

PCN Number: 1404  
Chgnot.doc rev 13 1/14

**Product/Process Change Notification (PCN)**

**Customer:** NEWARK ELECTRONICS

**Date:** 2/5/2015

**Customer Part # and/or Lot# affected:**

ACS756SCA-050B-PFF-T  
ACS756SCA-100B-PFF-T  
ACS756KCA-050B-PFF-T  
ACS758ECB-200B-PFF-T  
ACS758KCB-150B-PFF-T

ACS758LCB-100B-PFF-T  
ACS758LCB-050B-PFF-T  
ACS758LCB-100U-PFF-T  
ACS758LCB-050U-PFF-T

**Originator:** Laura Donelan

**Phone:** 603-626-2358

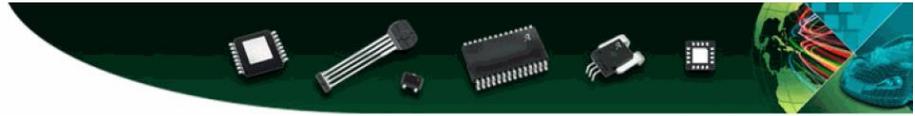
**Duration of Change:**

Permanent  Temporary (explain)

**Summary description of change:** Part Change:  Process Change:  Other:

**What is the part or process changing from (provide details)?**

The purpose of this PCN is to inform customers of a significant improvement that has been made to the packaging for the CA/CB device family. This improvement has substantially reduced the risk of devices shifting and/or piggy-backing within the tubes during shipment. It also prevents the end pins from breaking or shearing during shipment which has caused parts to spill out of the tubes in the past.



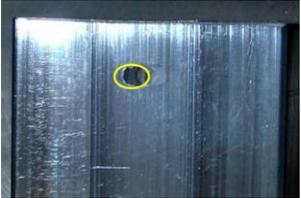
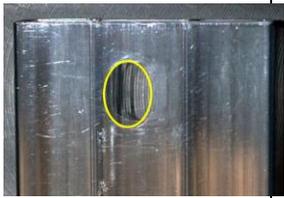
**What is the part or process changing to (describe the anticipated impact of this change on form, fit and/or function)?**

This improvement consists of two changes to the current packaging for the CA/CB package family: a change to the design of the end pin and a change to the size of the tube pin hole.

Comparison images of the old pin and new pin design can be found in the chart below. More detailed drawings can be found in Appendix A. The new pin design uses a soft PVC material which has more elasticity to absorb shock during transportation. The new pin is much thicker in diameter which prevents the devices from shifting within the tubes during shipment.

Comparison images of the old and new tube pinholes can be found in the chart below. More detailed comparison drawings of the full tube design can be found in Appendix B. The pinholes on either end of the tube have been widened and elongated to allow for the larger soft PVC pins. No other changes have been made to the tube design. This improvement also has no effect on the quantity of devices per tube, number of tubes per box, or any other general packing procedures.

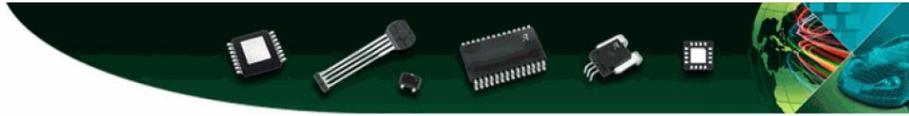
The tube and pin redesign has minimized the movement of devices within the tube and eliminated the potential for leads to bend and end pins to break. We have developed a more robust packaging for the CA/CB device family that will tolerate more abuse during shipment. Please see Appendix C for the results of our evaluation and comparison testing.

	<b>Current Tube Design:</b>	<b>New Tube Design</b>	<b>Current Pin Design</b>	<b>New Pin Design</b>
Material	Rigid PVC	Rigid PVC	Polycarbonate or PVC	Soft PVC
Pin Width	N/A	N/A	0.105" ±0.005"	0.190"
Pinhole Width	0.115" ±0.002"	0.275" x 0.395"	N/A	N/A
Image				

Please note that this change does not have any effect on the CA/CB package devices themselves. This PCN only addresses the packaging improvements made for these devices.

Please also note that this new design will require a different technique for pin installation and removal. See the attached presentation for full details on the proper pin installation and removal procedure.

**Note:** Validation of equivalence within a specific application is at the discretion of the Customer.



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Is a PPAP update required?

