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Control No. PCN-23241

July 10, 2023

PRODUCT/PROCESS CHANGE NOTIFICATION

TYPE OF CHANGE:

☐ Design

☒ Manufacturing

☐ Other

This notification is provided in accordance with Power Integrations policy of product/process change notification. If you have any questions or need further assistance, please contact your regional Power Integrations sales office.

DESCRIPTION OF CHANGE

Lapis Semiconductor Company Limited, Miyagi, Japan, an existing qualified wafer fabrication site, will be added as an alternative site for the products listed in this notification.

REASON FOR CHANGE

Improvement in the manufacturing capacity and flexibility.

PRODUCTS AFFECTED

Product Family	Ordering Part Number	Package
LinkSwitch-CV	LNK623DG-TL	SO-8C
	LNK623PG	PDIP-8C

QUALIFICATION STATUS

Refer to Appendix 1 for the qualification data.

EFFECT ON CUSTOMER

No adverse impact is expected in manufacturers' applications. There is no change to the datasheet parameters.

EFFECTIVE DATE

October 10, 2023. This date is subject to change. Products fabricated at the current wafer fabrication site will continue to be shipped after implementation of the above change.

SAMPLE AVAILABILITY

Samples will be available 2 weeks from the date of request. Please send requests for samples within two weeks after receipt of this notification to the local Power Integrations sales office.

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Appendix 1
Reliability Engineering
Qualification Report

Project Title: LNK623DG and LNK623PG Products Qualification at Lapis Miyagi Wafer Fab

Summary:

LNK623DG and LNK623PG products are being qualified at Lapis Miyagi to provide an alternative wafer fabrication site. Lapis Miyagi was previously qualified and has been in mass production of other products fabricated on the same wafer fabrication process since 2012. One lot of LNK623DG from Lapis Miyagi passed 1000 hours of DOPL testing for this qualification. Product electrical characterization was completed with acceptable results. Three additional lots of data on products using the same wafer fabrication process at Lapis Miyagi are included as supporting data.

Based on these results, Lapis Miyagi is qualified for wafer fabrication of LNK623DG and LNK623PG products.

Reliability Test Descriptions and Conditions

Test Name	Conditions	Reference Specification
DOPL (Dynamic Operating Life Test)	Tj=125°C, Vd(peak)=580V	EIA/JESD22-A108-D
HTRB (High Temperature Reverse Bias Test)	Ta=150°C; Vd=580V, Vbp = 5.8V	EIA/JESD22-A108-D
THBT (Temperature Humidity Bias Test)	85°C, 85% RH, Vd=30V, Vbp = 5.8V	EIA/JESD22-A101-C
TMCL (Temperature Cycle, Air to Air)	-65°C to +150°C, air to air	EIA/JESD22-A104-E
HALT (Humidity Accelerated Life Test)	DOPL at Tj=115°C, 85% RH, Vd(peak)=580V	Internal Standard
MSL Preconditioning	24-hr 150C bake → 168-hr 85°C, 85% RH soak for MSL1 or 192-hr 30°C, 60% RH soak for MSL3 → 3 passes 260C solder reflow	IPC/JEDEC J-STD-020E

DOPL (Dynamic Operating Life)

Product	Lot #	Wafer Fab	Test Duration	No. Failures/Sample Size
LNK623DG	DT700A	Lapis Miyagi	MSL1 +1000 hours	0 / 45
TNY288DG	7B740G	Lapis Miyagi	MSL1 +1000 hours	0 / 45
TNY290PG	3E056B	Lapis Miyagi	1000 hours	0 / 45
TNY290PG	3E057A	Lapis Miyagi	1000 hours	0 / 45

HTRB (High Temperature Reverse Bias)

Product	Lot #	Wafer Fab	Test Duration	No. Failures/Sample Size
TNY288DG	7B740G	Lapis Miyagi	MSL1 +1000 hours	0 / 45
TNY290PG	3E057A	Lapis Miyagi	1000 hours	0 / 45
TNY290PG	3E057B	Lapis Miyagi	1000 hours	0 / 45

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THBT (Temperature Humidity Bias)

Product	Lot #	Wafer Fab	Test Duration	No. Failures/Sample Size
TNY288DG	7B740G	Lapis Miyagi	MSL1 +1000 hours	0 / 45
TNY290PG	3E056B	Lapis Miyagi	1000 hours	0 / 45
TNY290PG	3E057A	Lapis Miyagi	1000 hours	0 / 45

TMCL (Temperature Cycling)

Product	Lot #	Wafer Fab	Test Duration	No. Failures/Sample Size
TNY288DG	7B740G	Lapis Miyagi	MSL1 + 1000 cycles	0 / 45
TNY290PG	3E056B	Lapis Miyagi	1000 cycles	0 / 45
TNY290PG	3E057A	Lapis Miyagi	1000 cycles	0 / 45

HALT (Humidity Accelerated Life Test)

Product	Lot #	Wafer Fab	Test Duration	No. Failures/Sample Size
TNY288DG	7B740G	Lapis Miyagi	MSL1 +1000 hours	0 / 20
TNY290PG	3E056B	Lapis Miyagi	1000 hours	0 / 20
TNY290PG	3E057A	Lapis Miyagi	1000 hours	0 / 20

Conclusion: Based on acceptable results, LNK623DG and LNK623PG products are qualified for wafer fabrication at Lapis Miyagi.

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CUSTOMER ACKNOWLEDGEMENT

Power Integrations requests you acknowledge the receipt of the above-mentioned PCN. If no acknowledgment is received within 30 days of this notification, Power Integrations will assume the change is acceptable. Lack of any additional response within 90 days of this notification further constitutes acceptance of the change.

Power Integrations reserves the right to ship either version manufactured after the effective date.

If you have any questions or need further assistance, please contact your regional Power Integrations sales office. Otherwise, please check the box below, acknowledging the receipt of the PCN.

The indicated Product/Process Change Notification was received by the undersigned authority.

Name/Title: _____

Signature: _____ Date: _____

Email Address/Phone#: _____

Company/Location: _____

CUSTOMER COMMENTS

Please email this signed form to pcn@power.com specifying the PCN# in the subject.

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