



## Product Change Notification / MFOL-18PVHH137

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### Date:

20-Mar-2024

### Product Category:

8-Bit Microcontrollers

### PCN Type:

Manufacturing Change

### Notification Subject:

CCB 6694 Final Notice: Qualification of MTAI as a new final test site for selected ATMEGA128, ATMEGA16xx, ATMEGA32, ATMEGA48, ATMEGA64, ATMEGA8xx, ATTINY13, ATTINY24, ATTINY25, ATTINY44, ATTINY45, ATTINY84 and ATTINY85 device families available in various packages.

### Affected CPNs:

[MFOL-18PVHH137\\_Affected\\_CPN\\_03202024.pdf](#)

[MFOL-18PVHH137\\_Affected\\_CPN\\_03202024.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 MTAI as a new final test site for selected ATMEGA128, ATMEGA16xx, ATMEGA32, ATMEGA48, ATMEGA64, ATMEGA8xx, ATTINY13, ATTINY24, ATTINY25, ATTINY44, ATTINY45, ATTINY84 and ATTINY85 device families available in various packages

### Pre and Post Change Summary:

**For 8L PDIP:**

	<b>Pre Change</b>	<b>Post Change</b>
Final Test Site	Lingsen Precision Industries, LTD. (LPI)	Microchip Technology Thailand (HQ) (MTAI)
Base Quantity Multiple (BQM)	50	50
Pin 1 Orientation	Pin# 1 Toward Green stopper or pin	Pin# 1 Toward White stopper or pin (Opposite Side: Black)
Tube	With minimal dimensional change. See Pre and Post Change Summary for comparison	
Packing Method	See Pre and Post Change Summary for comparison	

**For 14L PDIP:**

	<b>Pre Change</b>	<b>Post Change</b>
Final Test Site	Lingsen Precision Industries, LTD. (LPI)	Microchip Technology Thailand (HQ) (MTAI)
Base Quantity Multiple (BQM)	25	30
Pin 1 Orientation	Pin# 1 Toward Green stopper or pin	Pin# 1 Toward White stopper or pin (Opposite Side: Black)
Tube	With dimensional change. See Pre and Post Change Summary for comparison	
Packing Method	See Pre and Post Change Summary for comparison	

**For 28L SPDIP:**

	<b>Pre Change</b>	<b>Post Change</b>
Final Test Site	Lingsen Precision Industries, LTD.  (LPI)	Microchip Technology Thailand (HQ)  (MTAI)
Base Quantity Multiple (BQM)	14	14
Pin 1 Orientation	Pin# 1 Toward Green stopper or pin	Pin# 1 Toward White stopper or pin (Opposite Side: Black)
Tube	No dimensional change. See Pre and Post Change Summary for comparison	
Packing Method	See Pre and Post Change Summary for comparison	

**For 40L PDIP:**

	<b>Pre Change</b>	<b>Post Change</b>
Final Test Site	Lingsen Precision Industries, LTD.  (LPI)	Microchip Technology Thailand (HQ)  (MTAI)
Base Quantity Multiple (BQM)	10	10
Pin 1 Orientation	Pin# 1 Toward Green stopper or pin	Pin# 1 Toward White stopper or pin (Opposite Side: Black)
Tube	With minimal dimensional change. See Pre and Post Change Summary for comparison	
Packing Method	See Pre and Post Change Summary for comparison	

**Impacts to Data Sheet:**None

**Change Impact:**None

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

**Change Implementation Status:**In Progress

**Estimated First Ship Date:**April 29, 2024 (date code: 2418)

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

**Time Table Summary:**

	December 2023					>	March 2024					April 2024				
Workweek	48	49	50	51	52		09	10	11	12	13	14	15	16	17	18
Initial PCN Issue Date				X												
Qual Report Availability										X						
Final PCN Issue Date										X						
Estimated Implementation Date																X

**Method to Identify Change:**Traceability code

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

**Revision History:**December 18, 2023: Issued initial notification.

March 20, 2024: Issued final notification. Updated the affected CPN list. Attached Qual Report and provided the estimated first ship date on April 29, 2024.

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

**Attachments:**

[PCN\\_MFOL-18PVHH137\\_Qual Report.pdf](#)

[PCN\\_MFOL-18PVHH137\\_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.

