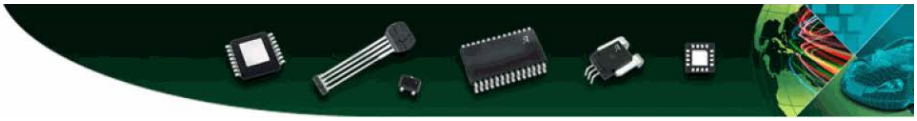

PCN Number: SM020519
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Product/Process Change Notification (PCN)

Customer: Digi-Key **Date: 02/05/19**

Customer Part # and/or Lot# affected: A4952ELYTR-T and A4953ELJTR-T

Originator: Scott Mitti **Phone: 508-854-5899**

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

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

Allegro currently manufactures the A4952ELYTR-T and A4953ELJTR-T at wafer fab, Polar Semiconductor LLC (PSL), Bloomington, MN, USA, utilizing 8" ABCD5 technology. In addition to PSL, Allegro will be manufacturing the A4952ELYTR-T and A4953ELJTR-T at United Microelectronics Corporation (UMC), Hsinshu, Taiwan wafer fab utilizing the 8" ABCD5 technology wafer line.

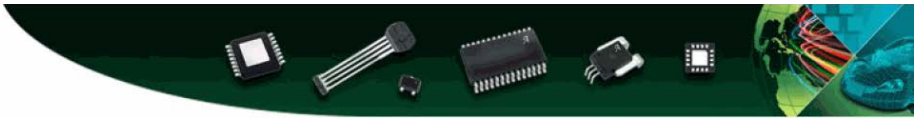
What is the part or process changing from (provide details)?

Allegro currently manufactures the A4952ELYTR-T and A4953ELJTR-T 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)?

In addition to PSL, Allegro will be manufacturing the A4952ELYTR-T and A4953ELJTR-T at United Microelectronics Corporation (UMC), Hsinshu, Taiwan wafer fab utilizing the 8" ABCD5 technology wafer line.

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 [X]

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

Reliability Qualification Results

Device: **4952, (949521)**
Assy Lot #: **1814480UDAA**
Number of Leads: **28**
Fab Location: **UMC**

Package: **LY (eMSOP)**
Assembly Location: **Unisem**
Lead Finish: **100% SN**
Tracking Number: **4305**

Reason for Qualification: ***4952 (949521) - Full-Bridge DMOS PWM Motor Drivers***

Reliability Qualification Results						
4952 (949521) STR#4305					Requirements	
Stress Test	**Abv.**	**Test #**	**Test Method**	**Test Conditions**	**S.S.**	**Results**
Electrostatic Discharge Charged Device Model	CDM	E3	JESD22-C101	Test Conditions, Sampling Size are defined in the Test Method		Classification = C3, >1kV
Electrical Distributions	ED	E5	AEC Q100-009	Tri-Temp Electrical Distributions	30 pcs	0 Rejects; Cpk>1.67

Device: **4953, (949521)**
Assy Lot #: **1814480UDAA**
Number of Leads: **28**
Fab Location: **UMC**

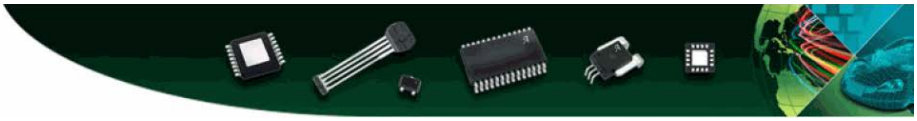
Package: **LJ (W-eSOIC)**
Assembly Location: **Unisem**
Lead Finish: **100% SN**
Tracking Number: **4306**

Reason for Qualification: ***4953 (949521) - Full-Bridge DMOS PWM Motor Drivers***

Reliability Qualification Results						
4953 (949521) STR#4306					Requirements	
Stress Test	**Abv.**	**Test #**	**Test Method**	**Test Conditions**	**S.S.**	**Results**
HAST	HAST	A2	JESD22-A110	130°C, 2 ATM, 85% RH, 0, 96 hrs	77	0 Rejects
High Temperature Operating Life	HTOL	B1	JESD22-A108	Ta = 125°C, 0, 168 hrs	77	0 Rejects
Electrostatic Discharge Human Body Model	HBM	E2	JESD22-A114	Test Conditions, Sampling Size are defined in the Test Method		Classification 2, HBM = 2kV
Electrostatic Discharge Charged Device Model	CDM	E3	JESD22-C101	Test Conditions, Sampling Size are defined in the Test Method		Classification = C3, >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, LLC* 900019 specification.

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



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Expected completion date for internal qualification: Complete

Expected PPAP availability date: N/A

Target implementation date: September 2019

Estimated date of first shipment: October 2019

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