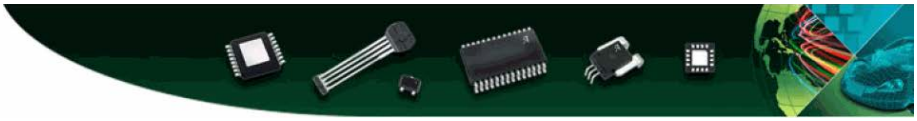


PCN Number: SM120117
Chgnot.doc rev 13 1/14

Product/Process Change Notification (PCN)

Customer: Digi-Key **Date: 12/01/2017**

Customer Part # and/or Lot# affected: A4986SESTR-T and A4986SLPTR-T

Originator: Scott Mitti **Phone: 508-854-5627**

Duration of Change: Permanent [X] Temporary (explain) [ ]

Summary description of change: Part Change: [ ] Process Change: [X] Other: [ ]

Allegro currently manufactures the A4986SESTR-T and A4986SLPTR at wafer fab, Polar Semiconductor LLC (PSL), Bloomington, MN, USA, utilizing 8" ABCD5 technology. Allegro will be changing wafer fab manufacturing to the 8" ABCD5 technology wafer line at United Microelectronics Corporation (UMC), Hsinshu, Taiwan.

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

Allegro currently manufactures the A4986SESTR-T and A4986SLPTR at wafer fab, Polar Semiconductor LLC (PSL), Bloomington, MN, USA, utilizing 8" ABCD5 technology.

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

Allegro will be changing wafer fab manufacturing for A4986SESTR-T and A4986SLPTR to the 8" ABCD5 technology wafer line at United Microelectronics Corporation (UMC), Hsinshu, Taiwan.

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

PCN Number: SM120117
Chgnot.doc rev 13 1/14

Is a PPAP update required? Yes [ ] No [X]

Is reliability testing required? Yes [X] No (explain) [ ]
(If Yes, refer to attached plan)

Reliability Qualification Results

Device: **4984 (7894), 4986 (949861)**
Assy Lot #: **1526479UAAA**
Number of Leads: **24**
Fab Location: **UMC**

Package: **LP (eTSSOP)**
Assembly Location: **Unisem**
Lead Finish: **100% Sn**
Tracking Number: **3030, 4095**

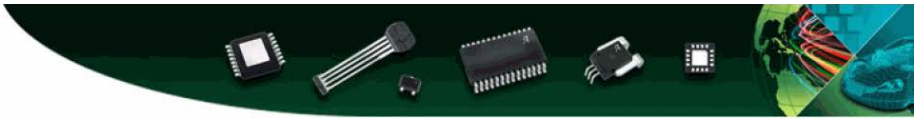
Reason for Qualification: ***4984 (7894) - DMOS Microstepping Driver with Translator and Overcurrent Protection; (UMC Fab and Copper-wire qual at Unisem)***

Reliability Qualification Results						
4984 (7894), 4986 (949861), STR#3030, STR#4095					Requirements	
Stress Test	**Abv.**	**Test #**	**Test Method**	**Test Conditions**	**S.S.**	**Results**
Preconditioning	PC	A1	JESD22-A113/ J-STD-020	85°C/60% RH, 168 hrs, Peak Reflow=260°C; MSL?, (THB, AC, TC)	231	0 Rejects
Temperature Humidity Bias	THB	A2-a	JESD22-A101	Ta = 85°C, RH = 85% 0, 1000 hrs	77	0 Rejects
Autoclave	AC	A3	JESD22-A102	Ta=121°C, 100% RH, 15 psig, 0, 96 hrs	77	0 Rejects
Temperature Cycle	TC	A4	JESD22-A104	Ta = -65°C to +150°C, 0, 500, 1000 Cycles	77	0 Rejects
High Temperature Storage Life	HTSL	A6	JESD22-A103	Ta = 150°C, 0, 1000 hrs	77	0 Rejects
High Temperature Operating Life	HTOL	B1	JESD22-A108	Ta = 125°C, 0, 1000 hrs	77	0 Rejects
Early Life Failure Rate	ELFR	B2	AEC-Q100-008 / JESD22-A108	Ta = 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. (after TC)		0 Rejects; Ppk>1.67
Electrostatic Discharge Human Body Model	HBM	E2	JS-001-2014	Test Conditions, Sampling Size are defined in the Test Method		Classification 2, HBM =2.0 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 Electrical Distributions	30 pcs	0 Rejects; Cpk>1.67

This device qualification is considered to be passing all environmental stress evaluations per the Allegro MicroSystems, 900019 specification and JEDEC JESD47.

Approved by:

Robert Demers
Robert Demers
Sr. Product Safety and Reliability
Allegro MicroSystems, LLC



PCN Number: SM120117
Chgnot.doc rev 13 1/14

Expected completion date for internal qualification: Complete

Expected PPAP availability date: N/A

Target implementation date: June 2018

Estimated date of first shipment: July 2018

Expected sample availability date: Available Upon Request

Customer Approval Required:

Yes	☐	**Date Required:**
No	X	**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: Date: Title:
cc: Allegro Sales/Marketing/Quality