



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

Jan-17th, 2023

PCN # ESW490-48 – IXYS Power Thyristor & Diode TO263 Packaging Location Transfer

To our valued customers,

Littelfuse would like to notify you that we will transfer our backend assembly process of IXYS Power Thyristor & Diode products TO263 Package to our new inhouse assembly factory in Lipa, Philippines. This brand-new assembly factory is to fulfill our strategy to invest in state-of-the-art power semiconductor assembly capabilities to dramatically improve our service levels to customers. Our target is to build this factory as a world class facility with automated, error proof processes to meet the highest quality standards. Contact our local Sales team in case you would like to understand more about this new factory.

Below is the detail changes associate with this Assembly Location change:

- 1) **Silicon Die:** No change
- 2) **Backend Assembly Bill of Materials:** No change
- 3) **Backend Assembly Process Flow:** No change
- 4) **Backend Assembly Equipment:** Equal or better
- 5) **Marking & Labeling:** Yes. Changes pls refer to below details.

DESCRIPTION	EXISTING LOCATION	SBU-LIPA	CHANGE (Y/N)	RISK	REMARKS
Unit Marking					
Logo			Y	LOW	Change to Littelfuse Logo
UL Sign	Yes	Yes	N	NR	No change
Trademark Sign	Yes	Yes	N	NR	No change
Product Name	Yes	Yes	N	NR	No change
Date Code	YYWW	YYWW	N	NR	No change
Assembly Line Code	L	M	Y	LOW	Site location code
Lot ID	FKT #	Lipa Lot ID format	Y	NR	SBU-Lipa uses global format
Box Label					
RoHS Label	e1	e3	Y	LOW	Both have printed RoHS compliance label
Logo			Y	NR	Change to Littelfuse Logo
Qty per Box	Yes	Yes	N	NR	No change
Part Number	Yes	Yes	N	NR	No change
Lot No	No	Yes	Y	LOW	Additional information from SBU-Lipa
Country of Origin	Yes	Yes	N	NR	No change
Code Type	Barcode	Barcode + 2D Code	Y	LOW	Additional scanning code to access information
Lot ID	FKT #	Lipa Lot ID format	Y	NR	SBU-Lipa uses global format
Date Code	Yes	Yes	N	NR	No change
Assy Line Code	L	M	Y	LOW	Site location code
Tube Label					
Logo			Y	NR	Change to Littelfuse Logo
Qty per tube	Yes	Yes	N	NR	No change
Part Number	Yes	Yes	N	NR	No change
Lot No	No	Yes	Y	LOW	Additional information from SBU-Lipa
Country of Origin	Yes	Yes	N	NR	No change
Code Type	Barcode	Barcode + 2D Code	Y	LOW	Additional scanning code to access information
Lot ID	FKT #	Lipa Lot ID format	Y	NR	SBU-Lipa uses global format
Date Code	Yes	Yes	N	NR	No change
Assy Line Code	L	M	Y	LOW	Site location code

Form, fit, function changes: None
Part number changes: None
Effective date: Apr-17th, 2023
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 Zhiwei Wang, Power Thyristor/Diode Discrete, Product Marketing Manager.

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

Thank you very much!

Zhiwei Wang

Best Regards,

Zhiwei Wang
Product Marketing Manager of Power Thyristor/Diode Discrete
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Littelfuse Phils, Inc. Lipa, Philippines



- Established since November 1997
- New Building 3 be opened in March 2020
- A two stories building (EBU & SBU)
- Total production space ~8400 m²
- 3400 m² used in phase 1
- Dedicated to semiconductor products





800 E. Northwest Highway Des Plaines, IL 60016

Product/Process Change Notice (PCN)

PCN#: ESW490-48 **Date:** Jan-17th, 2023

Product Identification:

IXYS Power Thyristor & Diode TO263 Package Products

Implementation Date for Change:

Apr-17th, 2023

Contact Information

Name: Zhiwei Wang

Title: Product Marketing Manager

Phone #: +86 510 85277701 - 7927

Fax#: N/A

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Category of Change:

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

Description of Change:

Littelfuse would like to notify you that we will transfer our backend assembly process of IXYS Power Thyristor/Diode TO263 Package Products to our inhouse new factory in Lipa, Philippines.