Yes

No

Is reliability testing required?  
(If Yes, refer to attached plan)

Yes

No (explain)

*Internal evaluation and comparison testing has been completed. Please see results in Appendix C.*

**Expected completion date for internal qualification:** N/A

**Expected PPAP availability date:** N/A

**Target implementation date:** May 1, 2015

**Estimated date of first shipment:** May 1, 2015

**Expected sample availability date:** February 16, 2015

**Customer Approval Required:** Yes  **Date Required:**  
No  **Notification Only**

**Please note:** It is our intention to inform our customer of changes as early as possible. Under Allegro’s procedure for product/process change notification, Allegro strives, based on its technical judgment, to provide notification of significant changes that may affect form, fit or function. However, as Allegro cannot ensure evaluation of product/process changes for each and every application; the customer retains responsibility to validate the impact of a change on its application suitability. If samples are needed for validation of a change, requests may be made via the contact information provided herein. Please contact your Account Manager or local Sales contact for any questions. We would kindly request your consideration so we can meet our target date for implementation. Unless both parties agree to extend the implementation date, this change will be implemented as scheduled.

Customer comments/Conditions of Acceptance:

Approved by:  
cc: Allegro Sales/Marketing/Quality

Date:

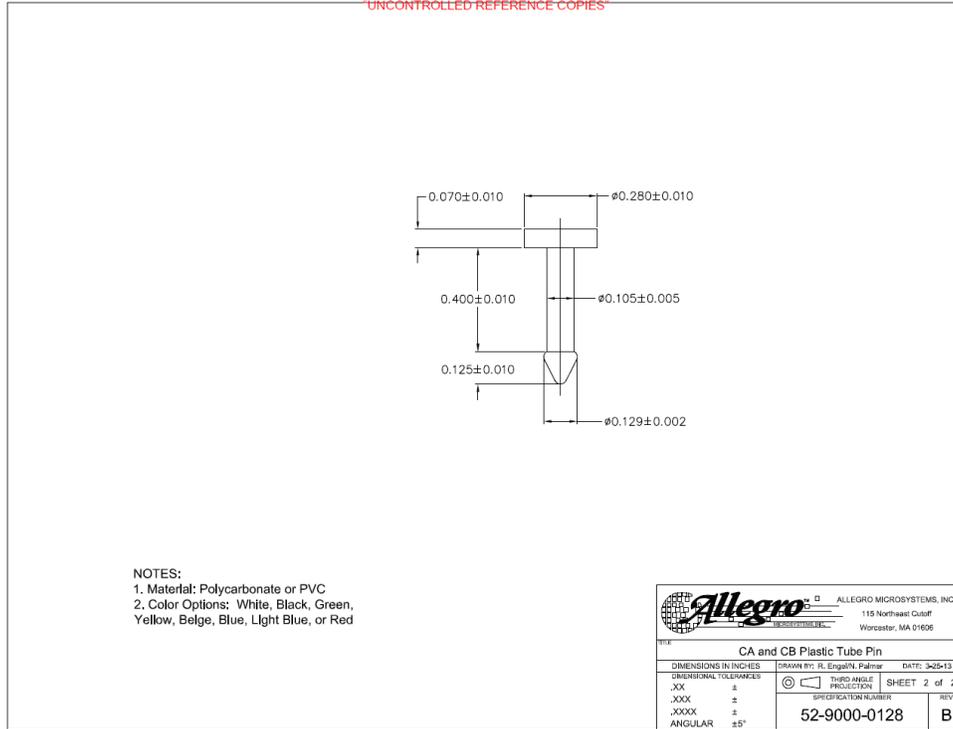
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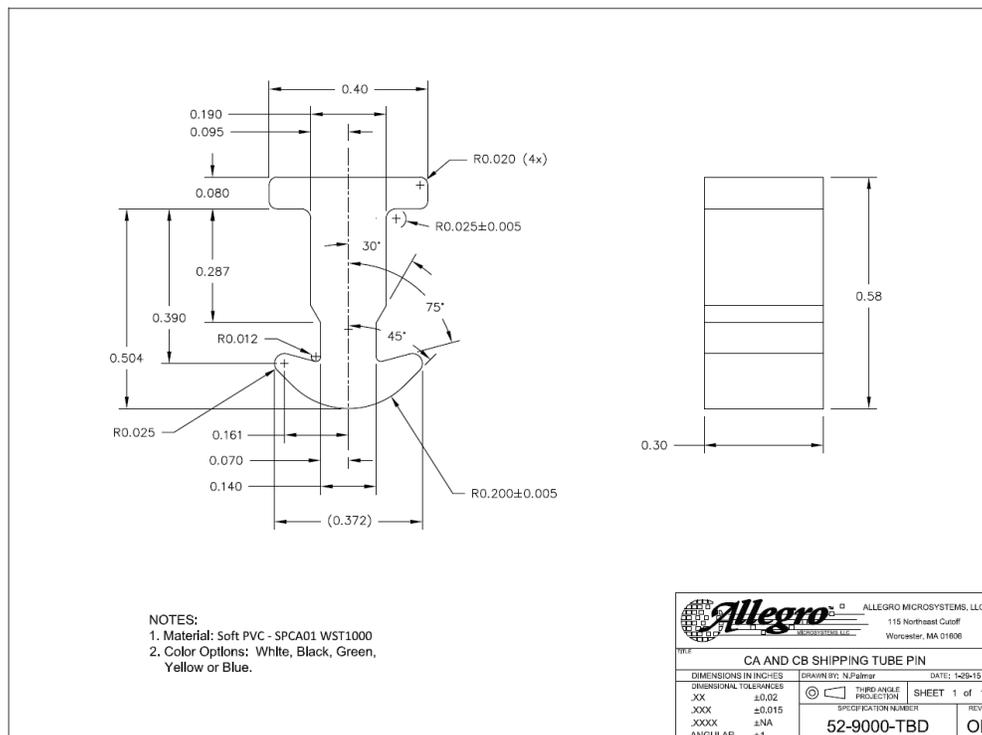
## Appendix A

