

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

August 15th, 2022

RE: PCN # ESU270-82 - SOT23-3L additional backend location approval

To our valued customers,

Littelf use would like to notify you of an additional approved backend location for SOT23-3L 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.

Qualification efforts are complete, and the new factory is ramping for shipments.

Products Affected:

Affected Part Numbers

SM24CANA-02HTG

SM712-02HTG

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: November 15th, 2022 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
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shu@littelfuse.com

PCN#:	Contact Information					
ESU270-82 Date: August 15th, 2022	Name: Sophia Hu					
Doe does lide of the street	Title: Assistant Product Manager					
Product Identification:	Phone #: +86 13771377277					
SOT23-3L additional backend location approval	Fax#: N/A					
Implementation Date for Change:	E-mail: shu@littelfuse.com					
Nov 15 th , 2022 or sooner						
	of Change:					
COTOO OL	ditional backend assembly, test, and packing location for					
products	SOT23-3L. There are no changes to fit, form & function of the finished					
Li Technology	producto.					
□ Discontinuance/Obsolescence						
□ Equipment						
Manufacturing Site						
☑ Raw Material						
☐ Testing						
☐ Fabrication Process ☐ Other:						
Important Dates:						
Qualification Samples Available: Upon request						
☐ Final Qualification Data Available: Upon request						
☐ 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.						



Prepared By : Jordan Hsieh-Product Engineering Manager,

Raider Chen-Product Engineer, Sophia Hu- Assistant Product Manager

Date : 2022/8/5

Device: SM24CANA-02HTG, SM712-02HTG

Revision : A

1.0 Objective:

The purpose of this document is to qualify an additional assembly supplier for SM24CANA-02HTG and SM712-02HTG. Summarize the physical, electrical and reliability test performed in qualification lots.

2.0 Applicable Devices:

2.1 Product name:

Affected Part Numbers		
SM24CANA-02HTG		
SM712-02HTG		

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

Raw Material Comparison Table						
Item	Original	New	Change or not			
Lead frame	C194	CACS5	Yes			
Die Attach Material	2200D/8008	84-1LMISR4	Yes			
Wire	Gold	Gold	No			
Mold Compound	G600	G600	No			
Plating	PPF	Matte 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 Reliability summary report:

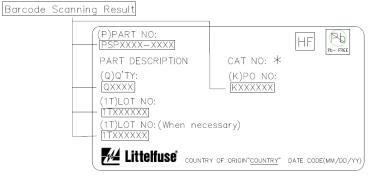
Test Items	Condition	S/S	Results	ETR#
Pre-conditioning (PC)	JESD22-A113	308 each lot	0/924	
DC Blocking (HTRB)	Bias = VRWM, Ta = 150°C, Duration = 1008 Hours	77 each lot	0/231	
Temperature Cycle (TC)	Ta = -55°C to +150°C, Duration = 1000 Cycles	77 each lot	0/231	
Temperature/Humidity (H3TRB)	Ta = 85°C, 85% RH, Bias = VRWM, Duration = 1008 Hours	77 each lot	0/231	133937 117688
Autoclave (AC)	Ta = 121°C, 100%RH, 2ATM, Duration = 96 Hours	77 each lot	0/231	117689
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:

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

8.0 Changed Part Identification:

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



9.0 Approvals:

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