Affected Catalog Part Numbers (CPN)

ATMEGA644A-PU  
ATMEGA644PA-PU  
ATMEGA16L-8PU  
ATMEGA16A-PU  
ATMEGA32A-PU  
ATMEGA32A-PN  
ATMEGA1284P-PU  
ATMEGA1284-PU  
ATTINY13A-PU  
ATTINY13V-10PQ  
ATTINY25-20PU  
ATTINY25V-10PU  
ATTINY45-20PU  
ATTINY13-20PU  
ATTINY13V-10PU  
ATTINY45V-10PU  
ATTINY85-20PU  
ATTINY85V-10PU  
ATTINY84A-PU  
ATTINY24A-PU  
ATTINY44A-PU  
ATMEGA328P-PU  
ATMEGA328-PU  
ATMEGA8L-8PU  
ATMEGA8A-PU  
ATMEGA328P-PN  
ATMEGA8-16PU  
ATMEGA88A-PU  
ATMEGA88PA-PU  
ATMEGA8A-PN  
ATMEGA88PA-PN  
ATMEGA168A-PU  
ATMEGA168PA-PU  
ATMEGA48A-PU  
ATMEGA48PA-PU  
ATMEGA168PA-PN  
ATMEGA48PA-PN



**QUALIFICATION REPROT SUMMARY  
RELIABILITY LABORATORY**

**PCN #: MFOL-18PVHH137**

**Date:  
March 07, 2024**

**Qualification of MTAI as a new final test site for selected  
ATMEGA128, ATMEGA16xx, ATMEGA32, ATMEGA48,  
ATMEGA64, ATMEGA8xx, ATTINY13, ATTINY24, ATTINY25,  
ATTINY44, ATTINY45, ATTINY84 and ATTINY85 device  
families available in various packages.**



## **MICROCHIP**

### PACKAGE QUALIFICATION REPORT

**Purpose** Qualification of MTAI as a new final test site for selected ATMEGA128, ATMEGA16xx, ATMEGA32, ATMEGA48, ATMEGA64, ATMEGA8xx, ATTINY13, ATTINY24, ATTINY25, ATTINY44, ATTINY45, ATTINY84 and ATTINY85 device families available in various packages.

**CCB No.** 6694

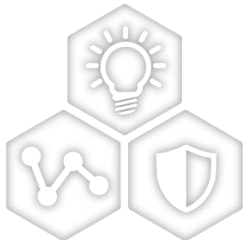
Test / Evaluation	Test Condition / Parameters	Result
Datalog/Bin Comparison	<ul style="list-style-type: none"><li>• Compare test numbers, test names, test sequence bin assignments &amp; pass/fail results.</li><li>• Accept if all match or justify the differences</li></ul>	Passed
Site By Site Verification	<ul style="list-style-type: none"><li>• Verifies the channel map has the correct site assignments and tester/handler communications work correctly</li></ul>	Passed
Correlation Lot Report	<ul style="list-style-type: none"><li>• Yield comparison between systems and test sites.</li><li>• Accept on yield match within 0.1%</li></ul>	Passed
Test Stability	<ul style="list-style-type: none"><li>• 50 loop tests performed with no data log delays.</li><li>• Accept on 0 fails</li></ul>	Passed

**CCB 6694**  
**PCN ID#: MFOL-18PVHH137**



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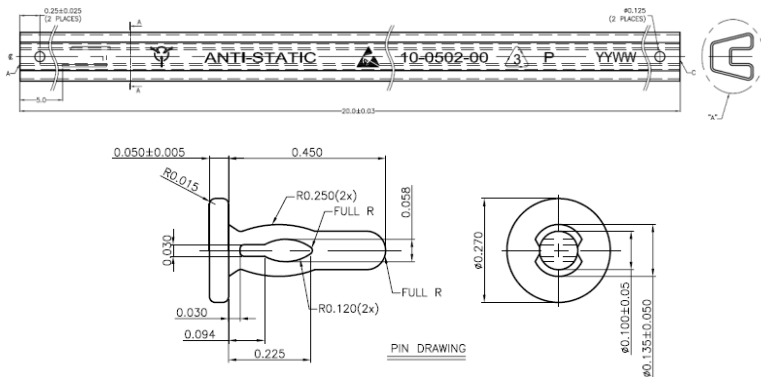
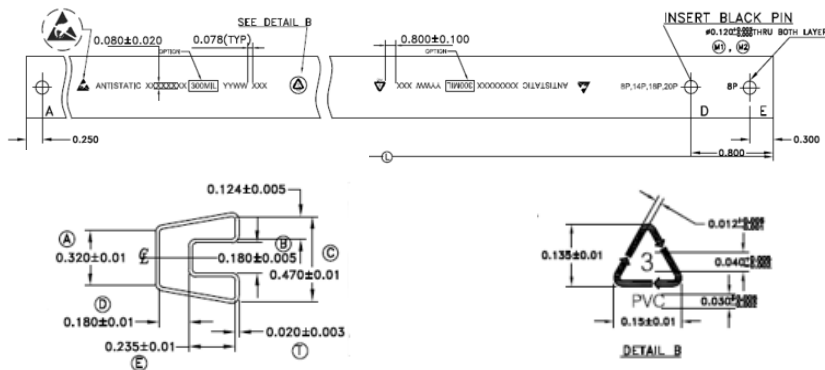
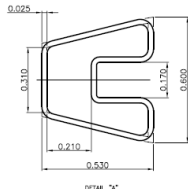
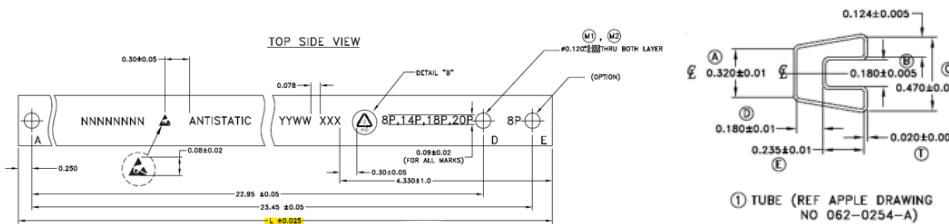
## Pre and Post Summary – Base Quantity Multiple (BQM)

