



FINAL PRODUCT/PROCESS CHANGE NOTIFICATION #16582Generic Copy

Issue Date: 06-Dec-2011**TITLE:** Final Notification for FACT Integrated Circuits Die Manufacturing Facility from ON Semiconductor Aizu (Japan) to Tower Semiconductor (Israel).**PROPOSED FIRST SHIP DATE:** 06-Mar-2012**AFFECTED CHANGE CATEGORY(S):** ON Semiconductor Fab Site**FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:**Contact your local ON Semiconductor Sales Office or Won Kang <won.kang@onsemi.com>**SAMPLES:** Contact your local ON Semiconductor Sales Office**ADDITIONAL RELIABILITY DATA: Available 1Q 2012**Contact your local ON Semiconductor Sales Office or Lakshmi Kari <lakshmi.kari@onsemi.com>**NOTIFICATION TYPE:**

Final Product/Process Change Notification (FPCN)

Final change notification sent to customers. FPCNs are issued at least 90 days prior to implementation of the change.

ON Semiconductor will consider this change approved unless specific conditions of acceptance are provided in writing within 30 days of receipt of this notice. To do so, contact <quality@onsemi.com>.**DESCRIPTION AND PURPOSE:**

Description of the change:

The transfer and qualification of the FACT Logic CMOS process from the ON Semiconductor Aizu facility (Japan) to Tower Semiconductor Ltd. (Israel) for SOIC packages only.

Tower Semiconductor Ltd. is certified according to the ISO/TS16949 standard. The FACT product family is being transferred to Tower Semiconductor and will achieve the same electrical and reliability performances as the Aizu wafer fab. The transfer includes a process change from 1.2 um (Aizu) to 0.6 um (Israel) CMOS process. The 0.6 um CMOS process in Tower fab has previously been qualified by ON Semiconductor for HSL, LCX, VHC family of products. Devices assembled in SOIC packages will use copper wire bonds. The qualification results summarized herein are intended to be automotive standard, Grade 3 compliant.

The integrated circuits design and electrical specifications will remain identical to AIZU devices. A full electrical characterization over the temperature range will be performed for each product to check the device functionality and electrical specifications.

Qualification tests are designed to show that the reliability of transferred devices will continue to meet or exceed ON Semiconductor reliability standards.



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QUALIFICATION RESULT:

Qualification of each device associated with the transfer has the following requirements:
 Three temperature electrical characterization
 ESD testing Human Body Model and Machine Model
 Latch up testing

#	Test	Name	Test Conditions	End Point Req's	Test Results	(rej/ ss)	(rej/ ss)	(rej/ ss)
					Read Point	Lot A	Lot B	Lot C
1	Prep	Sample preparation and initial part testing	Various	---	Initial Electrical	Done	Done	Done
2	HTOL	High Temp Operating Life	125°C for 1008 hours	c = 0, Room & 125C	504 Hrs 1008 Hrs	0/154 0/154	0/80 0/80	0/80 0/80
3	HTSL	High Temp Storage Life	150°C for 1008 hours	c = 0, Room & 125C	504 Hrs 1008 Hrs	0/154 0/154	0/80 0/80	0/80 0/80
4	PC	MSL Preconditioning	3 IR @ 260 deg C	c = 0, Room & 125C		MSL1 260	MSL1 260	MSL1 260
5	HAST-PC	Precond. Highly Accelerated Stress Test	TA= +130C, RH = 85%, PSIG= 18.8, bias	c = 0, Room & 125C	96 hrs	0/154	0/80	0/80
6	TC-PC	Precond. Temp Cycle	-65/+150 C	c = 0, Room & 125C	500 cyc 1000 cyc	0/77 0/77	0/80 0/80	0/80 0/80
7	AC-PC	Precond. Autoclave	TA = 121 C, RH = 100%,PSIG = 15	c = 0, Room & 125C	96 hrs	0/154	0/80	0/80

Qualification vehicles used are MC14051BDR2G, MC14094BDR2G, LM224DR2G, and LM239DR2G for Cu wire bond qualification.

