



FINAL PRODUCT/PROCESS CHANGE NOTIFICATION # 16761Generic Copy

Issue Date: 10-Nov-2011

TITLE: EPI process service at IQE (Cardiff, UK) as buffer capacity, supporting production volume ramp-up required to meet increased demand.

INITIAL SHIP DATE: N/A

AFFECTED CHANGE CATEGORY(S): Wafer fab (capacity increase)

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:

Contact your local ON Semiconductor Sales Office or Veronique Hooft
<Veronique.Hooft@onsemi.com>

SAMPLES: N/A: EPI equipment and process are identical.

ADDITIONAL QUALIFICATION DATA: Available

Contact your local ON Semiconductor Sales Office or Veronique Hooft
<Veronique.Hooft@onsemi.com>

NOTIFICATION TYPE:

Final Product/Process Change Notification (FPCN)

DESCRIPTION AND PURPOSE:

This Final PCN relates to EPI process service for I2T process at IQE, (Cardiff, UK).

This EPI process service has identical EPI equipment, enabling exactly same EPI process. EPI service is enabling additional EPI process buffer capacity until additional EPI equipment are installed and qualified in Oudenaarde facility. EPI service will only be used as flexible capacity buffer for I2T process.

Process change was initially planned for limited period. However due to the continued high market demand the use of this EPI buffer capacity has to extend in time and will be continued to be used as buffer when required.

RELIABILITY DATA SUMMARY: N/A (no reliability impact)

ELECTRICAL CHARACTERISTIC SUMMARY: N/A (Electrical Performance will continue to meet specifications)



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List of affected Customer Specific Parts:

Conti Part Number	ONSEMI Sellable Code	Internal Product
A2C00410100	NCV70522MN003R2G	0C522
A2C00034727	AMIS30660CANH2RG	0CANH
A2C00033926	AMIS41682CANM1RG	0CANM
A2C00046753	AMIS41683CANN1RG	0CANN
A2C40002735	0HSBA-004-XDS	0HSBA
A2C00035237	AMIS30600LINI1RG	0LINI
A2C00008332	0MAFA-001-XDF	0MAFA
A2C00038530	0SCIA-004-XDF	0SCIA
A2C00053712	0SHIA-002-XTP	0SHIA
A2C00051037	0SOCA-001-XTP	0SOCA
A2C00039697	AMIS42665TJAA1RG	0TJAA

Background information:

- **Goal of change:** Qualification of IQE as service for EPI deposition process, in order to support increased market demand.
- **What is changed:** Qualification of EPI deposition for I2T process at IQE:
 - EPI deposition equipment is identical to EPI equipment (ASM Single Wafer Reactor) at Oudenaarde site. This enables to use exactly same process in order to achieve same process characteristics.
- **Implementation of change:** IQE service will be used to buffer required EPI process capacity, in order to support business demand.
- **Qualification plan:** qualification has been successfully completed, including following topics:
 - Metrology matching: OK
 - EPI equipment matching: OK
 - EPI process installation (standard ON Semi process): process characteristic matching: OK
 - Electrical matching (Etest and sort): OK
 - PPAP documentation: OK
 - VDA audit: OK

Control plan is identical to EPI process at Oudenaarde waferFAB: see extract control plan below, showing EPI process control + additional ship instructions + extra inspection and cleaning.



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		<input type="checkbox"/> Prototype (Responsibility Code A, C, E)		<input type="checkbox"/> Pre-launch (Industrialization, Limited Transfer)		<input checked="" type="checkbox"/> Production (Full Transfer)		Key contact/Phone (if Req'd.)			Date (orig) 25/08/2008		
		Customer Part number ****_***						Core Team Technology TEP Core Team			Customer Engineering Approval/Date(if Req'd.)		
		Part name/Description 0****_*** (****_***-C071-***_****_***)						Supplier/Plant Approval/Date Technology TEP Approval Date			Customer Quality Approval/Date(if Req'd.)		
		Supplier/Plant On Semiconductor/Oudenaarde			Supplier Code NA			Other Approval/Date (if Req'd.)			Customer/Plant		
		Part/ Process	Process name/ Operation	Process Equipment	Characteristics		Special Char.	Methods					
		number	Description		Spec.	Product /			Process		Measurement	Sample	
					No.	Process	Class.		Specification/Target		Equipment	Size	Freq.
									LSL	T	USL		
		4919	SPIN_ETS	SEZ	FS_4919								
		7659	RCA_CLEAN	WETLUN	FS_7659								
2928 INSP_EPI				SURFSCAN	FS_2907	DEFDENS5/1			EDC -SQC list		KLA/TENCOR	5#/1PL	Per lot/run
8902 PACK_SHIP													SPC CHART
		7702	EPI_B2H6	4PP,BIORAD,EPI	FS_7702	DIKTE MEAN	*		EDC -SQC list		THICKN MEAS	1#	Per lot/run
						DIKTE RANGE			EDC -SQC list		THICKN MEAS	1#	Per lot/run
						DIKTE1/9			EDC -SQC list		THICKN MEAS	1#/9PL	Per lot/run
						RSH MEAN			EDC -SQC list		4 POINT PROBE	1	Per lot/run
						RSH RANGE			EDC -SQC list		4 POINT PROBE	1	Per lot/run
						RSH1/9			EDC -SQC list		4 POINT PROBE	1#/9PL	Per lot/run
8903 UNPACK_REC													
3343 SPRAY				SOLVENTCLEAN	FS_3303								
2929 INSP_EPI				SURFSCAN	FS_2907	DEFDENS5/1			EDC -SQC list		KLA/TENCOR	5#/1PL	Per lot/run
		7611	RCA_CLEAN	WETLUN	FS_7611								
		7001	INIT_OX	ELLIPSOMETER,OXID	FS_7001	DIKTEP1/2			EDC -SQC list		THICKN MEAS	1#/2PL	Per lot/run
													SPC CHART

Extract control plan, showing EPI process control + additional ship instructions + extra inspection and cleaning.