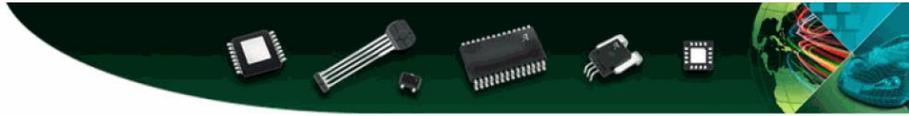
### Current Pin Design Drawing: 52-9000-0128 Rev B

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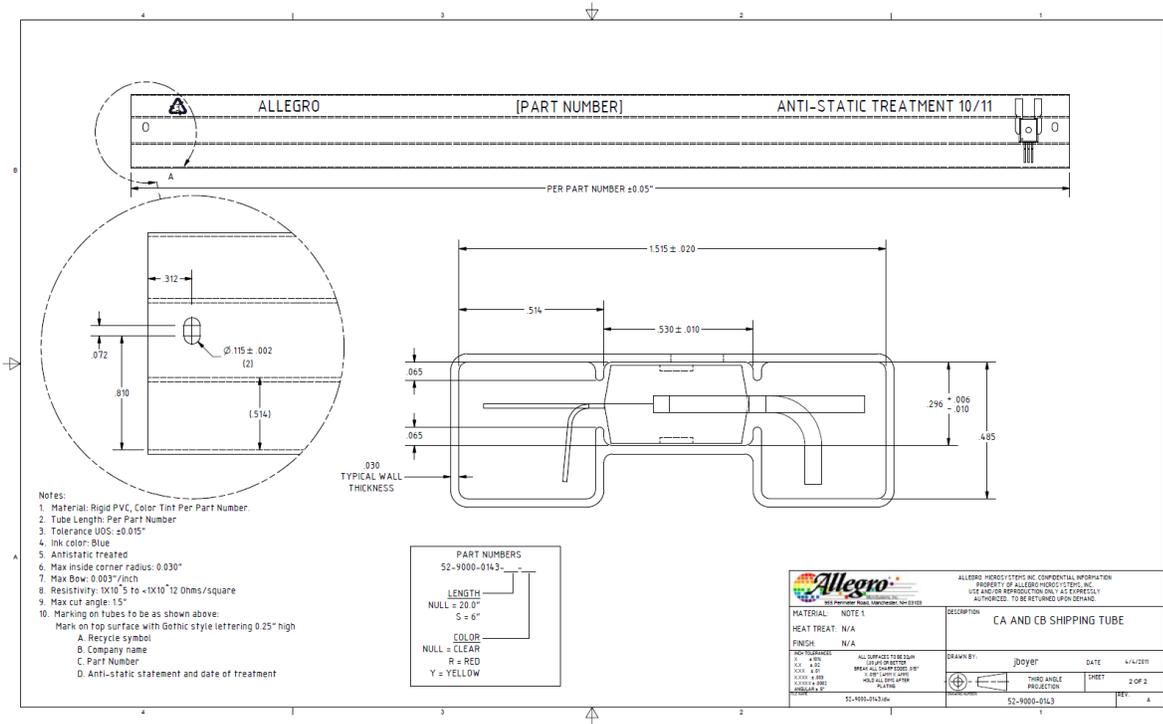
### New Pin Design Drawing: 52-9000-0128 Rev C



