

# Product Change Notification (PCN)



N° LFPCN221219

Date: December 19<sup>th</sup>, 2022

**Subject:** *PCN for Y1 Power Modules Inhouse Assembly Location Transfer  
MCO/MDO types (Refer to the list of affected parts in page 4)*

**Dear Valued Customer,**

After the successful relocation of our TO-240, Y4 and MCC Y1 product families in 2020, 2021 and 2022, Littelfuse would like to notify you about the transfer of the backend manufacturing of our MCO/MDO Y1 package parts to our inhouse assembly factory in Lipa, Philippines.

This new Littelfuse facility combines the very best operational excellence and semiconductor expertise to deliver a highly automated, world class facility designed, to meet IATF16949 & VDA6.3 requirements. 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,






Pascal Ducluzeau  
Product Marketing Manager  
Medium Power Modules  
[pducluzeau@littelfuse.com](mailto:pducluzeau@littelfuse.com)

Contact Information:	Contact your local Littelfuse Sales Partner or Pascal Ducluzeau.
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<b>SUBJECT OF CHANGE:</b>	Y1 Bipolar Power Modules – MCO & MDO types Inhouse Backend Assembly Location Transfer	
<b>PRODUCTS AFFECTED:</b>	See page 4	
<b>REASON OF CHANGE:</b>	State-of-the-art power semiconductor assembly capabilities to dramatically improve service levels to customers. Our target is to set this factory as a world class facility with automated, error proof processes to meet the highest quality standards.	
<b>DESCRIPTION OF CHANGE:</b>	<b>ACTUAL SITE</b>	<b>TRANSFERRED SITE – LIPA, Philippines</b>
<ul style="list-style-type: none"> <li>Marking (on parts)</li> </ul>		
<ul style="list-style-type: none"> <li>Company Logo</li> </ul>	Ixys Logo 	Littelfuse IXYS Logo 
<ul style="list-style-type: none"> <li>UL Logo</li> </ul>	YES - NO CHANGE	
<ul style="list-style-type: none"> <li>Electrical Draw. + pin out</li> </ul>	YES - NO CHANGE	
<ul style="list-style-type: none"> <li>Date code + Site Assy code</li> </ul>	YYWWPM	YYWWM
<ul style="list-style-type: none"> <li>Catalog Part Number</li> </ul>	YES - NO CHANGE	
<ul style="list-style-type: none"> <li>Lot Number</li> </ul>	6 digit = xxxxxx Lot sequential number (000001 – 999999)	8 digit = YYMDDxxx YY= 2 last digit of the year, M = Month (A=Jan, L=Dec), DD = Day, xxx = Lot sequential (001-999) reset to 001 every day
<ul style="list-style-type: none"> <li>2D Matrix</li> </ul>	36 characters  1 <sup>st</sup> to 19 <sup>th</sup> digit = Product P/N 20 <sup>th</sup> to 23 <sup>rd</sup> digit = Date Code YYWW 24 <sup>th</sup> to 25 <sup>th</sup> digit = Assembly code 26 <sup>th</sup> to 31 <sup>st</sup> digit = Lot number 32 <sup>nd</sup> digit = Extra digit for future reference 33 <sup>rd</sup> to 36 <sup>th</sup> digit = Individual module number within one lot	49 characters  1 <sup>st</sup> to 25 <sup>th</sup> digit = Product P/N 26 <sup>th</sup> to 31 <sup>st</sup> digit = Date Code YYWW 32 <sup>nd</sup> to 33 <sup>rd</sup> digit = Assembly code 34 <sup>th</sup> to 43 <sup>rd</sup> digit = Lot number 44 <sup>th</sup> digit = Extra digit for future reference 45 <sup>th</sup> to 49 <sup>th</sup> = Individual module number within one lot
<ul style="list-style-type: none"> <li>Labelling (on packing)</li> </ul>		
<ul style="list-style-type: none"> <li>Inner Box</li> </ul>		
<ul style="list-style-type: none"> <li>2D Sequence</li> </ul>	Type - Part Number - Date Code - Lot No. - Qty - Label	Type – Date Code – Lot No. – Qty – Label
<ul style="list-style-type: none"> <li>Master/Outer Box</li> </ul>	No Label	
<ul style="list-style-type: none"> <li>Bill of material</li> </ul>	NO CHANGE	
<ul style="list-style-type: none"> <li>Electrical characteristics</li> </ul>	Electrical characteristics of qualification site matched to current production site	
<ul style="list-style-type: none"> <li>Mechanical characteristics</li> </ul>	Mechanical characteristics of qualification site matched to current production site	

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## RELIABILITY DATA SUMMARY:

- Qualification done on module part MCO600-16io1 structurally representative to the whole MCO/MDO Y1 Bipolar 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
<b>MCO600-16io1</b>							
1	HTRB	High Temp. Rev. Bias	1000hr., 125°C, 1120 V AC	IEC 60749-23	1	10	Passed
2	Humidity	High Temp. High Humidity Bias	1000hr., 85% rH., 85°C	IEC 60749-42	1	10	Passed
3	T/C	Temperature Cycling	200 cycles, -40°C/+150°C	IEC 60749-25	1	10	Passed
4	P/C	Power Cycling	10 000 cycles, dT=80K	IEC 60749-34	1	10	Passed
5	ITSM	Surge Current	Datasheet		1	3	Passed

## TIME SCHEDULE:

- Parts availability: *Starting from the week of December 19th, 2022 (Week 51/2022)*
- Production ramp-up: *Starting from the week of December 19th, 2022 (Week 51/2022)*



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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 by Dec 19<sup>th</sup>

## LIST OF AFFECTED Y1 BIPOLAR MODULES

1	MCO450-20IO1	11	MCO600-22IO1SL
2	MCO450-22IO1	12	MDO500-12N1
3	MCO500-12IO1	13	MDO500-14N1
4	MCO500-14IO1	14	MDO500-16N1
5	MCO500-16IO1	15	MDO500-18N1
6	MCO500-18IO1	16	MDO500-20N1
7	MCO600-16IO1	17	MDO500-22N1
8	MCO600-18IO1	18	MDO600-16N1
9	MCO600-20IO1	19	MCMA650MT1400NKD
10	MCO600-22IO1	20	MCMA650MT1800NKD

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.