List of Affected General Parts:

MC74AC00DG	MC74AC377DWG	MC74ACT161DR2G
MC74AC00DR2G	MC74AC377DWR2G	MC74ACT163DG
MC74AC02DG	MC74AC4040DG	MC74ACT163DR2G
MC74AC02DR2G	MC74AC4040DR2G	MC74ACT20DG
MC74AC04DG	MC74AC540DWG	MC74ACT20DR2G
MC74AC04DR2G	MC74AC540DWR2G	MC74ACT240DWG
MC74AC05DG	MC74AC541DWG	MC74ACT240DWR2G
MC74AC05DR2G	MC74AC541DWR2G	MC74ACT241DWG
MC74AC08DG	MC74AC573DWG	MC74ACT241DWR2G
MC74AC08DR2G	MC74AC573DWR2G	MC74ACT244DWG
MC74AC10DG	MC74AC574DWG	MC74ACT244DWR2G



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MC74AC10DR2G	MC74AC574DWR2G	MC74ACT245DWG
MC74AC11DG	MC74AC646DWG	MC74ACT245DWR2G
MC74AC11DR2G	MC74AC646DWR2G	MC74ACT253DG
MC74AC125DG	MC74AC652DWR2G	MC74ACT253DR2G
MC74AC125DR2G	MC74AC74DG	MC74ACT257DG
MC74AC132DG	MC74AC74DR2G	MC74ACT257DR2G
MC74AC132DR2G	MC74AC74DR2GH	MC74ACT259DG
MC74AC138DG	MC74AC86DG	MC74ACT259DR2G
MC74AC138DR2G	MC74AC86DR2G	MC74ACT273DWG
MC74AC139DG	MC74ACT00DG	MC74ACT273DWR2G
MC74AC139DR2G	MC74ACT00DR2G	MC74ACT273DWR2GH
MC74AC14DG	MC74ACT02DG	MC74ACT32DG
MC74AC14DR2G	MC74ACT02DR2G	MC74ACT32DR2G
MC74AC157DG	MC74ACT04DG	MC74ACT373DWG
MC74AC157DR2G	MC74ACT04DR2G	MC74ACT373DWR2G
MC74AC161DG	MC74ACT05DG	MC74ACT374DWG
MC74AC161DR2G	MC74ACT05DR2G	MC74ACT374DWR2G
MC74AC163DR2G	MC74ACT08DG	MC74ACT377DWG
MC74AC20DG	MC74ACT08DR2G	MC74ACT377DWR2G
MC74AC20DR2G	MC74ACT08DR2GH	MC74ACT540DWG
MC74AC240DWG	MC74ACT10DR2G	MC74ACT540DWR2G
MC74AC240DWR2G	MC74ACT11DR2G	MC74ACT541DWG
MC74AC244DWG	MC74ACT125DG	MC74ACT541DWR2G
MC74AC244DWR2G	MC74ACT125DR2G	MC74ACT564DWR2G
MC74AC245DWG	MC74ACT125DR2H	MC74ACT573DWG
MC74AC245DWR2G	MC74ACT132DG	MC74ACT573DWR2G
MC74AC253DR2G	MC74ACT132DR2G	MC74ACT574DWG
MC74AC257DR2G	MC74ACT138DG	MC74ACT574DWR2G
MC74AC259DG	MC74ACT138DR2G	MC74ACT640DWG
MC74AC259DR2G	MC74ACT139DG	MC74ACT640DWR2G
MC74AC273DWG	MC74ACT139DR2G	MC74ACT646DWG
MC74AC273DWR2G	MC74ACT14DG	MC74ACT646DWR2G
MC74AC32DG	MC74ACT14DR2G	MC74ACT652DWG
MC74AC32DR2G	MC74ACT153DG	MC74ACT652DWR2G
MC74AC373DWG	MC74ACT153DR2G	MC74ACT74DG
MC74AC373DWR2G	MC74ACT157DG	MC74ACT74DR2G
MC74AC374DWG	MC74ACT157DR2G	MC74ACT86DG
MC74AC374DWR2G	MC74ACT161DG	MC74ACT86DR2G