



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

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September 8<sup>th</sup>, 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 8<sup>th</sup>, 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](mailto:shu@littelfuse.com)

<b>PCN# :</b> ESU270-89    Date: September 8 <sup>th</sup> , 2023  SC70-5L and SC70-6L additional backend location approval Implementation Date for Change: Dec 8 <sup>th</sup> , 2023 or sooner	<b>Contact Information</b> Name: Sophia Hu Title: Assistant Product Manager Phone # : +86 13771377277 Fax# : N/A E-mail : shu@littelfuse.com
<b>Category of Change:</b> <input type="checkbox"/> Assembly Process <input type="checkbox"/> Data Sheet <input type="checkbox"/> Technology <input type="checkbox"/> Discontinuance/Obsolescence <input type="checkbox"/> Equipment <input checked="" type="checkbox"/> Manufacturing Site <input checked="" type="checkbox"/> Raw Material <input type="checkbox"/> Testing <input type="checkbox"/> Fabrication Process <input type="checkbox"/> Other: _____	<b>Description of Change:</b> Approve additional backend assembly, test, and packing location for SC70-5L and SC70-6L. There are no changes to fit, form & function of the finished products.
<b>Important Dates:</b> <input checked="" type="checkbox"/> Qualification Samples Available: Upon request <input type="checkbox"/> Last Time Buy: <input checked="" type="checkbox"/> Final Qualification Data Available: Upon request <input type="checkbox"/> Date of Final Product Shipment:	
<b>Method of Distinguishing Changed Product</b> <input checked="" type="checkbox"/> Product Mark, See (8.0) in the succeeding PCN report for details <input type="checkbox"/> Date Code, <input type="checkbox"/> Other,	
<b>Demonstrated or Anticipated Impact on Form, Fit, Function or Reliability:</b> N/A	
<b>LF Qualification Plan/Results:</b> Yes	
<b>Customer Acknowledgement of Receipt:</b> Littelfuse requests you acknowledge receipt of this PCN. In your acknowledgement, you grant approval or request additional information. Littelfuse will assume the change is acceptable if no acknowledgement is received within 30 days 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

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**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.

Barcode Scanning Result



**9.0 Approvals:**

**Sophia Hu**  
SPA Assistant Product Manager  
Littelfuse, Wuxi

**Light Hsieh**  
SPA Product Engineering Manager  
Littelfuse, HsinChu

**Raider Chen**  
SPA Product Engineer  
Littelfuse, HsinChu