

PCN Number: 1109
Chgnot.doc rev 10 04/13 - NO

Product/Process Change Notification (PCN)

Customer: North American and Asia Distributors

Date: 8/26/13

Customer Part # and/or Lot# affected: A3979SLPTR-T

Originator: Julie Hurley

Phone: 508-854-5491

Fax: 508-853-3353

Duration of Change:

Permanent Temporary (explain)

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

Allegro currently manufactures the A3979SLPTR-T at Polar Semiconductor, LLC, Bloomington, MN, USA Wafer Fab and Unisem, Perak, Ipoh, Malaysia Assembly. The A3979SLPTR-T will be changing to United Microelectronics Corporation (UMC), Hsinshu, Taiwan Wafer Fab and dual Assembly source at and Unisem, Perak, Ipoh, Malaysia and Jiangsu Changjiang Electronics Tech (JCET), Jiangyin, Jiangsu, China

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

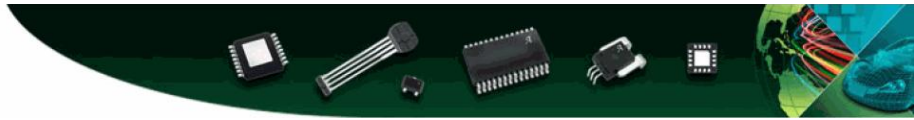
- 1. Polar Semiconductor, LLC, Bloomington, MN USA Wafer Fab
- 2. Unisem, Perak, Ipoh, Malaysia Assembly

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

- 1 United Microelectronics Corporation (UMC), Hsinshu, Taiwan Wafer Fab
- 2. Dual Source Assembly:
 - Unisem, Perak, Ipoh, Malaysia
 - or
 - Jiangsu Changjiang Electronics Tech (JCET), Jiangyin, Jiangsu, China

Describe how this change affects the customer:

There is no change to the Form, Fit, or Function of the device.



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Is a PPAP update required? Yes No

Is reliability testing required? Yes No (explain)

(If Yes, refer to attached plan)

Per the below plan:
Per JEDEC and AECQ100 standards

Reliability Qualification Plan/Results

Device: **7877, (3977)**
 Fab Location: **UMC**
 Assy Lot #: **1246396UAAA**
 Package: **LP (TSSOP)**

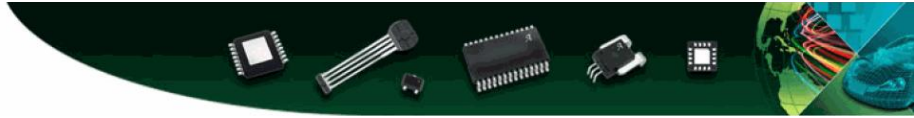
Number of Leads: **28**
 Assembly Location: **Unisem**
 Lead Finish: **100% Sn**
 Tracking Number: **2104**

Reason For Qualification: **7877-Microstepping DMOS Driver with Translator**

Reliability Qualification Test Plan/Results

7877 - STR#2104						Requirements	
Stress Test	Abv.	Test #	Test Method	Test Conditions	S.S.	Results	
Preconditioning	PC	A1	JESD22-A113	85°C/60% RH, 168 hrs, Peak Reflow=260°C	260	0 Rejects	
HAST	HAST	A2	JESD22-A110	130°C, 2 ATM, 85% RH, 0, 96 hrs	77	0 Rejects	
Autoclave	AC	A3	JESD22-A102	121°C, 100% RH, 15 PSIG, 0, 96 hrs	77	0 Rejects	
Temperature Cycle	TC	A4	JESD22-A104	-65°C to +150°C, 0, 500 Cycles	77	0 Rejects	
High Temperature Operating Life	HTOL	B1	JESD22-A108	125°C, 0, 1000 hrs	77	0 Rejects	
Early Life Failure Rate	ELFR	B2	AEC-Q100-008 / JESD22-A108	125°C, 0, 48 hrs	800	0 Rejects	
Wire Bond Pull	WBP	C2	800021	Temp conditions and sample size are defined in the test method.		0 Rejects; Cpk>1.33	
Electrostatic Discharge Human Body Model	HBM	E2	JESD22-A114	Test Conditions, Sampling Size are defined in the Test Method		Classification H2, HBM =2.5 kV	
Electrostatic Discharge Charged Device Model	CDM	E3	JESD22-C101	Test Conditions, Sampling Size are defined in the Test Method		Classification = IV, > 1kV	
Latch-Up	LU	E4	AEC Q100-004	Test Conditions, Sampling Size are defined in the Test Method		Class II, Level A	
Electrical Distributions	ED	E5	AEC Q100-009	Tri-Temp Characterization	1 lot	0 Rejects; Cpk>1.67	

This device qualification is considered to be passing all environmental stress evaluations per the Allegro MicroSystems, Inc. 900019 specification.



Expected completion date for internal qualification: Complete

Expected PPAP availability date: N/A

Target implementation date: 11/1/2013

Estimated date of first shipment: 1/1/2014

Expected sample availability date: Available Now

**Customer Approval
Required:**

No **For Notification Only**

cc: Allegro Sales/Marketing/Quality