

Product Change Notification (PCN)



N° LFPCN230313

Date: March 13th, 2023

Subject: *PCN for Y2 Power Modules Inhouse Assembly Location Transfer
MCC310/MCD310/MDD310 types (Refer to the list of affected parts in
page 4)*

Dear Valued Customer,

After the successful relocation of our TO-240, Y4 and Y1 product families in 2020, 2021 and 2022, Littelfuse would like to notify you about the transfer of the backend manufacturing of our MCC310/MCD310/MDD310 Y2 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,



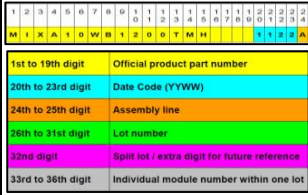
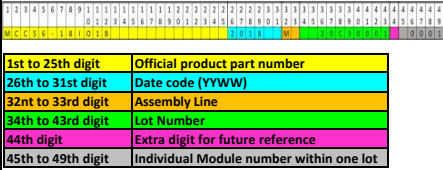


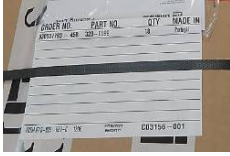

Mirko Vogelmann
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| Contact Information: | Contact your local Littelfuse Sales Partner or Mirko Vogelmann. |
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| SUBJECT OF CHANGE: | Y2 Bipolar Power Modules – MCC310/MCD310/MDD310 types Inhouse Backend 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, Philippines |
| <ul style="list-style-type: none"> Marking (on parts) | | |
| <ul style="list-style-type: none"> Company Logo | IXYS Logo  | Littelfuse IXYS Logo  |
| <ul style="list-style-type: none"> UL Logo | YES - NO CHANGE | |
| <ul style="list-style-type: none"> Electrical Draw. + pin out | YES - NO CHANGE | |
| <ul style="list-style-type: none"> Date code + Site Assy code | YYWWG | YYWWM |
| <ul style="list-style-type: none"> Catalog Part Number | YES - NO CHANGE | |
| <ul style="list-style-type: none"> 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 |
| <ul style="list-style-type: none"> 2D Matrix | 36 characters  | 49 characters  |
| <ul style="list-style-type: none"> Labelling (on packing) | | |
| <ul style="list-style-type: none"> Inner Box |  |  |
| <ul style="list-style-type: none"> 2D Sequence | Product Code - Type - Date Code - Lot No. - Qty - Label | Type – Date Code – Lot No. – Qty – Label |
| <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 MCC310-16IO1 structurally representative to the whole Y2 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 |
|--------------|----------|----------------------------------|---------------------------|--------------|--------|---------|--------|
| MCC310-16IO1 | | | | | | | |
| 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 | ITSM | Surge Current | Datasheet | | 1 | 3 | Passed |

- For reason of production line closure, the Y2 package production related equipment and tooling have been transferred to the new production site.
- Product components and materials are unchanged.
- The production set-up has been supported closely by product and process responsible engineers of the original production line.
- Transferred production line was released after verification that inline process requirements are met.
- T/C and P/C tests will be done in parallel to the production ramp and were not considered gating for start of product shipments.

TIME SCHEDULE:

- Parts availability: *Starting from the week of March 13th, 2023 (Week 11/2023)*
- Production ramp-up *Starting from the week of March 13th, 2023 (Week 11/2023)*



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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 March 17th

LIST OF AFFECTED Y2 BIPOLAR MODULES

| | |
|----|--------------|
| 1 | MCC310-08IO1 |
| 2 | MCC310-12IO1 |
| 3 | MCC310-14IO1 |
| 4 | MCC310-16IO1 |
| 5 | MCC310-18IO1 |
| 6 | MCD310-08IO1 |
| 7 | MCD310-12IO1 |
| 8 | MCD310-14IO1 |
| 9 | MCD310-16IO1 |
| 10 | MCD310-18IO1 |
| 11 | MCD310-22IO1 |
| 12 | MDD310-12N1 |
| 13 | MDD310-14N1 |
| 14 | MDD310-16N1 |
| 15 | MDD310-18N1 |
| 16 | MDD310-20N1 |
| 17 | MDD310-22N1 |

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.