Doc No.: CN-00419 Rev.: A Release Date: 2019-07-17

| TITLE: Product/Process Change Notice -Additional Assembly & Test Facility For DFN5x6 Clip Package (Phase I) | | | | | |
|---|-----------------|--------|--|--|--|
| RELEASE DATE: 2019-07-17 | | | OWNER DEPARTMENT: Product & Test | | |
| REVISION HISTORY | | | | | |
| | | | (The original approval sheet is kept in DCC) | | |
| REVISION | RELEASE DATE | AUTHOR | DESCRIPTION OF CHANGES | | |
| A | 2019-07-17 | Yi Liu | original | | |
| | | | | | |
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PROCESS CHANGE NOTIFICATION

| Additional Assembly & Test Facility For DFN5x6 Clip Package (Phase I) | PCN# | CN-00419A |
|--|---|--|
| | | |
| Dear Valued Customer, | | |
| This Product Change Notification (PCN) contains a | advance inform | nation about changes we are planning to make to the |
| products that you have purchased within the last two | years. | |
| To increase manufacturing capacity, AOS is qualify Assembly & Test Facility for DFN5x6 Clip package DFN/QFN package since 2005. The qualification an be divided into several phases. The involved produc quality and reliability of our products will not be aff | e. Carsem has lad manufacturi ets of phase I a | been AOS assembly and test subcontractor for other ng release of DFN5x6 Clip package in Carsem can re listed in the appendix. The form, fit, function, |
| Please acknowledge receipt of this PCN a | as well as | requests within 30 days by signing in at |
| http://www.aosmd.com/quality/pcn or sending the | e enclosed A | cknowledgement Form to your local AOS Sales |
| Representative. | | |
| Lack of acknowledgement of the PCN within 30 day | ys constitutes a | acceptance of the change. |
| If you have any questions regarding this change noti | ice, please con | tact your local AOS Sales Representative. |
| http://www.aosmd.com/contact | | |
| Sincerely, | | |
| СК ОН | | |
| Vice President of Quality | | |
| Alpha and Omega Semiconductor | | |

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Process Change Notification

PRODUCT CATEGORY PRODUCT(S) AFFECTED

MOSFET

Please refer the affected part list at the end of this PCN.

* This PCN extends to all new related products that may be released after this PCN.

TYPE OF CHANGE

Additional Assembly and Test Facility

DESCRIPTION OF CHANGE

To release Carsem Semiconductor (Suzhou) Co., Ltd. as an additional Assembly & Test Facility.

REASON FOR CHANGE

To increase manufacturing capacity.

SAMPLE AVAILIBILITY

See appendix

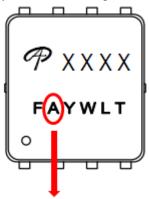
(To obtain samples or production devices, please contact your AOS Sales Representative).

FIRST SHIP DATE

Estimated to be from Aug.15, 2019, or earlier upon customer approval.

METHOD OF IDENTIFICATION

By assembly location code on product marking.



Assembly location code

P -- Carsem Semiconductor (Suzhou) Co., Ltd.

IMPACT OF CHANGE

Form: None:
Fit: None
Function: None
Reliability: None
Environment: None

QUALIFICATION / RELIABILITY DATA:

Reliability Qualification for DFN5x6 Clip package:

| Reliability test | | | | |
|---------------------|--|------------|-------------|----------|
| Test Item Condition | | Time Point | Sample Size | Due Date |

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| HTGB | T=150°C Vgs=100%Vgsmax | 1000 hours | 77*3 | 08/12/2019 |
|----------------------------|---|---------------------------|------|------------|
| HTRB | T=150°C Vds=80%Vdsmax | 1000 hours 77*3 08/12/201 | | 08/12/2019 |
| Solder reflow precondition | MSL soak + 3cycle reflow@ 260°C | - | 77*9 | 07/25/2019 |
| TC | -65(+0/-10)°C to +150(+15/-0)°C air to air; 30mins/cycle (preferred) | 500 cycles | 77*3 | 08/12/2019 |
| HAST | 130(±2)°C,85(±5)%RH, 33.3psia, Vds=80%Vdsmax before arcing (typically ≤42V) | 96hours | 77*3 | 07/31/2019 |
| PCT | 121(±2)°C, 29.7psia, RH=100% | 96hours | 77*3 | 07/31/2019 |

Note: the qualification is base on generic product family data.

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/

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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)



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Appendix: Affected Product List

| Part number | Estimated sample available date | Estimated completion date of qualification | Remark |
|-------------|-----------------------------------|--|--------|
| AO6022N03 | Contact Sales for sample schedule | 8/12/2019 | |
| AO6030N03 | Contact Sales for sample schedule | 8/12/2019 | |
| AON6104 | Contact Sales for sample schedule | 8/12/2019 | |
| AON6104FD | Contact Sales for sample schedule | 8/12/2019 | |
| AON6104FH | Contact Sales for sample schedule | 8/12/2019 | |
| AON6234 | Contact Sales for sample schedule | 8/12/2019 | |
| AON6334FD | Contact Sales for sample schedule | 8/12/2019 | |
| AON6334FH | Contact Sales for sample schedule | 8/12/2019 | |
| AON6354 | Contact Sales for sample schedule | 8/12/2019 | |
| AON6354L | Contact Sales for sample schedule | 8/12/2019 | |
| AON6354_001 | Contact Sales for sample schedule | 8/12/2019 | |
| AON6360 | Contact Sales for sample schedule | 8/12/2019 | |
| AON6360D | Contact Sales for sample schedule | 8/12/2019 | |
| AON6360P | Contact Sales for sample schedule | 8/12/2019 | |
| AON6384 | Contact Sales for sample schedule | 8/12/2019 | |
| AON6406 | Contact Sales for sample schedule | 8/12/2019 | |
| AON6407 | Contact Sales for sample schedule | 8/12/2019 | |
| AON6407_001 | Contact Sales for sample schedule | 8/12/2019 | |
| AON6502 | Contact Sales for sample schedule | 8/12/2019 | |



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| AON6504_002 | Contact Sales for sample schedule | 8/12/2019 | |
|---------------|-----------------------------------|-----------|--|
| AON6512 | Contact Sales for sample schedule | 8/12/2019 | |
| AON6512_002 | Contact Sales for sample schedule | 8/12/2019 | |
| AON6548 | Contact Sales for sample schedule | 8/12/2019 | |
| AON6592 | Contact Sales for sample schedule | 8/12/2019 | |
| AON6704L_002 | Contact Sales for sample schedule | 8/12/2019 | |
| AONS36314 | Contact Sales for sample schedule | 8/12/2019 | |
| AONS36323 | Contact Sales for sample schedule | 8/12/2019 | |
| AONS36344 | Contact Sales for sample schedule | 8/12/2019 | |
| AONS36344FD | Contact Sales for sample schedule | 8/12/2019 | |
| AONS36344FH | Contact Sales for sample schedule | 8/12/2019 | |
| AONS36344FV | Contact Sales for sample schedule | 8/12/2019 | |
| AONS36356 | Contact Sales for sample schedule | 8/12/2019 | |
| AONS36356_001 | Contact Sales for sample schedule | 8/12/2019 | |