

TITLE: Product/Process Change Notice -Molding Compounds Change for Multiple Products in TO220(F) & TO262F package (Phase I)
RELEASE DATE: 2020-07-08
OWNER DEPARTMENT: Product & Test
REVISION HISTORY

(The original approval sheet is kept in DCC)

REVISION	RELEASE DATE	AUTHOR	DESCRIPTION OF CHANGES
A	2020-07-08	Yuye Cao	original

PROCESS CHANGE NOTIFICATION

**Molding Compounds Change for Multiple
Products in TO220(F) & TO262F package
(Phase I)**

PCN #

CN-00433A

Dear Valued Customer,

This Product Change Notification (PCN) contains advance information about changes we are planning to make to products that you have purchased within the last two years.

Due to the discontinuation of the supply of molding compounds from Samsung SDI Co., Ltd, Alpha & Omega Semiconductor has qualified new molding compounds from Panasonic Industrial Devices Materials (Shanghai) Co., Ltd. and KCC Corporation for TO220, TO220F & TO262F package to avoid supplying shortage. The transition of the molding compound is planned in several phases. The affected products in phase I are listed in the appendix. The form, fit, function, quality and reliability of our products 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/IGBT	PRODUCT(S) AFFECTED Please refer the affected part list at the end of this PCN. * This PCN extends to all related products that may be released after this PCN.																		
TYPE OF CHANGE Molding compound change																			
DESCRIPTION OF CHANGE Change the molding compound supplier from Samsung SDI to Panasonic and KCC. For details, please contact your local AOS sales representatives.																			
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">Original</th> <th colspan="2">New</th> </tr> <tr> <th>Supplier</th> <th>Type</th> <th>Supplier</th> <th>Type</th> </tr> </thead> <tbody> <tr> <td rowspan="2" style="text-align: center;">Samsung SDI</td> <td style="text-align: center;">Pb Free Type</td> <td style="text-align: center;">Panasonic</td> <td rowspan="2" style="text-align: center;">Halogen Free type (Green compound)</td> </tr> <tr> <td style="text-align: center;">Halogen Free type (Green compound)</td> <td style="text-align: center;">KCC</td> </tr> </tbody> </table>		Original		New		Supplier	Type	Supplier	Type	Samsung SDI	Pb Free Type	Panasonic	Halogen Free type (Green compound)	Halogen Free type (Green compound)	KCC				
Original		New																	
Supplier	Type	Supplier	Type																
Samsung SDI	Pb Free Type	Panasonic	Halogen Free type (Green compound)																
	Halogen Free type (Green compound)	KCC																	
REASON FOR CHANGE Product Discontinuance from Samsung SDI, avoid supplying shortage																			
SAMPLE AVAILABILITY See appendix (To obtain samples or production devices, please contact your AOS Sales Representative).	FIRST SHIP DATE Estimated to be from Oct, 20 th , 2020, or earlier upon customer approval.																		
METHOD OF IDENTIFICATION Estimated to start from Date Code: '202'.																			
IMPACT OF CHANGE Form: None Fit: None Function: None Reliability: None Environment: None																			
QUALIFICATION / RELIABILITY DATA: Reliability Qualification :																			
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4">Reliability test</th> </tr> <tr> <th>Test Item</th> <th>Condition</th> <th>Time Point</th> <th>Sample Size</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">HTGB</td> <td style="text-align: center;">T=150°C Vgs=100%Vgsmax</td> <td style="text-align: center;">1000 hours</td> <td style="text-align: center;">77*3</td> </tr> <tr> <td style="text-align: center;">HTRB</td> <td style="text-align: center;">T=150°C Vds=80%Vdsmax</td> <td style="text-align: center;">1000 hours</td> <td style="text-align: center;">77*3</td> </tr> </tbody> </table>				Reliability test				Test Item	Condition	Time Point	Sample Size	HTGB	T=150°C Vgs=100%Vgsmax	1000 hours	77*3	HTRB	T=150°C Vds=80%Vdsmax	1000 hours	77*3
Reliability test																			
Test Item	Condition	Time Point	Sample Size																
HTGB	T=150°C Vgs=100%Vgsmax	1000 hours	77*3																
HTRB	T=150°C Vds=80%Vdsmax	1000 hours	77*3																

TC	-65(+0/-10)°C to +150(+15/-0)°C air to air; 30mins/cycle (preferred)	1000 cycles	77*3
HAST	130(±2)°C, 85(±5)%RH, 33.3psia, Vds=80%Vdsmax before arcing (typically ≤42V)	96hours	77*3
PCT	121(±2)°C, 29.7psia, RH=100%	96hours	77*3

