

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

Feb 10th, 2021

RE: PCN # ESU270-60 - AQ3118-01ETG additional backend location approval

To our valued customers,

Littelfuse would like to notify you of an additional approved backend location for AQ3118-01ETG TVS Diode Array (SPA® Diodes) product. This new 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 product.

Qualification efforts are complete, and the new factory is ramping for 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. 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 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			
ESU270-60 Date: Feb 10 th , 2021	Name: Sophia Hu			
Product Identification :	Title: Assistant Product Manager			
AQ3118-01ETG TVS Diode Array Product	Phone # : +86 13771377277			
additional backend location approval	Fax# : N/A			
Implementation Date for Change:	E-mail : shu@littelfuse.com			
Feb 15 th , 2021				
Category of Change: De	escription of Change:			
	pprove additional backend assembly, test, and packing locations for			
	Q3118-01ETG. There are no changes to fit, form & function of the finished			
Technology pr	product.			
Discontinuance/Obsolescence				
Equipment				
Manufacturing Site				
🖾 Raw Material				
Testing				
Fabrication Process				
□ Other:				
Important Dates:				
Qualification Samples Available: Availa	ble 🗌 Last Time Buy:			
Final Qualification Data Available: Avai	lable			
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 ManagerDate: 2021/2/5Device: AQ3118-01ETG

Revision : A

1.0 **Objective:**

The purpose of this document is to qualify an additional assembly supplier for AQ3118-01ETG. Summarize the physical, electrical and reliability test performed in qualification lots.

2.0 Applicable Devices:

2.1 Product name: AQ3118-01ETG

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

4.0 Packing Method

No change of packing method.

5.0 Physical Differences/Changes:

AQ3118-01ETG					
Item	Original	New	Change or not		
Die Attach Material	8006NS	8006NS	No		
Wire	Gold	Gold	No		
Mold Compound	CEL-9220HF10	G770HCD	Yes		
Plating	PPF	PPF	No		

6.0 Reliability Test Results Summary:

6.1 AQ3118-01ETG summary report:

Test Items	Condition	S/S	Results	ETR #
Pre-conditioning (PC)	JESD22-A113	308 each lot	0/924	79803 76955 78492
DC Blocking (HTRB)	Bias = VRWM, Ta = 150° C, Duration = 1008 Hours	77 each lot	0/231	
Temperature Cycle (TC)	$Ta = -55^{\circ}C$ to $+150^{\circ}C$, 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	

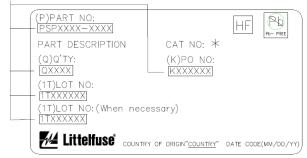
7.0 Electrical Characteristic Summary:

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

8.0 <u>Changed Part Identification:</u>

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

Barcode Scanning Result



9.0 Approvals:

Sophia Hu SPA Assistant Product Manager Littelfuse, Wuxi Jordan Hsieh SPA Product Manager Littelfuse, HsinChu <u>Raider Chen</u> SPA Product Engineer Littelfuse, HsinChu