

PROCESS CHANGE NOTIFICATION

Silicon Process Change for AOTF190A60L and
AOTF190A60L_001

PCN #

CN-00393A

Dear Valued Customer,

This letter and attached Product Change Notification (PCN) are to inform you of changes to a product that you have purchased within the last two years.

As part of our continuous improvement program, we are going to change the process of source metal contact formation in our fab. And there will be very minor change to the gate pad size as well. The form, fit, function, reliability and product quality will not be affected in any way with this change.

Please acknowledge receipt of this PCN within 30 days by signing in at <http://www.aosmd.com/quality/pcn> or sending the enclosed Acknowledgement Form to your local AOS Sales Representative.

Lack of acknowledgement of the PCN within 30 days constitutes acceptance of the change.

If you have any questions regarding this change notice, please contact your local AOS Sales Representative.

<http://www.aosmd.com/contact>

Sincerely,

CK OH

Vice President of Quality

Alpha and Omega Semiconductor

Process Change Notification

| PRODUCT CATEGORY MOSFET | PRODUCT(S) AFFECTED AOTF190A60L and AOTF190A60L_001 | | | | | | | | | | | |
|--|---|---|--------|--|------|----|----------|----------------|----------------|---------------|--------------|--------------|
| TYPE OF CHANGE Wafer processing | | | | | | | | | | | | |
| DESCRIPTION OF CHANGE a) To upgrade and add the source contact metal filling from Ti/TiN + Al to Ti/TiN + Tungsten + Al b) Subtle change in die layout | | | | | | | | | | | | |
| REASON FOR CHANGE a) To improve the wire bonding process window for better yield. b) To optimize the R _{ds(on)} performance by fine-tuning gate pad size. Details see comparison table below | | | | | | | | | | | | |
| <table border="1" style="margin: auto; border-collapse: collapse;"> <thead> <tr> <th style="width: 20%;"></th> <th style="width: 40%;">From</th> <th style="width: 40%;">To</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">die size</td> <td style="text-align: center;">4310x3410 (um)</td> <td style="text-align: center;">4310x3410 (um)</td> </tr> <tr> <td style="text-align: center;">Gate pad size</td> <td style="text-align: center;">508x336 (um)</td> <td style="text-align: center;">480x320 (um)</td> </tr> </tbody> </table> | | | | | From | To | die size | 4310x3410 (um) | 4310x3410 (um) | Gate pad size | 508x336 (um) | 480x320 (um) |
| | From | To | | | | | | | | | | |
| die size | 4310x3410 (um) | 4310x3410 (um) | | | | | | | | | | |
| Gate pad size | 508x336 (um) | 480x320 (um) | | | | | | | | | | |
| SAMPLE AVAILABILITY Estimated to be ready by the end of Feb 2018. (To obtain samples or production devices, please contact your AOS Sales Representative). | | FIRST SHIP DATE Estimated to be from May 31, 2018, or earlier upon customer approval. | | | | | | | | | | |
| METHOD OF IDENTIFICATION Estimated to start from date code 18N. An accurate cut-in date code will be provided when the customer approval is received. | | | | | | | | | | | | |
| IMPACT OF CHANGE Form: None Fit: None Function: None Reliability: None Environment: None | | | | | | | | | | | | |
| QUALIFICATION / RELIABILITY DATA: | | | | | | | | | | | | |
| Reliability test item | Test Condition | Sample size | Result | | | | | | | | | |
| HTGB | T=150°C, V _{gs} =100%V _{gsmax} 1000hrs 168rs | 77x3 pcs(*) 77pcs | Pass | | | | | | | | | |
| HTRB | T=150°C, V _{ds} =100%V _{dsmax} 1000hrs 168hrs | 77x3 pcs(*) 77pcs | Pass | | | | | | | | | |
| (*) Qualification data derived from generic process family. | | | | | | | | | | | | |

PCN RESPONSE:

Please acknowledge receipt of this PCN within 30 days of delivery

Lack of acknowledgement of the PCN within 30 days constitutes acceptance of the change.

AOS CONTACTS:

Please contact your local AOS Sales Representative
<http://www.aosmd.com/contact/>

Acknowledgement of Process Change Notification

(Filled by the customer)

Confirming the Receipt of the PCN

PCN #:

Receiving date (YY/MM/DD):

Receiver:

Department / Title of the receiver:

Signature / Stamp:

Customer Request

Sample request

Quantity:

Requirement of qualification data:

Approval of the Change

Approve

Disapprove

Reason of disapproval:

Approver:

Department / Title of the approver:

Signature / stamp:

QRU-00022-02(d)

Appendix: Affected Product List

| Part number | Estimated sample available date | Estimated completion date of qualification | Remark |
|--------------------|--|---|---------------|
| AOTF190A60L | Available | Completed | |
| AOTF190A60L_001 | Available | Completed | |