

Product Change Notification (PCN)



N° LFPCN240607

Date: June 07th, 2024

Subject: *PCN for V1 Power Modules Inhouse Assembly Location Transfer
(Refer to the list of affected parts in page 4)*

Dear Valued Customer,

Littelfuse would like to notify you about the transfer of the backend manufacturing of our modules in V1 package to our Outsourced Semiconductor Assembly and Test (OSAT) factory in Laguna, Philippines.

This OSAT facility, a Littelfuse Back End partner since many years, build in mass production V1 products for Littelfuse already. This transfer refers to all our V1 products, which have only been built in our Lampertheim facility so far until now.

Our clear focus being to bring high levels of service to our customers and quality products to support future growth of the power semiconductor business.

Please find enclosed all details related to this PCN.

Important information for your attention and according to JEDEC STANDARD "JESD46":

- Please 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 from the date of this PCN. Lack of any additional response within 90 days of PCN issuance further constitutes acceptance of change.

Your prompt reply will help Littelfuse to assure a smooth and well executed transition. Your attention and response to this matter is greatly appreciated.

Thank you very much.

Best Regards,

Mirko Vogelmann
Product Manager
Medium Power Modules
mvogelmann@littelfuse.com

Contact Information:	Contact your local Littelfuse Sales Partner or Mirko Vogelmann
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SUBJECT OF CHANGE:	V1 Bipolar Power Modules OSAT Backend Assembly Location Transfer																									
PRODUCTS AFFECTED:	See page 4																									
REASON OF CHANGE:	Set the right balance for power modules assembly between internal and outsourced Back End facilities. Extend the V1 packages assembly being built in this facility additionally to other V1 products already built there.																									
DESCRIPTION OF CHANGE:	ACTUAL SITE Lampertheim, Germany	TRANSFERRED SITE Laguna, Philippines																								
<ul style="list-style-type: none"> ■ Marking (on parts) 																										
<ul style="list-style-type: none"> • Label marking 																										
<ul style="list-style-type: none"> • Company Logo 	IXYS Logo 	Littelfuse IXYS Logo 																								
<ul style="list-style-type: none"> • UL Logo 	NO CHANGE																									
<ul style="list-style-type: none"> • Date code + Site Assy code 	YYWWX	YYWWAM																								
<ul style="list-style-type: none"> • Catalog Part Number 	NO CHANGE																									
<ul style="list-style-type: none"> • 2D Matrix 	36 characters <table border="1"> <tr><td>1st to 19th digit</td><td>Official product part number</td></tr> <tr><td>20th to 23rd digit</td><td>Date Code (YYWW)</td></tr> <tr><td>24th to 25th digit</td><td>Assembly line</td></tr> <tr><td>26th to 31st digit</td><td>Lot number</td></tr> <tr><td>32nd digit</td><td>Split lot / extra digit for future reference</td></tr> <tr><td>33rd to 36th digit</td><td>Individual module number within one lot</td></tr> </table>	1st to 19th digit	Official product part number	20th to 23rd digit	Date Code (YYWW)	24th to 25th digit	Assembly line	26th to 31st digit	Lot number	32nd digit	Split lot / extra digit for future reference	33rd to 36th digit	Individual module number within one lot	49 characters <table border="1"> <tr><td>1st to 25th digit</td><td>Official product part number</td></tr> <tr><td>26th to 31st digit</td><td>Date code (YYWW)</td></tr> <tr><td>32nd to 33rd digit</td><td>Assembly Line</td></tr> <tr><td>34th to 43rd digit</td><td>Lot Number</td></tr> <tr><td>44th digit</td><td>Extra digit for future reference</td></tr> <tr><td>45th to 49th digit</td><td>Individual Module number within one lot</td></tr> </table>	1st to 25th digit	Official product part number	26th to 31st digit	Date code (YYWW)	32nd to 33rd digit	Assembly Line	34th to 43rd digit	Lot Number	44th digit	Extra digit for future reference	45th to 49th digit	Individual Module number within one lot
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<ul style="list-style-type: none"> ■ Labelling (on packing) 																										
<ul style="list-style-type: none"> • Inner Box 																										
<ul style="list-style-type: none"> • Master/Outer Box 																										
<ul style="list-style-type: none"> ■ Bill of material 	NO CHANGE																									
<ul style="list-style-type: none"> ■ Electrical characteristics 	Electrical characteristics of qualification site matched to current production site																									
<ul style="list-style-type: none"> ■ Mechanical characteristics 	Mechanical characteristics of qualification site matched to current production site																									

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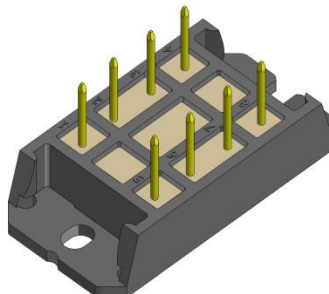
RELIABILITY DATA SUMMARY:

- Qualification done on module part structurally representative to the whole V1 modules package family
- The acceptance defining criteria for type tests of this product family are detailed in: IEC 60747-6 Edition 3.0, clause 7.5.5, table 10

Results:	Test	Description	Conditions	Standard Use	# Lots	Qty /Lot	Result
MDMA60UC1600VC							
1	HTRB	High Temp. Rev. Bias	1000hr., ≤125°C, 1120V AC	IEC 60749-23	2	5	Passed
2	Humidity	High Temp. High Humidity Bias	1000hr., 85% rH., 85°C	IEC 60749-42	2	5	Passed
3	T/C	Temperature Cycling	50 cycles, -40°C/+150°C	IEC 60749-25	2	5	Passed
4	P/C	Power Cycling	10 000 cycles, ≤ 125°C, dT=80K	IEC 60749-34	1	5	Passed
VUM33-06PH							
1	HTRB	High Temp. Rev. Bias	1000hr., ≤125°C, 480V DC	IEC 60749-23	2	5	Passed

TIME SCHEDULE:

- Parts availability: *July 2024 (Week 27 onwards)*
- Production ramp-up: *June 2024*
- Last Shipment: *Mid of July (Week 30) from assembly site in Lampertheim*
- Last time buy: *N/A - Any new orders will be processed through the new assembly site*



V1-B-Pack

(pin-out location is non representative to all topologies offered)

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ASSESSMENT:

- No influence in terms fit, form and function.
- No part number change.
- Data sheets remain unchanged.
- LF Qualification report available upon request.

LIST OF AFFECTED V1 POWER MODULES (See Note below):

	SAP Material	Package
1	MDMA60UC1600VC	V1-B-Pack
2	VUC36-12GO1	V1-B-Pack
3	VUC36-16GO2	V1-B-Pack
4	VUE50-12NO1	V1-A-Pack
5	VUM24-05N	V1-B-Pack
6	VUM33-05N	V1-B-Pack
7	VUM33-06PH	V1-B-Pack
8	VVZ40-12io1	V1-B-Pack
9	VVZ40-16io1	V1-B-Pack

Customer Information: Forward-looking statements are intended to provide information about our expected future operations. These statements are not promises or guarantees, particularly with respect to any timelines provided in the schedule. All terms of delivery and rights to technical changes are subject to alteration by Littelfuse.