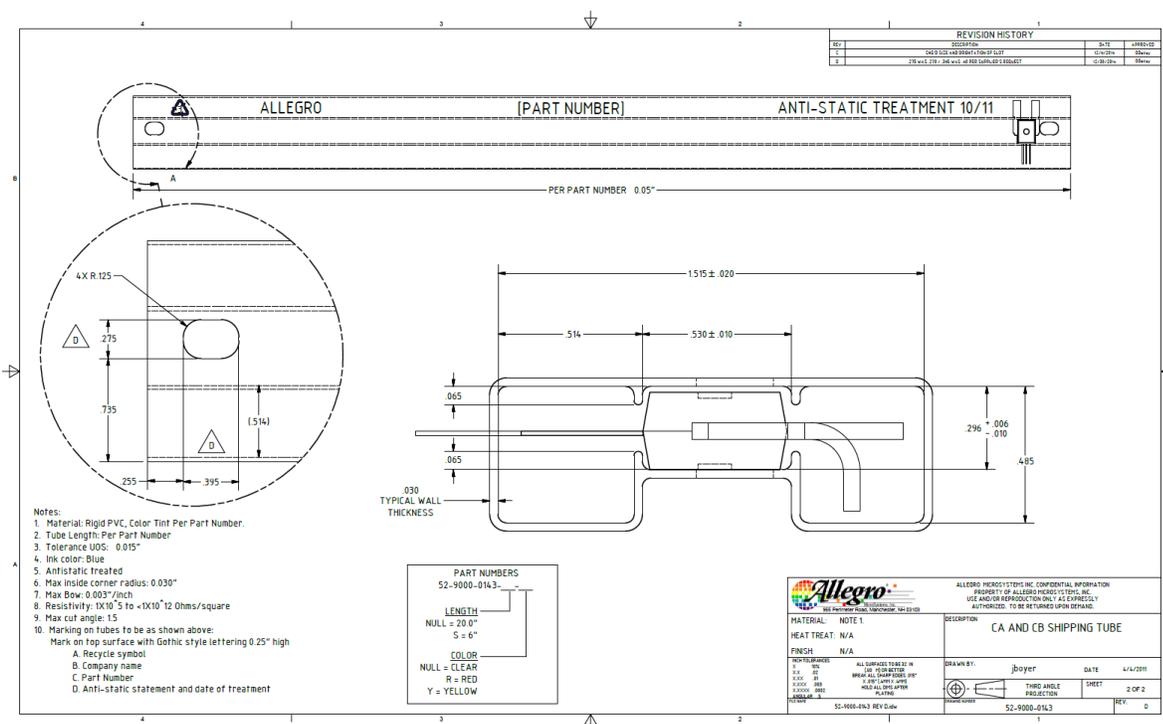


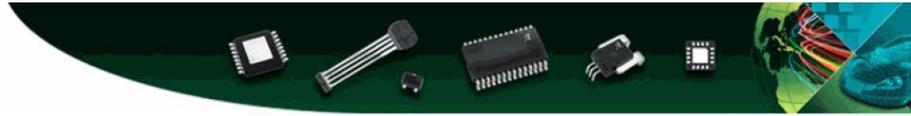
Appendix B

Current Tube Design Drawing: 52-9000-0143 Rev A



New Tube Design Drawing: 52-9000-0143 Rev B





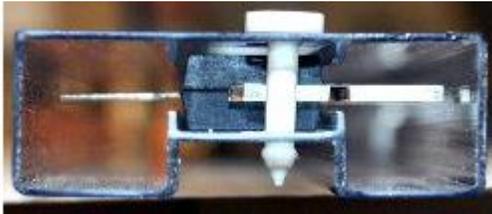
## Appendix C

### Internal Reliability & Comparison Testing

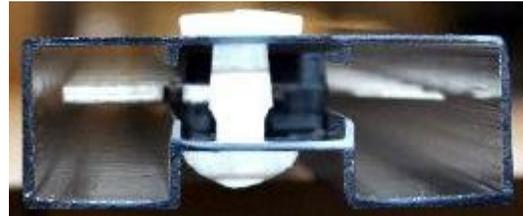
Allegro performed drop testing on the old and new tube and endpin designs with the goal of comparing the resulting damage to the devices. One outer box was dropped 10 times on each end for a total of 40 drops. In between each set of 10 drops, the inner boxes were opened and inspected for damage.

Inner boxes 1 and 3 contained devices packaged in the old tube design (Exhibit 1). Inner boxes 2 and 4 contained devices packaged in the new tube design (Exhibit 2). See Exhibit 3 for the layout of these inner boxes within the outer box.

*Exhibit 1*



*Exhibit 2*



*Exhibit 3*

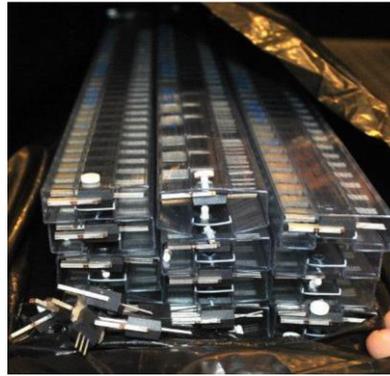




## Appendix C

After the outer box was dropped 10 times on each end and each side for a total of 40 drops, inner boxes 1 and 3 showed 100% shearing and a large amount of device disorientation (Exhibit 4). Inner boxes 2 and 4 showed no issues (Exhibit 5).

*Exhibit 4*



*Exhibit 5*

