



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

March 15th, 2019

RE: PCN # ESU270-43 – SP1064-04UTG alternative backend location approval

To our valued customers,

Littelfuse would like to notify you another newly approved backend location for SP1064-04UTG TVS Diode Array (SPA® Diodes) product. This new 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 product.

Qualification efforts are completed, and the new factory is online for immediate shipments. Please see the documentation in the following pages for change details.

The affected product has 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: June 14th, 2019 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 Jia Zhu, Product Manager.

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

Best Regards,

Jia Zhu
TVS Diode Array Product Manager
Semiconductor Business Unit, Wuxi, China
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PCN#: ESU270-43 Date: March 15, 2019 Product Identification : SP1064-04UTG TVS Diode Array Product alternative backend location approval Implementation Date for Change: June 14, 2019 or sooner	Contact Information Name: Jia Zhu Title: Product Marketing Manager Phone # : +86 13913131571 Fax# : N/A E-mail : jzhu3@littelfuse.com
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Category of Change: <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: _____	Description of Change: Approve another alternated backend assembly, test, and packing locations for SP1064-04UTG. There are no changes to fit, form & function of the finished product. The affected product has been fully qualified in accordance with all established criteria for performance and reliability. All relevant details are included in the supplemental pages.
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Important Dates: <input checked="" type="checkbox"/> Qualification Samples Available: March 11, 2019 <input type="checkbox"/> Last Time Buy: <input checked="" type="checkbox"/> Final Qualification Data Available: March 11, 2019 <input type="checkbox"/> Date of Final Product Shipment:	
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Method of Distinguishing Changed Product <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,

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 can 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.



PCN Report

ETR # Various

Prepared By : Jia Zhu-SPA Product Manager, Jordan Hsieh-SPA Product Engineering Manager,
Raider Chen-SPA Product Engineer,
Date : 03/11/2019
Device : SP1064-04UTG
Revision : A

1.0 Objective:

The purpose of this document is to qualify an alternative assembly supplier for SP1064-04UTG. Summarize the physical, electrical and reliability test performed in qualification lots.

2.0 Applicable Devices:

SP1064-04UTG

3.0 Assembly, Process & Material Differences/Changes:

3.1 Assembly Changes

New assembly site added.

3.2 Process Changes

No change of process method.

3.3 Material Change

Lead frame	C7025-NiPdAu	Efect64T-NiPdAu	Yes
Die Attach Material	84-1LMISR4	8008MD	Yes
Wire	Gold	Gold	No
Mold Compound	G600	G770HCD	Yes
Plating	PPF	PPF	No

4.0 Packing Method

No change of packing method.

5.0 Physical Differences/Changes:

No change in mechanical specification or package outline dimension (POD).

6.0 Reliability Test Results Summary:

6.1 SP1064-04UTG Reliability report:

Test Items	Condition	S/S	Results	ETR #
Pre-conditioning	JESD22-A113	308 each lot	0/616	ETR121787 ETR121880
High Temperature DC Blocking	Bias = VRWM, Ta = 150°C Duration = 1008 Hours	77 each lot	0/154	
Temperature Cycle	Ta = -55°C to +150°C Duration = 1000 Cycles	77 each lot	0/154	
High Humidity High Temp. with DC Bias	Ta = 85°C, 85% RH Duration = 1008 Hours	77 each lot	0/154	
Autoclave	Ta = 121°C, 100%RH, 2ATM Duration = 96 Hours	77 each lot	0/154	
Resistance to Solder Heat	260°C, 10 sec M-2031	30 each lot	0/60	
Moisture Sensitivity Level (MSL)	Per Jedec J-STD-020D Level 1	308 each lot	0/616	
Solderability	ANSI-J-STD-002	10 each lot	0/20	

7.0 Electrical Characteristic Summary:

No change in electrical characteristics. Characterization data is available upon request.

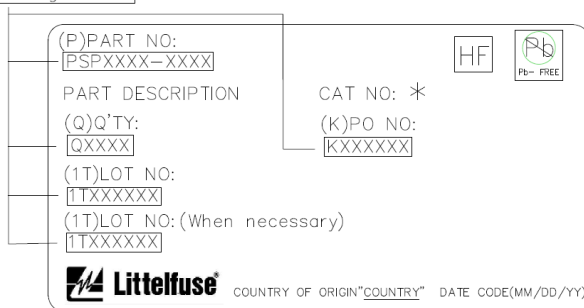
8.0 Changed Part Identification:

There are qualified suppliers, detail please refer to below table

Package Type	Part Number	Original	New added
DFN2510-10L	SP1064-04UTG	M	G

And it can be identified by code of CAT NO on the label.

Barcode Scanning Result



9.0 Recommendations & Conclusions:

Based on the test results, it is determined that the alternative assembly supplier for SP1064-04UTG products are qualified and certified for production of all Littelfuse datasheet.

10.0 Approvals:

Jia Zhu
SPA Product Manager
Littelfuse, Wuxi

Jordan Hsieh
SPA Product Engineering Manager
Littelfuse, HsinChu

Raider Chen
SPA Product Engineer
Littelfuse, HsinChu