



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

Sep 10th, 2014

RE: PCN # ESU270-26 -- SLVU2.8-4BTG Alternate Location Approval for Backend Assembly, Test and Packing

To our valued customers,

Littelfuse would like to notify you of a newly approved backend location for the SLVU2.8-4BTG TVS Diode Array (SPA® Diodes) products. The new backend factory in Thailand 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 complete and the new factory is online for immediate shipments. Please see the attached documentation for change detail and affected part numbers.

All 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: Sep 10th, 2014

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 Chad Marak, Product Manager.

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

Best Regards,

A handwritten signature in black ink that reads "Chad Marak". The signature is written in a cursive, flowing style.

Chad Marak
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800 E. Northwest Highway Des Plaines, IL 60016

Product/Process Change Notice (PCN)

PCN#: ESU270-26 **Date:** 09/10/2014

Product Identification:

SLVU2.8-4BTG of TVS

Diode Array Products

Implementation Date for Change:

09/10/2014

Contact Information

Name: Chad Marak

Title: Product Marketing Manager

Phone #: +1 408 886 1600

Fax#: N/A

E-mail: cmarak@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 an alternate backend assembly, test, and packing location for SLVU2.4BTG product.

There are no changes to fit, form & function of the finished product. The affected products have been fully qualified in accordance with all established criteria for performance and reliability

All relevant detail is included in the supplemental pages..

Important Dates:

- Qualification Samples Available: 09/10/2014 Last Time Buy:
- Final Qualification Data Available: 09/10/2014
- 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:

N/A

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 : Jordan Hsieh-SPA Product engineering manager,

Date : 09/4/2014

Device : SLVU2.8-4BTG Product

Revision : A

1.0 Objective:

The purpose of this project is to qualify a second / alternate assembly location for SLVU2.8-4BTG product. Succeeding pages summarize the physical, electrical and reliability test performed in qualification lots.

2.0 Applicable Devices:

Standard Part Numbers (SOIC package)	
SLVU2.8-4BTG	

3.0 Assembly, Process & Material Differences/Changes:

3.1 Assembly and Process Changes

There are no changes in the assembly and process method.

3.2 Material Changes

Material	Product:SLVU2.8-4BTG				
	Package : SOIC 8L				
	Original		New		Changed?
Material Name	Supplier	Material Name	Supplier		
Lead frame	A194	ASM	A194	ASM	No
Die Attach Material	84-1LMISR4	Henkel	84-1LMISR4	Henkel	No
Au Wire	Au 1.2 mils, 99.99%	Heraeus	Au 1.2 mil 99.999%	Tanaka	Yes
Molding Compound	G600	Sumitomo	G600	Sumitomo	No
Lead Finish	100% Sn	REDRING Solder	100% Sn	Ultracore	Yes

4.0 Packing Method

There will be no changes in the packing method.



5.0 Physical Differences/Changes:

There is no change in mechanical specification or package outline dimension (POD).

6.0 Reliability Test Results Summary:

Test Items	Condition	S/S	Results	ETR #
DC Blocking	Bias = Rated Voltage Ta = 150°C Duration = 1008 Hours	80	0/80	ETR 60814
Temperature Cycle	Ta = -55°C to +150°C Duration = 1000 Cycles	80	0/80	
Temperature/Humidity	Ta = 85°C, 85% RH Duration = 1008 Hours	80	0/80	
Autoclave	Ta = 121 °C, 100%RH, 2ATM Duration = 96 Hours	80	0/80	
Moisture Sensitivity Level(MSL)	Per Jedec J-STD-020D Level 1	11	0/11	

7.0 Electrical Characteristic Summary:

There is no change in electrical characteristics. Characterization data is available upon request.

8.0 Changed Part Identification:

To distinguish different manufacturing sites please check the product marking as below,
Product marking:

Original	New Supplier
CYYWW	HYYWW

Note: YY is year and WW is calendar week

9.0 Recommendations & Conclusions:

Based on the test results, it is determined that the second/alternative assembly site is qualified and certified for production of Littelfuse SLVU2.8-4BTG product.

10.0 Approvals:

Jordan Hsieh
SPA Product Engineering Manager
Littelfuse, Hsinchu