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

Dec 11th, 2020

RE: PCN # ESU270-53 – SP7538PUTG additional backend location approval

To our valued customers,

Littelfuse would like to notify you of an additional approved backend location for SP7538PUTG 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 in progress, and the new factory is online for immediate shipments. Please see the documentation in the following pages for change details.

The affected product is under qualification 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: Feb 15th, 2021 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**
ESU270-53 Date: Dec 11th, 2020	Name: Sophia Hu
Product Identification :	Title: Assistant Product Manager
SP7538PUTG TVS Diode Array Product	Phone # : +86 13771377277
additional backend location approval	Fax# : N/A
Implementation Date for Change:	E-mail : shu@littelfuse.com
Feb 15th, 2021 or sooner	

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 locations for SP7538PUTG. There are no changes to fit, form & function of the finished product. The affected product is under qualification in accordance with all established criteria for performance and reliability.
All relevant details are included in the supplemental pages.

Important Dates:

- ☒ Qualification Samples Available: Dec 15th, 2020
- ☐ Last Time Buy:
- ☒ Final Qualification Data Available: End of Jan 2021
- ☐ 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 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 : Sophia Hu-SPA Assistant Product Manager, Jordan Hsieh-SPA Product Engineering Manager, Raider Chen-SPA Product Engineer,
Date : 12/07/2020
Device : SP7538PUTG
Revision : A

1.0 Objective:

The purpose of this document is to qualify an additional assembly supplier for SP7538PUTG. Summarize the physical, electrical and reliability test performed in qualification lots.

2.0 Applicable Devices:

SP7538PUTG

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

SP7538PUTG			
Item	Original	New	Change or not
Lead frame	A194-NiPdAu	DFN14TLN(R-AG)	Yes
Die Attach Material	8006NS	8006NS	No
Wire	Gold	Gold	No
Mold Compound	G770HCD	CEL9220HF13	Yes
Plating	PPF	Tin	Yes

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 TBD:

Test Items	Condition	S/S	Results	ETR #
Pre-conditioning	JESD22-A113	308 each lot	Upon request	ETR151571 ETR151572 ETR151574
High Temperature DC Blocking	Bias = VRWM, Ta = 150°C Duration = 1008 Hours	77 each lot	Upon request	
Temperature Cycle	Ta = -55°C to +150°C Duration = 1000 Cycles	77 each lot	Upon request	
High Humidity High Temp. via DC Bias	Ta = 85°C, 85% RH Duration = 1008 Hs	77 each lot	Upon request	
Autoclave	Ta = 121°C, 100%RH, 2ATM Duration = 96 Hs	77 each lot	Upon request	
Resistance to Solder Heat	260°C,10 sec M-2031	30 each lot	Upon request	
Moisture Sensitivity Level (MSL)	Per Jedec J-STD-020D Level 1	308 each lot	Upon request	
Solderability	ANSI-J-STD-002	10 each lot	Upon request	

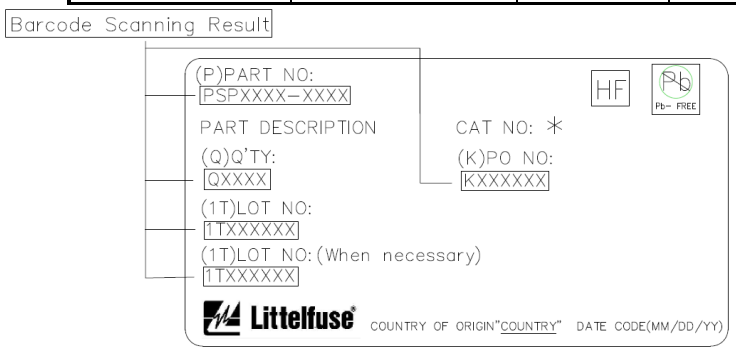
7.0 Electrical Characteristic Summary:

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

8.0 Changed Part Identification:

Both were qualified suppliers and it can be identified by code of CAT NO on the label.

Package Type	Part Number	Original	New added
DFN3810-9L	SP7538PUTG	T	U



9.0 Recommendations & Conclusions:

Based on the test results, it is determined that the alternative assembly supplier for SP7835PUTG products are qualified and certified for production of all Littelfuse datasheet.

10.0 Approvals:

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