		LPI	MTAI
Tube	8L PDIP	50	50
	14L PDIP	25	30
	28L SPDIP	14	14
	40L PDIP	10	10

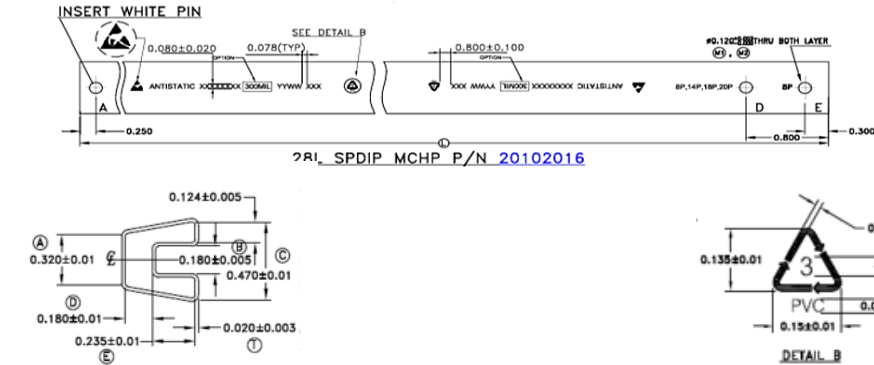
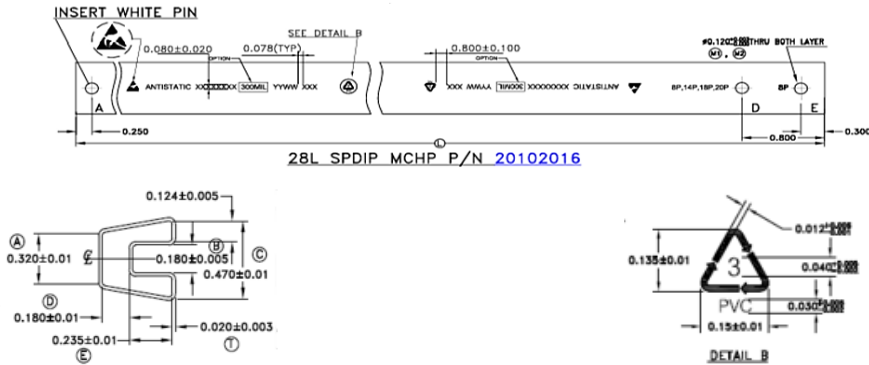
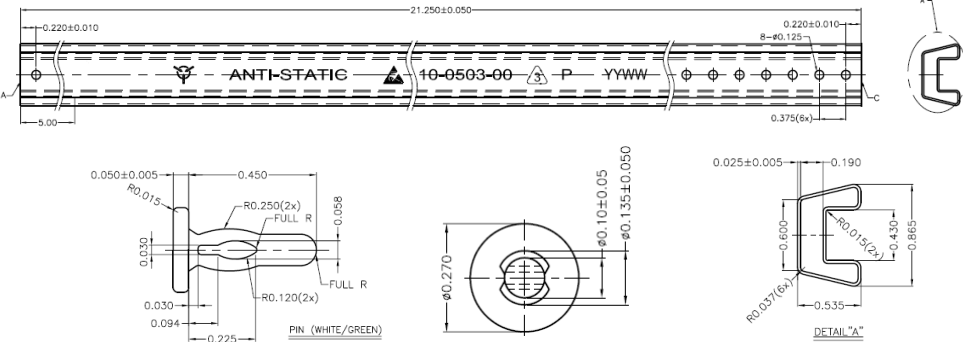
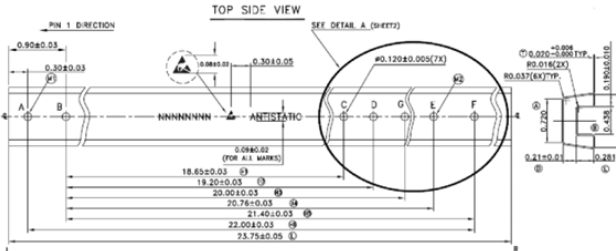
# Pre and Post Summary – Pin 1 Orientation

