

PCNNumber: 1315
Chgnot.doc rev 10 04/13 - NO

Product/Process Change Notification (PCN)

Customer: NAM & ASIA Distribution

Date: 10/23/2013

Customer Part # and/Allegro part #: A4938EETTR-T

Originator: J. 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 assembles the 5 x 5 QFN package type at Stats ChipPAC, Kuala Lumpur, Malaysia, (SCM). Stats ChipPAC Malaysia (SCM) has informed Allegro that they will be closing this facility in June of 2014. Allegro will move the assembly site for the 5 x 5 QFN package type from Stats ChipPAC Malaysia (SCM) to Carsem Suzhou, China (CRC).

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

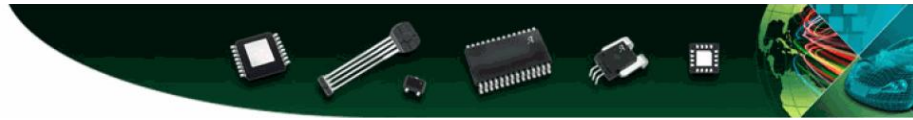
Allegro currently assembles the 5 x 5 QFN package type at Stats ChipPAC, Kuala Lumpur, Malaysia. Stats ChipPAC Malaysia (SCM) has informed Allegro that they will be closing this facility in June of 2014.

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

Allegro will move the assembly site for the 5 x 5 QFN package type to Carsem Suzhou, China.

Describe how this change affects the customer:

Carsem Suzhou, China has been primary QFN source for many years. Allegro has performed the necessary qualification and electrical tests to ensure the device is functionally equivalent to the data sheet specification.



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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:

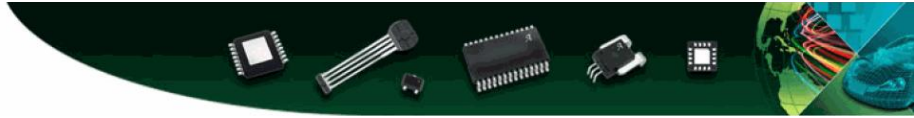
Summary: This qualification is considered to be passing all environmental stress evaluations per the Allegro MicroSystems, LLC 900019 specification for Carsem-SZ, MLP/QFN 0.90mm package thickness family of devices.

Detailed Data: *Carsem-SZ*

Package: 5x5 QFN 0.90mm thickness, ET
 Assembly Location: Carsem-SZ
 Mold Compound: G770
 Lead Finish: 100% Tin
 Die Attach Material: QMI-519

Tests Summary

Stress	Test Method	Test Condition	Sample Size	Results	# of Lots
Preconditioning	J-STD-020	85°C/60 RH, 168 hrs	231	0 Rejects	5
HAST	JESD22-A110	130°C/85% RH, 96 hrs	77	0 Rejects	5
AC	JESD22-A102	121°C, 100% RH, 96 hrs	77	0 Rejects	5
TC	JESD22-A104	-65°C to +175°C, 500 cyc	77	0 Rejects	4
TC	JESD22-A104	-65°C to +150°C, 1000 cyc	77	0 Rejects	1
HTSL	JESD22-A103	175°C, 1000 hrs	77	0 Rejects	3
HTSL	JESD22-A103	150°C, 1000 hrs	77	0 Rejects	1
HTOL	JESD22-A108	125°C, 1000 hrs	77	0 Rejects	2
ELFR	AEC-Q100-008	125°C, 48 hrs	800	0 Rejects	1
Latch-Up	Q100-004		6	0 Rejects	1
Wire Bond Pull	Mil-STD-2011	Method 2011	5	Cpk > 1.67	3
Solderability	JESD22-B102		15	0 Rejects	1
Saw Kerf			5	Cpk > 1.67	1
Die Shear Strength			5	Cpk > 1.67	1
Ball Shear Strength			30	Cpk > 1.67	1
Wire Pull Strength			30	Cpk > 1.67	1
Stitch Pull			30	Cpk > 1.67	1
Wire Sweep			10	Cpk > 1.67	1
Plating Thickness			5	Cpk > 1.67	1
Physical Dimensions (X)			5	Cpk > 1.67	1
Physical Dimensions (Y)			5	Cpk > 1.33	1



Expected completion date for internal qualification: Complete

Expected PPAP availability date: N/A

Target implementation date: January 2014

Estimated date of first shipment: February 2014

Expected sample availability date: Available 6 weeks after request

Customer Approval Required: For Notification Only

No

cc: Allegro Sales/Marketing/Quality