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

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

Appendix: Affected Product List

Part number	Estimated sample available date	Estimated completion date of qualification	Remark
AOTF10B60D	Contact Sales	Complete	
AOTF10B60D2	Contact Sales	Complete	
AOTF10B65M1	Contact Sales	Complete	
AOTF10B65M1_001	Contact Sales	Complete	
AOTF10B65M1_002	Contact Sales	Complete	
AOTF10B65M2	Contact Sales	Complete	
AOTF10B65MQ2	Contact Sales	Complete	
AOTF10N50FD	Contact Sales	Complete	
AOTF10N60	Contact Sales	Complete	
AOTF10N60CL	Contact Sales	Complete	
AOTF10N60L	Contact Sales	Complete	
AOTF10N60_001	Contact Sales	Complete	
AOTF10N60_002	Contact Sales	Complete	
AOTF10N60_004	Contact Sales	Complete	
AOTF10N62	Contact Sales	Complete	
AOTF10N65	Contact Sales	Complete	
AOTF10N65L	Contact Sales	Complete	
AOTF10N65_001	Contact Sales	Complete	
AOTF11N60	Contact Sales	Complete	
AOTF11N60L	Contact Sales	Complete	
AOTF11N62L	Contact Sales	Complete	
AOTF11S60L	Contact Sales	Complete	
AOTF11S60L_001	Contact Sales	Complete	
AOTF11S65	Contact Sales	Complete	
AOTF11S65L	Contact Sales	Complete	
AOTF12N30	Contact Sales	Complete	
AOTF12N50	Contact Sales	Complete	
AOTF12N50L	Contact Sales	Complete	
AOTF12N50L_001	Contact Sales	Complete	

AOTF12N50_003	Contact Sales	Complete	
AOTF12N50_004	Contact Sales	Complete	
AOTF12N50_006	Contact Sales	Complete	
AOTF12N50_008	Contact Sales	Complete	
AOTF12N50_009	Contact Sales	Complete	
AOTF12N60	Contact Sales	Complete	
AOTF12N60L	Contact Sales	Complete	
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AOTF12N65	Contact Sales	Complete	
AOTF12N65L	Contact Sales	Complete	
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AOTF12N65_003	Contact Sales	Complete	
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AOTF15S65L	Contact Sales	Complete	
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AOTF16N50L	Contact Sales	Complete	
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AOTF18N65L	Contact Sales	Complete	
AOTF20B65LN2	Contact Sales	Complete	
AOTF20B65M1	Contact Sales	Complete	
AOTF20B65M2	Contact Sales	Complete	
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AOTF2142L	Contact Sales	Complete	
AOTF2144L	Contact Sales	Complete	
AOTF2146L	Contact Sales	Complete	
AOTF22N50	Contact Sales	Complete	
AOTF22N50L	Contact Sales	Complete	
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AOTF4N60	Contact Sales	Complete	
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AOTF5B65M1	Contact Sales	Complete	
AOTF5B65M2	Contact Sales	Complete	

AOTF5N50	Contact Sales	Complete	
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AOTF66466L	Contact Sales	Complete	
AOTF66920L	Contact Sales	Complete	
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AOTF7N60FD_001	Contact Sales	Complete	
AOTF7N60L	Contact Sales	Complete	
AOTF7N60L_002	Contact Sales	Complete	
AOTF7N60L_003	Contact Sales	Complete	
AOTF7N60_001	Contact Sales	Complete	
AOTF7N60_003	Contact Sales	Complete	
AOTF7N60_DELT A	Contact Sales	Complete	
AOTF7N65	Contact Sales	Complete	
AOTF7N65L	Contact Sales	Complete	
AOTF7N65L_001	Contact Sales	Complete	
AOTF7N65L_003	Contact Sales	Complete	
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AOTF7S65L	Contact Sales	Complete	
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AOTF8N50L_004	Contact Sales	Complete	
AOTF8N50_001	Contact Sales	Complete	
AOTF8N50_005	Contact Sales	Complete	
AOTF8N65	Contact Sales	Complete	
AOTF8N65L	Contact Sales	Complete	

AOTF8N65L_001	Contact Sales	Complete	
AOTF8N65L_005	Contact Sales	Complete	
AOTF8N65_003	Contact Sales	Complete	
AOTF8N65_004	Contact Sales	Complete	
AOTF8N65_006	Contact Sales	Complete	
AOTF9N50	Contact Sales	Complete	
AOTF9N50L	Contact Sales	Complete	
AOTF9N50L_001	Contact Sales	Complete	
AOWF10N60	Contact Sales	Complete	
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AOWF12N50	Contact Sales	Complete	
AOWF12N60	Contact Sales	Complete	
AOWF12N65	Contact Sales	Complete	
AOWF14N50	Contact Sales	Complete	
AOWF15S60	Contact Sales	Complete	
AOWF15S65	Contact Sales	Complete	
AOWF20S60	Contact Sales	Complete	
AOWF25S65	Contact Sales	Complete	
AOWF4N60	Contact Sales	Complete	
AOWF4S60	Contact Sales	Complete	
AOWF7S60	Contact Sales	Complete	
AOWF7S65	Contact Sales	Complete	
AOWF8N50	Contact Sales	Complete	