		LPI	MTAI
Tube	8L PDIP	Pin# 1 Toward Green stopper or pin	Pin# 1 Toward White stopper or pin (Opposite Side: Black)
	14L PDIP		
	28L SPDIP		
	40L PDIP		

# Pre and Post Summary – Tube

		LPI	MTAI																													
Tube	8L PDIP	<div><p>NOTES:</p><ol style="list-style-type: none"><li>1. MATERIAL: CLEAR, TRANSPARENT PVC.</li><li>2. THIS TUBE IS TO BE TESTED PER PACKAGE MATERIAL STANDARD SPEC MIL-PRF-38535 AND EIA-STD-5.</li><li>3. FINISH: TO BE TREATED WITH ANTI-STATIC COATING: STATIC CHARGE ON TUBE TO BE 50 VOLTS AT A DISTANCE OF 2.0 INCHES FROM A SENSING PROBE.</li><li>4. NO CHIPS OR CRACKS ALLOWED.</li><li>5. 0.010" MAX. BURR ON INNER TUBE EDGE.</li><li>6. THE FLATNESS OF TUBE SADDLE SHOULD BE 0.003" MAX.</li><li>7. NO OIL, GREASE, OR OTHER FOREIGN CONTAMINATION TO BE ON OR IN TUBE.</li><li>8. MAX. SURFACE RESISTIVITY OF TUBE &amp; PIN : <math>10^{10}</math> ohm/sq MAX.</li><li>9. REFER TO SPEC MA-5016 FOR TUBE MARKING.</li><li>10. REFER TO SPEC MA-5016 FOR ASSEMBLY LOCATION CODE.</li><li>11. UNLESS OTHERWISE SPECIFIED DIMENSION ARE IN INCHES.</li><li>12. UNLESS OTHERWISE SPECIFIED TOLERANCES MUST BE ±0.010.</li><li>13. "10-0502-00" DENOTES ATHEL PART NUMBER.</li><li>14. "YYWW" DENOTES DATECODE OF TUBE MANUFACTURER. (OPTIONAL).</li><li>15. "P" DENOTES ASSEMBLY CODE.</li><li>16. MARKING COLOR MUST BE BLUE: MARKING TEXT TYPE IS "ARIAL BOLD"</li><li>17. FOR SOLDERABLE TUBE, PRINT "SOLDERABLE" AFTER OPTIONAL DATECODE.</li><li>18. ATHEL LOGO MUST BE OUTLINED, DO NOT FILL IN.</li><li>19. RECYCLE SYMBOLS MUST BE .0061 OUNG THICK.</li><li>20. CHARACTERS &amp; ALL OTHER SYMBOLS MUST BE .017,001 THICK.</li><li>21. PIN : MATERIAL OF PIN : PPR 48 PIN COATED WITH ANTISTATIC LIQUID COLOR OF PIN : WHITE/GREEN(PAYTONG 2578C) (THE TUBING SHOULD PUT THE "WHITE PIN" ON SIDE C OF THE TUBE AND ATTACH THE "GREEN PIN" BEFORE SHIPPING)</li></ol></div>	<div><p>Color</p><p>Length</p><p>Dimension</p></div>																													
	14L PDIP	<div><table><tr><th>Color</th><th>Length</th><th>Dimension</th></tr><tr><td>Clear</td><td>20 in</td><td>Refer to tube drawing</td></tr></table></div>	Color	Length	Dimension	Clear	20 in	Refer to tube drawing	<div><table><tr><th>MCHP P/N</th><th>TUBE COLOUR</th><th>PRINT COLOUR</th><th>DIMENSION "L"</th><th>PRE-INSERT COLOUR</th><th>INSERTING HOLE</th></tr><tr><td>20101803</td><td>CLEAR</td><td>BLUE</td><td>24.00</td><td>BLACK</td><td>D</td></tr><tr><td>20101806</td><td>CLEAR</td><td>BLUE</td><td>24.00</td><td>WHITE</td><td>A</td></tr><tr><td>20100805</td><td>CLEAR</td><td>BLUE</td><td>23.13</td><td>-</td><td>NO HOLE</td></tr></table><p>Color</p><p>Length</p><p>Dimension</p></div>	MCHP P/N	TUBE COLOUR	PRINT COLOUR	DIMENSION "L"	PRE-INSERT COLOUR	INSERTING HOLE	20101803	CLEAR	BLUE	24.00	BLACK	D	20101806	CLEAR	BLUE	24.00	WHITE	A	20100805	CLEAR	BLUE	23.13	-
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# Pre and Post Summary – Tube