- 1) Silicon Die: No change
- 2) Backend Assembly Bill of Materials: No change
- 3) Backend Assembly Process Flow: No change
- 4) Backend Assembly Equipment: Equal or better
- 5) Marking & Labeling: Yes. (refer to PCN letter)

Product form, fit, function changes: None

Part number changes: None

Important Dates:

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

Method of Distinguishing Changed Product

- Product Mark,
- Date Code,
- Other,

Demonstrated or Anticipated Impact on Form, Fit, Function or Reliability:

None

LF Qualification Plan/Results:

Refer to PCN report.

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 : Zhiwei Wang, Product Marketing Manager
Date : Jan 17th, 2023
Products : IXYS Power Thyristor/Diode TO263 Package Products
Revision : A

1.0 Objective:

This qual report covers IXYS Power Thyristor/Diode TO263 Package Products Assembly location Transfer.

2.0 Applicable Products:

IXYS Power Thyristor/Diode TO263 Package Products. Refer to Appendix A for detail affected part number list.

3.0 Physical Differences/Changes:

Silicon Die: No change
Backend Assembly Bill of Materials: No change
Backend Assembly Process Flow: No change
Backend Assembly Equipment: Equal or better
Backend Assembly Packing Tube/Reel Dimension: No change

4.0 Qualification Test Result

All samples passed parametric and reliability test standard by Littelfuse/IXYS.

DEVICE	REL - TEST	CONDITIONS	SAMPLE SIZE PER LOT, pc	E22D13A1	E22D13A3	RESULT
CME30E1600PZ	HTRB	80% Bias, 125C, 1000hrs	30	Done	Done	Passed
	Temp Cycle	-50/+150 1000 cycles with 250, 500 cycles reading	30	Done	Done	Passed
	HAST	96 hrs. at 130C / 85%RH	30	Done	Done	Passed
	PC	per std	30	Done	Done	Passed
	UHASt	42v , 96 hrs. at 130C / 85%RH	30	Done	Done	Passed
	ITSM	Datasheet	3	Done	Done	Passed

DEVICE	REL - TEST	CONDITIONS	SAMPLE SIZE PER LOT, pc	E22H33A1	RESULT
CS1854	Temp Cycle	-50/+150 1000 cycles with 250, 500 cycles reading	30	Done	Passed
	UHASt	42v , 96 hrs. at 130C / 85%RH	30	Done	Passed
	ITSM	Datasheet	3	Done	Passed

DEVICE	REL - TEST	CONDITIONS	SAMPLE SIZE PER LOT, pc	E22H32A1	RESULT
CLE20E1200PC	Temp Cycle	-50/+150 1000 cycles with 250, 500 cycles reading	30	Done	Passed
	UHASt	42v , 96 hrs. at 130C / 85%RH	30	Done	Passed
	ITSM	Datasheet	3	Done	Passed

DEVICE	REL - TEST	CONDITIONS	SAMPLE SIZE PER LOT, pc	E22G29A1	E22G29A2	E22G29A3	RESULT
DPG60C300PC	HTRB	80% Bias, 125C, 1000hrs	30	Done	Done	Done	Passed
	Temp Cycle	-50/+150 1000 cycles with 250, 500 cycles reading	30	Done	Done	Done	Passed
	AUTOCLAVE	96h, 121°C/100%r.H.	30	Done	Done	Done	Passed
	PC	per std	30	Done	Done	Done	Passed
	ITSM	Datasheet	3	Done	Done	Done	Passed

5.0 Recommendations & Conclusions:



Based on the above qualification test results, Littelfuse concluded new Alternative Assembly Location can pass the release criterion and ready to start mass production for affected products.

