Product Change Notification (PCN)

N° LFPCN220919

Date: September 19th, 2022

Subject: ***PCN for Y1 Power Modules Inhouse Assembly Location Transfer MCC/MCD/MDD/MCMA/MDMA/MDNA types only*** ***(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 some of our 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

Contact Information:	Contact your local Littelfuse Sales Partner or Pascal Ducluzeau.

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SUBJECT OF CHANGE:	Y1 Bipolar Power Modules Inhouse Backend Assembly Location Transfer
PRODUCTS AFFECTED:	See page 4
REASON OF CHANGE:	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.

DESCRIPTION OF CHANGE:	**ACTUAL SITE**	**TRANSFERRED SITE – LIPA, Phil.**
■ Marking (on parts)		
• Company Logo	Ixys Logo	Littelfuse IXYS Logo
• UL Logo	YES - NO CHANGE	
• Electrical Draw. + pin out	YES - NO CHANGE	
• Date code + Site Assy code	YYWW**G**	YYWW**M**
• Catalog Part Number	YES - NO CHANGE	
• Lot Number	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
• 2D Matrix	36 characters	49 characters
■ Labelling (on packing)		
• Inner Box		
• 2D Sequence	Product Code - Type - Date Code - Lot No. - Qty – Label	Type – Date Code – Lot No. – Qty – Label
• Master/Outer Box	NO CHANGE	
■ Bill of material	NO CHANGE	
■ Electrical characteristics	Electrical characteristics of qualification site matched to current production site	
■ Mechanical characteristics	Mechanical characteristics of qualification site matched to current production site	

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

1st to 25th digit	Official product part number
26th to 31st digit	Date code (YYWW)
32nt 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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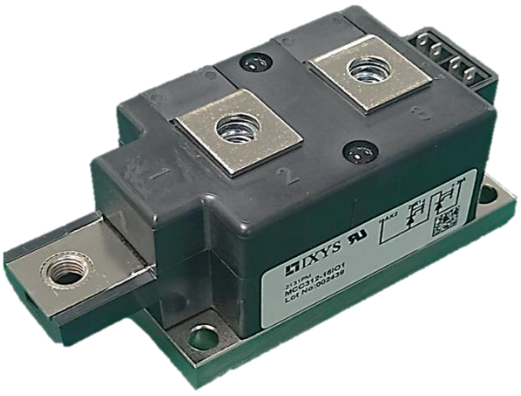
RELIABILITY DATA SUMMARY:
• **Qualification done on module part structurally representative to the whole Y1 Bipolar modules package family excluding MCO/MDO and MCMA650MT1x00NKD types.** • The acceptance defining criteria for type tests of this product family are detailed in: IEC 60747-6 Edition 3.0, clause 7.5.5, table 10

Results:	Test	Description	Conditions	Standard Use	# Lots	Qty/Lot	Result
MCC312-16io1							
1	HTRB	High Temp. Rev. Bias	1000hr., 125°C, 1120 V AC	IEC 60749-23	1	30	Passed
2	Humidity	High Temp. High Humidity Bias	1000hr., 85% rH., 85°C	IEC 60749-42	1	30	Passed
3	P/C	Power Cycling	20 000 cycles, dT=80K	IEC 60749-34	1	30	Passed
4	ITSM	Surge Current	Datasheet		1	30	Passed

TIME SCHEDULE:

- Parts availability: *Week of October 03rd, 2022 (Week 40/2022)*
- Production ramp-up: *October 20th, 2022 (Week 42/2022)*
- Last Shipment: Till week 50/2022 from the actual back-end site
- Last time buy: N/A - Any new orders will be processed through the new back-end site



ASSESSMENT:

- No influence in terms fit, form and function.
- No part number change.
- Data sheets remain unchanged.
- LF Qualification report available by Sept 30th

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LIST OF AFFECTED Y1 BIPOLAR MODULES (See Note below):

1	MCC224-20IO1	*26*	MCD312-12IO1
2	MCC224-22IO1	*27*	MCD312-14IO1
3	MCC224-24IO1	*28*	MCD312-16IO1
4	MCC225-12IO1	*29*	MCD312-16IO1-PCM
5	MCC225-14IO1	*30*	MCD312-18IO1
6	MCC225-16IO1	*31*	MCMA265P1600KA
7	MCC225-18IO1	*32*	MCMA265PD1600KB
8	MCC255-12IO1	*33*	MDD175-28N1
9	MCC255-14IO1	*34*	MDD175-34N1
10	MCC255-16IO1	*35*	MDD255-12N1
11	MCC255-18IO1	*36*	MDD255-14N1
12	MCC312-12IO1	*37*	MDD255-16N1
13	MCC312-14IO1	*38*	MDD255-18N1
14	MCC312-16IO1	*39*	MDD255-20N1
15	MCC312-18IO1	*40*	MDD255-22N1
16	MCD224-20IO1	*41*	MDD312-12N1
17	MCD224-22IO1	*42*	MDD312-14N1
18	MCD225-12IO1	*43*	MDD312-16N1
19	MCD225-14IO1	*44*	MDD312-18N1
20	MCD225-16IO1	*45*	MDD312-20N1
21	MCD225-18IO1	*46*	MDD312-22N1
22	MCD255-12IO1	*47*	MDD312-22N1-PCM
23	MCD255-14IO1	*48*	MDMA380P1600KC
24	MCD255-16IO1	*49*	MDNA380P2200KC
25	MCD255-18IO1		

NOTE: MCO, MDO and MCMA650 type modules are not part of this PCN. Another PCN file will be edited in a second step when associated products family qualification will be completed.

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.