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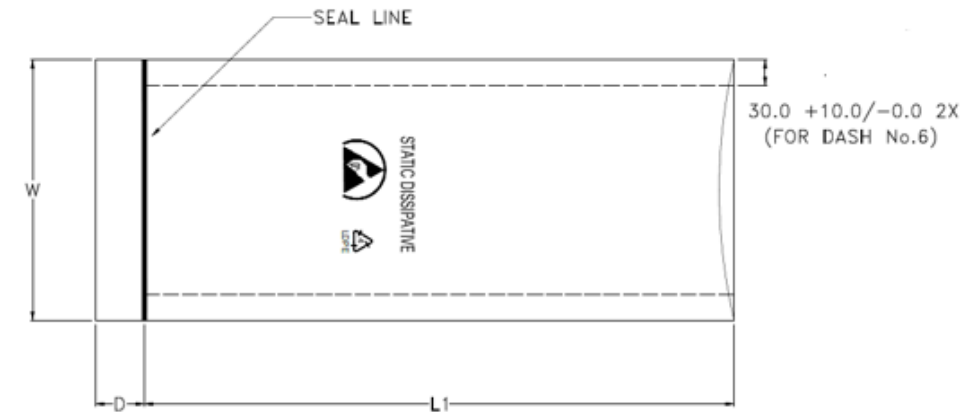
# Pre and Post Summary – Antistatic Shielding Bag / Moisture Barrier Bag

## LPI



0.08mm\*21cm\*77cm


## MTAI



DASH NO.	W	L1	D(Min.)	BAG COLOR
- 1	305 ±6.0	752 ±13.0	8	PINK
- 2	152 ±4.0	752 ±13.0	8	PINK
- 3	318 ±6.0	473 ±8.0	8	PINK
- 4	711 ±12.0	777 ±13.0	8	PINK
- 5	356 ±6.0	375 ±6.0	5	TRANSPARENT
- 6	140 +10.0/-0	760 +10.0/-5	12	PINK (GUSSET TYPE)
- 7	80 ±5.0	120 ±5.0	12	PINK
- 8	228.6 ±6.35	304.8 ±9.525	12	PINK
- 9	260 ±5.0	370 ±6.0	7	PINK
- 10	914 ±15.0	787 ±13.0	10±2	PINK

- Note:
- 1.PLASTIC THICKNESS: 0.100±0.01 (0.120±0.01 FOR DASH No. 6)/SIDE.
  - 2.SURFACE RESISTIVITY  
 $1 \times 10^4 \leq SR < 1 \times 10^{11}$  OHMS  
 $1 \times 10^5 \leq SR < 1 \times 10^{12}$  OHMS/SQ.
  - 3.PREPRINT WITH BLACK COLOR ONLY FOR DASH NUMBER 6

# Pre and Post Summary – Carton Box

LPI	MTAI
	
	15.0x71.5x5.0 cm (1 bag per 1 outer box)
	17.0x65.0x8.0 cm (1 bag per 1 outer box)
	15.5x62.0x14.0 cm (2 bag per 1 outer box)
	22.5x63.0x16.5 cm (3 bag per 1 outer box)
	32.0x63.0x15.5 cm (4 bag per 1 outer box)
	36.0x63.0x16.5 cm (5 bag per 1 outer box)
28.0x60.0x11.0 cm (2 inner box per 1 outer box)	No Inner box
43.0x60.0x19.0 cm (6 inner box per 1 outer box)	