Appendix A: Detail Part Number list affected

Diode
DSEC16-12AS-TRL
DPG60IM300PC-TRL
DSI30-08AS-TRL
DMA10P1600PZ-TRL
DSI30-16AS-TRL
DSP8-12S-TRL
DLA40IM800PC-TRL
DPG20C400PC-TRL
DSEP40-03AS-TRL
DSEP29-06AS-TRL
DSEP12-12AZ-TRL
DSI30-12AS-TRL
DSP8-08AS-TRL
DPG60C300PC-TRL
DSP8-08S-TRL
DSEI8-06AS-TRL
DSEP12-12BZ-TRL
DNA30EM2200PZ-TRL
DSEI36-06AS-TRL
DMA30IM1600PZ-TRL
DSI30-08AS-TUB
DNA30E2200PZ-TRL
DPG30C300PC-TRL
DPG30C200PC-TRL
DSEI8-06AS-TUB
DMA10IM1600PZ-TRL
DSEI19-06AS-TRL
DNA30EM2200PZ-TUB
DSI30-12AS-TUB
DSP8-12AS-TUB
DLA20IM800PC-TRL
DLA40IM800PC-TUB
DSEI36-06AS-TUB

Diode
DSP8-08AS-TUB
DSEP15-06AS-TRL
DSEP15-06BS-TRL
DSI30-16AS-TUB
DAA10EM1800PZ-TUB
DSEP12-12AZ-TUB
DSEP29-06AS-TUB
DPG60IM300PC-TUB
DLA20IM800PC-TUB
DHG30IM600PC-TUB
DMA30IM1600PZ-TUB
DSEC16-12AS-TUB
DSEP15-06AS-TUB
DSS16-01AS-TUB
DPG30IM400PC-TUB
DNA30E2200PZ-TUB
DPG30C200PC-TUB
DPG30C300PC-TUB
DPG60C300PC-TUB
DAA10P1800PZ-TRL
DAA10P1800PZ-TUB
DHG30IM600PC-TRL
DMA10IM1600PZ-TUB
DMA10P1600PZ-TUB
DMA10P1800PZ-TRL
DMA10P1800PZ-TUB
DPG20C400PC-TUB
DPG30IM300PC-TRL
DPG30IM300PC-TUB
DPG30IM400PC-TRL
DAA10EM1800PZ-TRL
DSA30C150PC-TRL
DSA30C150PC-TUB

Diode
DSA30C200PC-TRL
DSA30C200PC-TUB
DSA30C45PC-TRL
DSA30C45PC-TUB
DSEI12-06AS-TRL
DSEI12-06AS-TUB
DSEI12-12AZ-TRL
DSEI12-12AZ-TUB
DSEI19-06AS-TUB
DSEI25-06AS-TRL
DSEI25-06AS-TUB
DSEP12-12BZ-TUB
DSEP15-06BS-TUB
DSEP40-03AS-TUB
DSP8-08S-TUB
DSP8-12AS-TRL
DSP8-12S-TUB
DSS10-01AS-TRL
DSS10-01AS-TUB
DSS16-0045AS-TRL
DSS16-0045AS-TUB
DSS16-01AS-TRL

Thyristor
CME30E1600PZ-TRL
CLA30MT1200NPZ-TRL
CLE20E1200PC-TRL
CLA15E1200NPZ-TRL
CLA30E1200NPZ-TRL
CLA30E1200PC-TRL
CLB30I1200PZ-TRL
CMA30E1600PZ-TRL
CS19-08HO1S-TRL
CS19-12HO1S-TRL
CS19-08HO1S-TUB
CMA20E1600PZ-TUB
CS19-12HO1S-TUB
CLA40MT1200NPZ-TUB
CLA30MT1200NPZ-TUB
CLA5E1200PZ-TUB
CME30E1600PZ-TUB
CLA15E1200NPZ-TUB
CLA20EF1200PZ-TRL
CLA20EF1200PZ-TUB
CLA30E1200NPZ-TUB
CLA30E1200PC-TUB
CLA40E1200NPZ-TRL
CLA40E1200NPZ-TUB
CLA40MT1200NPZ-TRL
CLA5E1200PZ-TRL
CLB30I1200PZ-TUB
CLB40I1200PZ-TRL
CLB40I1200PZ-TUB
CLE20E1200PC-TUB
CMA20E1600PZ-TRL
CMA30E1600PZ-TUB
CS1854 - TRL