



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
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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.

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