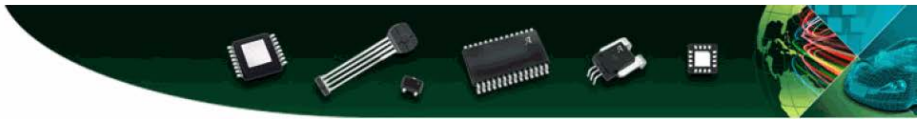


PCN Number: SM062017
Chgnot.doc rev 13 1/14

Product/Process Change Notification (PCN)

Customer: Digi-Key **Date: 06/20/17**

Customer Part # and/or Lot# affected: A3941KLPTR-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: [ ]

1. Allegro currently manufactures the A3941KLPTR-T on the 6" wafer fab ABCD4 technology line at Polar Semiconductor LLC (PSL), Bloomington, MN, USA. Allegro will closing the 6" wafer line in March 2018 and will transition manufacturing to the 8" ABCD4 technology wafer fab line at Polar Semiconductor LLC (PSL), Bloomington, MN, USA.

2. Allegro will permanently close its wafer probe operations in Worcester, Massachusetts, USA by March 31, 2018. Wafer probe operations will be moved to Allegro MicroSystems Philippines, Inc. (AMPI) located in Manila, Philippines.

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

1. Currently the A3941KLPTR-T is manufactured on Polar Semiconductor LLC (PSL), Bloomington, MN, USA 6" wafer fab ABCD4 technology line.

2. Currently the A3941KLPTR-T is probed at Allegro MicroSystems, LLC Worcester, Na

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

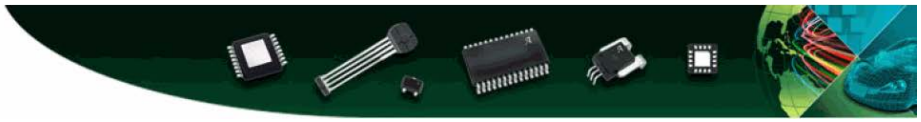
1. The A3941KLPTR-T will be manufactured on Polar Semiconductor LLC (PSL), Bloomington, MN, USA 8" wafer fab ABCD4 technology line.

2. Probe location for the A3941KLPTR-T will be moved to AMPI. Allegro is utilizing the same probe equipment, test programs and test methodologies in its Philippine facility as is currently being performed in its US facility. Relocation of probe operations reduces movement of wafers between factories shortening overall cycle time and minimizing wafer

handling. All expansions of probe capability and capacity will now occur at AMPI to support Allegro's future business growth.

Is a PPAP update required?	Yes		No	X
Is reliability testing required? (If Yes, refer to attached plan)	Yes	X	No (explain)	

See Below



Reliability Qualification Results

Device: **3941 (7811)**
Assy Lot #: **1637920UAAA**
Number of Leads: **28**
Fab Location: **PSL**

Package: **LP (eTSSOP)**
Assembly Location: **Unisem**
Lead Finish: **100% SN**
Tracking Number: **3669**

Reason for Qualification: ***3941 (7811) - Full-Bridge Power MOSFET Controller***

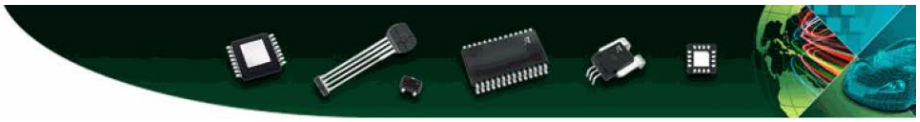
Reliability Qualification Results						
3941 (7811), STR#3669					Requirements	
Stress Test	**Abv.**	**Test #**	**Test Method**	**Test Conditions**	**S.S.**	**Results**
Preconditioning	PC	A1	JESD22-A113 / J-STD-020	85°C/60% RH, 168 hrs, Peak Reflow=260°C; MSL2, (HAST, AC, TC)	231	0 Rejects
HAST	HAST	A2	JESD22-A110	130°C, 2 ATM, 85% RH, 0, 96 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 +175°C, 0, 500, 1000 Cycles	77	0 Rejects
Wire Bond Pull	WBP	C2	Mil-Std-883 Method 2011	Temp conditions and sample size are defined in the test method. (after TC)		0 Rejects; Ppk>1.67
High Temperature Operating Life	HTOL	B1	JESD22-A108	Ta = 150°C, 0, 1000 hrs	77	0 Rejects
Early Life Failure Rate	ELFR	B2	AEC-Q100-008 / JESD22-A108	Ta = 150°C, 0, 48 hrs	800	0 Rejects
Electrostatic Discharge Human Body Model(STR#3813)	HBM	E2	AEC-Q100-002 / 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	AEC-Q100-011	Test Conditions, Sampling Size are defined in the Test Method		Classification C6, > 1kV
Latch-Up	LU	E4	JESD78	Test Conditions, Sampling Size are defined in the Test Method		Class II, Level B
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, LLC* 900019 specification and AEC-Q100.

Approved by:

Bob Demers

Bob Demers
Product Safety and Reliability
Allegro MicroSystems, LLC



Expected completion date for internal qualification: Complete

Expected Data availability date: Attached

Target implementation date: June 2018

Estimated date of first shipment: July 2018

Expected sample availability date: Available by 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. 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