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8755 W. Higgins Road
Suite 500
Chicago, IL 60631

www.littelfuse.com

Dec 13, 2021

Re: LFPCN41420 Additional Wafer Foundries Approval for SOT23-6 Package SDP and DSLP Series SIDACTor

To Our Valued Customers,

In order to support fast-growing demand and secure continuity of supply for our customers, Littelfuse will approve additional wafer foundries in China and Taiwan for SOT23-6 Package SDP and DSLP Series SIDACTor.

There will be no change to the form, fit, function, quality, or reliability of the products.

All affected products have been fully qualified in accordance with established performance and reliability criteria. Please refer to the attached affected parts list and the attached documentation for qualification result and change details.

Form, fit, function changes: None

Part number changes: None

Effective date: 15th March, 2022

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 your local sales team or product team below for further assistance.

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

Best Regards,

Victoria You
Assistant Product Manager
Automotive TVS & Hi-Rel TVS & SIDACTor
Tel: +86 510 85277701 ext. 7710
VYou@Littelfuse.com



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800 E. Northwest Highway Des Plaines, IL 60016

Product/Process Change Notice (PCN)

PCN#: Date: 13th Dec, 2021

Product Identification :

SOT23-6 Package SDP and DSLP Series SIDACTor

Implementation Date for Change:

15th Mar, 2022

Contact Information

Name: Victoria You

Title: Assistant Production Manager

Phone # : +86 510 85277701 ext. 7710

Fax# : NA

E-mail : VYou@Littelfuse.com

Category of Change:

- Assembly Process
- Data Sheet
- Technology
- Discontinuance/Obsolescence
- Equipment
- Manufacturing Site
- Raw Material
- Testing
- Fabrication Process
- Other: _____

Description of Change:

In order to support fast-growing demand and secure continuity of supply for our customers, Littelfuse will approve additional wafer foundries in China and Taiwan for SOT23-6 Package SDP and DSLP Series SIDACTor.

Important Dates:

- Qualification Samples Available: Upon request Last Time Buy:
- Final Qualification Data Available: Upon request
- Date of Final Product Shipment:

Method of Distinguishing Changed Product

- Product Mark,
- Date Code,
- Other, Littelfuse internal work order documentation

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

Prepared By : Jordan Hsieh-Product Engineering Manager
Wilson Wu-Product Engineering Supervisor
Date : 12/8/2021
Device : SOT23-6 Package SDP and DSLP Series Product
Revision : A

1.0 Objective:

The purpose of this project is to qualify alternate foundries for SDP and DSLP Series Product. Succeeding pages summarize the physical, electrical and reliability test performed in qualification lots.

2.0 Applicable Devices:

Part Numbers	Part Numbers
SDP0240T023G6RP	DSLPO080T023G6RP
P834SDP0240T023G6	DSLPO120T023G6RP
	DSLPO180T023G6RP
	DSLPO240T023G6RP
	DSLPO360T023G6RP

3.0 Packing Method

There will be no changes in the packing method.

4.0 Physical Differences/Changes:

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

5.0 Reliability Test Results Summary:

Test Items	Condition	S/S per PN	Results	ETR #
Pre-conditioning (PC)	JESD22-A113	231	0/231	ETR164843 ETR164854 ETR162438 ETR166471
DC Blocking (HTRB)	Bias = 80%V _{DRM} , Ta = 125°C Duration = 1008 Hours	77	0/77	
Temperature Cycle (TC)	Ta = -55°C to +150°C Duration = 1000 Cycles	77	0/77	
Temperature/Humidity (H3TRB)	Bias = 80%V _{DRM} , Ta = 85°C, 85% RH Duration = 1008 Hours	77	0/77	
Unbiased Highly Accelerated Stress Test (UHAST)	Ta = 130°C, 85%RH, 2ATM Duration = 96 Hours	77	0/77	
Resistance to Solder Heat (RSH)	260°C, 10 sec M-2031	30	0/30	
Moisture Sensitivity Level (MSL)	Per Jedec J-STD-020D Level 1	22	0/22	



Remark:

1. Tests are conducted without a bias condition unless otherwise stated.
2. Reliability data from product tests that is representative of similar products having structural similarity, commonality of production processes and product technology will be generically applied to those products.
3. Tests are conducted on SDP0240T023G6RP, SLVU2.8HTG, SP4021-01FTG-C

Estimate of Failure Rate, MTBF, FITS for a Given Operation Temperature

Temp °C	% FR/khrs	MTBF (K)	FITS
30	0.0000076	13163061.53	0.08
60	0.00023856	419175.11	2.39
80	0.00171509	58306.01	17.15
100	0.00998019	10019.85	99.80
125	0.07033148	1421.84	703.31
150	0.39351454	254.12	3935.15

4. The Mean-Time-Between-Failure (MTBF) in hours and the percent failure rate per 1000 hours (%FR/khr) are computed at a 60% confidence level using the chi square method and the Arrhenius derating model for various junction operating temperatures. For the calculations, a value of 1 eV was used for the activation energy.

6.0 Changed Part Identification:

There is no Part used in affected products.

7.0 Recommendations & Conclusions:

Based on the test results, it is determined that the alternative foundries are qualified and certified for production of all Littelfuse SDP and DSLP Series Product.

8.0 Approvals:

Peter Liu
Asia OSAT Product Engineering Manager
Littelfuse, Wuxi