8755 W. Higgins Road
Suite 500
Chicago, Illinois USA 60631

September 8th, 2023

RE: PCN # ESU270-89–SC70-5L and SC70-6L additional backend location approval

To our valued customers,

Littelfuse would like to notify you of an additional approved backend location for SC70-5L and SC70-6L TVS Diode Array (SPA® Diodes) products. This additional backend factory in China is fully approved for all assembly, test, and packing operations. There are no changes to fit, form, and function of the finished products.

Products Affected:

SC70-5L & SC70-6L Product List		
SP1001-04JTG	SP3003-02JTG	SP3001-04JTG
SP1001-05JTG	SP3003-04JTG	SP0504BAJTG
SP1002-02JTG	SP3002-04JTG	SP0505BAJTG

The affected products have been fully qualified in accordance with established performance and reliability criteria. The attached pages summarize the qualification results. Full qualification data and/or samples will be available upon request.

Form, fit, function changes: None
Part number changes: None
Effective date: Dec 8th, 2023 or sooner
Replacement products: N/A
Last time buy: N/A

This notification is for your information and acknowledgement. If you have any other questions or concerns, please contact Sophia Hu, Assistant Product Manager.

We value your business and look forward to assisting you whenever possible.

Best Regards,

Sophia Hu
TVS Diode Array Assistant Product Manager
Semiconductor Business Unit, Wuxi, China
+86 510 85277701 - 7653
shu@littelfuse.com

PCN# :	**Contact Information**
ESU270-89 Date: September 8th, 2023 SC70-5L and SC70-6L additional backend location approv Implementation Date for Change: Dec 8th, 2023 or sooner	Name: Sophia Hu Title: Assistant Product Manager Phone # : +86 13771377277 Fax# : N/A E-mail : shu@littelfuse.com

Category of Change:

- ☐ Assembly Process
- ☐ Data Sheet
- ☐ Technology
- ☐ Discontinuance/Obsolescence
- ☐ Equipment
- ☒ Manufacturing Site
- ☒ Raw Material
- ☐ Testing
- ☐ Fabrication Process
- ☐ Other: _____

Description of Change:

Approve additional backend assembly, test, and packing location for SC70-5L and SC70-6L. There are no changes to f it, form & function of the f inished products.

Important Dates:

- ☒ Qualification Samples Available: Upon request
- ☐ Last Time Buy:
- ☒ Final Qualification Data Available: Upon request
- ☐ Date of Final Product Shipment:

Method of Distinguishing Changed Product

- ☒ Product Mark, See (8.0) in the succeeding PCN report for details
- ☐ Date Code,
- ☐ Other,

Demonstrated or Anticipated Impact on Form, Fit, Function or Reliability:

N/A

LF Qualification Plan/Results:

Yes

Customer Acknowledgement of Receipt: Littelfuse requests you acknowledge receipt of this PCN. In your acknowledgement, you c grant approval or request additional information. Littelfuse will assume the change is acceptable if no acknowledgement is r eceived within 30 da of this notice. Lack of any additional response within 90 days of PCN issuance further constitutes acceptance of the change.

Prepared By : Light Hsieh-Product Engineering Manager,
Raider Chen-Product Engineer, Sophia Hu- Assistant Product Manager
Date : 2023/3/28
Device : Please refer to 2.1.
Revision : A

1.0 Objective:

Qualify alternative assembly supplier for SC70-5L and SC70-6L products. Summarize the physical items, electrical characteristics and reliability result of qualification lots.

2.0 Applicable Devices:

2.1 Product name:

SC70-5L & SC70-6L Product List		
SP1001-04JTG	SP3003-02JTG	SP3001-04JTG
SP1001-05JTG	SP3003-04JTG	SP0504BAJTG
SP1002-02JTG	SP3002-04JTG	SP0505BAJTG

3.0 Assembly, Process & Material Differences/Changes:

3.1 Assembly Changes:
No change of assemble process.

3.2 Process Changes:
No change of process method.

3.3 Material Change:

Item	Original	New	Change or not
Lead frame	A194/C194 Cu Alloy	A194/C194 Cu ALLOY	No
Die Attach Material	2200D/8006NS	84-1LMISR4	Yes
Wire	Au	Au	No
Mold Compound	G600	CEL-8240HF10	Yes
Plating	Tin	Tin	No

4.0 Packing Method

No change of packing method.

5.0 Physical Differences/Changes:

No change of packing method.

6.0 Reliability Test Results Summary:

6.1 Reliability summary report:

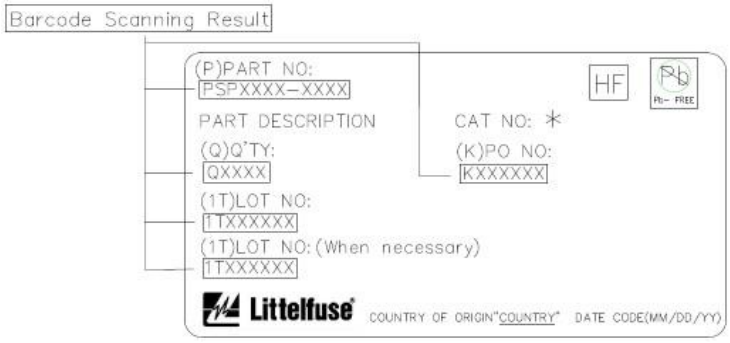
Test Items	Condition	S/S	Results	ETR #
Pre-conditioning (PC)	JESD22-A113	308 each lot	0/924	179999 181352 183180
DC Blocking (HTRB)	Bias = VRWM, Ta = 150°C, Duration = 1008 Hours	77 each lot	0/231	
Temperature Cycle (TC)	Ta = -55°C to 150°C, Duration = 1000 Cycles	77 each lot	0/231	
Temperature/Humidity (H3TRB)	Ta = 85°C, 85% RH, Bias = VRWM, Duration = 1008 Hours	77 each lot	0/231	
Autoclave (AC)	Ta = 121°C, 100%RH, 2ATM, Duration = 96 Hours	77 each lot	0/231	
Resistance to Solder Heat (RSH)	260°C, 10 sec, M-2031	10 each lot	0/30	
Moisture Sensitivity Level (MSL)	Per Jedec J-STD-020D Level 1	308 each lot	0/924	
Solderability (SD)	ANSI-J-STD-002	10 each lot	0/30	

7.0 Electrical Characteristic Summary:

Electrical performances were comparable and characterization data is available upon request.

8.0 Changed Part Identification:

New supplier is qualified by Littelfuse and product can be identified by CAT NO on the label.



9.0 Approvals:

Sophia Hu	Light Hsieh	Raider Chen
SPA Assistant Product Manager	SPA Product Engineering Manager	SPA Product Engineer
Littelfuse, Wuxi	Littelfuse, HsinChu	Littelfuse, HsinChu