                                                                                                                                                                                                                                                                                      |                      |                          |      |      |
| Pin1 Orientation             | <div></div> <div></div>  | <div></div> <div></div> <table><tr><th>Pin1 Side plug color</th><th>Opposite Side plug color</th></tr><tr><td>Grey</td><td>Blue</td></tr></table> | Pin1 Side plug color | Opposite Side plug color | Grey | Blue |
| Pin1 Side plug color         | Opposite Side plug color                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                         |                      |                          |      |      |
| Grey                         | Blue                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                         |                      |                          |      |      |
| Desiccant and HIC            | <div></div> <div></div> | <div></div> <div></div>                                                                                                                         |                      |                          |      |      |

# Packing Information - TUBE

|                                                               | UNISEM (Pre)                                                                                                                                                                                                           | MTAI (Post)                                                                                                  |                          |                                    |     |     |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |           |  |        |  |                                    |                |                          |                |                          |         |             |              |                |     |              |            |     |              |              |     |              |            |     |              |          |
|---------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|--------------------------|------------------------------------|-----|-----|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|--|--------|--|------------------------------------|----------------|--------------------------|----------------|--------------------------|---------|-------------|--------------|----------------|-----|--------------|------------|-----|--------------|--------------|-----|--------------|------------|-----|--------------|----------|
| Final Test Location                                           | Unisem (M) Bhd                                                                                                                                                                                                         | Microchip Technology Thailand (MMT)                                                                          |                          |                                    |     |     |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |           |  |        |  |                                    |                |                          |                |                          |         |             |              |                |     |              |            |     |              |              |     |              |            |     |              |          |
| Packing Media                                                 | TUBE                                                                                                                                                                                                                   | TUBE                                                                                                         |                          |                                    |     |     |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |           |  |        |  |                                    |                |                          |                |                          |         |             |              |                |     |              |            |     |              |              |     |              |            |     |              |          |
| Antistatic Shielding Bag/Moisture Barrier Bag/Packing Process |                                                                                                                                      | <p><b>Inner Box:</b></p>  |                          |                                    |     |     |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |           |  |        |  |                                    |                |                          |                |                          |         |             |              |                |     |              |            |     |              |              |     |              |            |     |              |          |
|                                                               |  <table><tr><th>Length (mm)</th><th>Width (mm)</th><th>Thickness (mm)</th></tr><tr><td>565</td><td>133</td><td>80</td></tr></table> | Length (mm)                                                                                                  | Width (mm)               | Thickness (mm)                     | 565 | 133 | 80 | <p><b>Outer Box:</b></p> <table><tr><th colspan="2">Inner box</th><th colspan="2">Carton</th><th rowspan="2">Number of Inner box(es) per carton</th></tr><tr><th>Drawing number</th><th>Dimension W x L x H (cm)</th><th>Drawing number</th><th>Dimension W x L x H (cm)</th></tr><tr><td rowspan="5">M02-010</td><td rowspan="5">12.9x56.5x8</td><td>M01-022 (PP)</td><td>15.5x62.0x14.0</td><td>1:1</td></tr><tr><td>M01-028 (C4)</td><td>28x63.5x11</td><td>2:1</td></tr><tr><td>M01-029 (C6)</td><td>28x63.5x15.5</td><td>3:1</td></tr><tr><td>M01-030 (C8)</td><td>28x63.5x20</td><td>4:1</td></tr><tr><td>M01-040 (S6)</td><td>43x59x19</td><td>6:1</td></tr></table> | Inner box |  | Carton |  | Number of Inner box(es) per carton | Drawing number | Dimension W x L x H (cm) | Drawing number | Dimension W x L x H (cm) | M02-010 | 12.9x56.5x8 | M01-022 (PP) | 15.5x62.0x14.0 | 1:1 | M01-028 (C4) | 28x63.5x11 | 2:1 | M01-029 (C6) | 28x63.5x15.5 | 3:1 | M01-030 (C8) | 28x63.5x20 | 4:1 | M01-040 (S6) | 43x59x19 |
| Length (mm)                                                   | Width (mm)                                                                                                                                                                                                             | Thickness (mm)                                                                                               |                          |                                    |     |     |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |           |  |        |  |                                    |                |                          |                |                          |         |             |              |                |     |              |            |     |              |              |     |              |            |     |              |          |
| 565                                                           | 133                                                                                                                                                                                                                    | 80                                                                                                           |                          |                                    |     |     |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |           |  |        |  |                                    |                |                          |                |                          |         |             |              |                |     |              |            |     |              |              |     |              |            |     |              |          |
| Inner box                                                     |                                                                                                                                                                                                                        | Carton                                                                                                       |                          | Number of Inner box(es) per carton |     |     |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |           |  |        |  |                                    |                |                          |                |                          |         |             |              |                |     |              |            |     |              |              |     |              |            |     |              |          |
| Drawing number                                                | Dimension W x L x H (cm)                                                                                                                                                                                               | Drawing number                                                                                               | Dimension W x L x H (cm) |                                    |     |     |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |           |  |        |  |                                    |                |                          |                |                          |         |             |              |                |     |              |            |     |              |              |     |              |            |     |              |          |
| M02-010                                                       | 12.9x56.5x8                                                                                                                                                                                                            | M01-022 (PP)                                                                                                 | 15.5x62.0x14.0           | 1:1                                |     |     |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |           |  |        |  |                                    |                |                          |                |                          |         |             |              |                |     |              |            |     |              |              |     |              |            |     |              |          |
|                                                               |                                                                                                                                                                                                                        | M01-028 (C4)                                                                                                 | 28x63.5x11               | 2:1                                |     |     |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |           |  |        |  |                                    |                |                          |                |                          |         |             |              |                |     |              |            |     |              |              |     |              |            |     |              |          |
|                                                               |                                                                                                                                                                                                                        | M01-029 (C6)                                                                                                 | 28x63.5x15.5             | 3:1                                |     |     |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |           |  |        |  |                                    |                |                          |                |                          |         |             |              |                |     |              |            |     |              |              |     |              |            |     |              |          |
|                                                               |                                                                                                                                                                                                                        | M01-030 (C8)                                                                                                 | 28x63.5x20               | 4:1                                |     |     |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |           |  |        |  |                                    |                |                          |                |                          |         |             |              |                |     |              |            |     |              |              |     |              |            |     |              |          |
|                                                               |                                                                                                                                                                                                                        | M01-040 (S6)                                                                                                 | 43x59x19                 | 6:1                                |     |     |    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |           |  |        |  |                                    |                |                          |                |                          |         |             |              |                |     |              |            |     |              |              |     |              |            |     |              |          |