

**FINAL PRODUCT/PROCESS CHANGE NOTIFICATION #16555**

Generic Copy

Issue Date: 23-Dec-2010

TITLE: Final Notification for Roznov Fab 100mm to 150mm Wafer Conversion for Wafer Sales Devices

PROPOSED FIRST SHIP DATE: 23-Mar-2011

AFFECTED CHANGE CATEGORY(S): wafer size change

FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:

Contact your local ON Semiconductor Sales Office or <patrick.rousset@onsemi.com>

SAMPLES: Contact your local ON Semiconductor Sales Office

ADDITIONAL RELIABILITY DATA: Available

Contact your local ON Semiconductor Sales Office

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:

Conversion of the Roznov CZ4 wafer fab technologies and the associated integrated circuits from the existing 100mm process to 150mm wafer size. The purpose is to increase the wafer fab productivity.

The 150mm wafer process is being created at Roznov in order to get the same electrical and reliability performances as the 100mm process.

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 standards.


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RELIABILITY DATA SUMMARY:					
Device Tested: CS51411EDR8G (EG30)					
Number of Lots Tested: 3					
Test	Conditions	Measure	Interval	Rejects	Sample
High Temp Op Life	Ta = 125°C	room & hot	504hrs.	0	240
			1008hrs.	0	240
Early Life Failure Rate	Ta = 125°C	room & hot	48hrs.	0	3200
Precondition	MSL1 @ 260°C ,			0	250
	3 X IR at 260°C				
Temp Cycle	Ta= -65 to 150C	room & hot	500 Cycle	0	240
Bond Pull Strength	Cond C.		1X	Cpk>1.33	
Bond Shear			1X	Cpk>1.33	
ESD Human Body Model (ESD HBM)		room & hot		2kV	9
ESD Machine Model (ESD MM)		room & hot		200V	9
Latch Up (LU)		room & hot		LU+>100mA	6
				LU->100mA	
Temperature Characterization (ED)		room & hot & cold		Cpk>1.67	90

Device Tested: MC34167D2TR4G (EPI80)					
Number of Lots Tested: 3					
Test	Conditions	Measure	Interval	Rejects	Sample
High Temp Op Life	Ta = 100°C	room & hot	504hrs.	0	240
			1008hrs.	0	240
Early Life Failure Rate	Ta = 100°C	room & hot	48hrs.	0	3200
Precondition	MSL1 @ 245°C ,			0	250
	3 X IR at 245°C				
Temp Cycle	Ta= -65 to 150C	room & hot	500 Cycle	0	240
Bond Pull Strength	Cond C.			1X	Cpk>1.33
Bond Shear				1X	Cpk>1.33
ESD Human Body Model (ESD HBM)		room & hot		2kV	9
ESD Machine Model (ESD MM)		room & hot		200V	9
Latch Up (LU)		room & hot		LU+>100mA	6
				LU->100mA	
Temperature Characterization (ED)		room & hot & cold		Cpk>1.67	90


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Device Tested: NCP1117DT50RKG (EPI85S)					
Number of Lots Tested: 3					
Test	Conditions	Measure	Interval	Rejects	Sample
High Temp Op Life	Ta = 125°C	room & hot	504hrs.	0	240
			1008hrs.	0	240
Early Life Failure Rate	Ta = 125°C	room & hot	48hrs.	0	3200
Precondition	MSL1 @ 260°C ,			0	250
	3 X IR at 260°C				
Temp Cycle	Ta= -65 to 150C	room & hot	500 Cycle	0	240
Bond Pull Strength	Cond C.		1X	Cpk>1.33	
Bond Shear			1X	Cpk>1.33	
ESD Human Body Model (ESD HBM)		room & hot		2kV	9
ESD Machine Model (ESD MM)		room & hot		200V	9
Latch Up (LU)		room & hot		LU+>100mA	6
				LU->100mA	
Temperature Characterization (ED)		room & hot & cold		Cpk>1.67	90

Device Tested: NCV317BTG (EPI44)					
Number of Lots Tested: 3					
Test	Conditions	Measure	Interval	Rejects	Sample
High Temp Op Life	Ta = 125°C	room & hot	504hrs.	0	240
			1008hrs.	0	240
Early Life Failure Rate	Ta = 125°C	room & hot	48hrs.	0	3200
Temp Cycle	Ta= -65 to 150C	room & hot	500 Cycle	0	240
Autoclave	Ta=121C, P = 15PSIG	room	96 hrs.	0	240
	RH = 100%				
High Accelerated Stress test	130°C/85%RH,	room & hot	96hrs.	0	240
	18,8 psi, bias				
Bond Pull Strength	Cond C.		1X	Cpk>1.33	
ESD Human Body Model (ESD HBM)		room & hot		2kV	9
ESD Machine Model (ESD MM)		room & hot		300V	9
ESD Charge Device Model (ESD CDM)		room & hot		2kV	9
Latch Up (LU)		room & hot		LU+>100mA	6
				LU->100mA	
Temperature Characterization (ED)		room & hot & cold		Cpk>1.67	90


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Device Tested: MC33204 (EPI92)					
Number of Lots Tested: 3					
Test	Conditions	Measure	Interval	Rejects	Sample
High Temp Op Life	Ta = 125°C	room & hot	504hrs.	0	240
Precondition	MSL1 @ 260°C, 3 X IR at 260°C			0	250
Temp Cycle	Ta= -65 to 150C	room & hot	500 Cycle	0	240
Early Life Failure Rate	Ta = 125°C	room & hot	48hrs.	In process	3200
Bond Pull Strength	Cond C.		1X	In process	
ESD Human Body Model (ESD HBM)		room & hot		In process	9
ESD Machine Model (ESD MM)		room & hot		In process	9
Latch Up (LU)		room & hot		In process	6
Temperature Characterization (ED)		room & hot & cold		In process	90

CHANGED PART IDENTIFICATION:

Other than the size of the shipped wafers, there will be no change to the appearance of the devices.



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List of affected General Parts:

PART

LMW317	MCW7815AC	MCW7908C
LMW317L	MCW7818AC	MCW7912C
LMW324	MCW7824AC	MCW7915C
LMW358	MCW78L05AC	MCW7918C
LMW385-1.2	MCW78L08AC	MCW7924C
LMW393	MCW78L09AC	MCW79L05AC
LPW2951	MCW78L12AC	MCW79L12AC
MCW1455	MCW78L15AC	MCW79L15AC
MCW1496	MCW78L18AC	MCW79L18AC
MCW33171	MCW78L24AC	MCW79L24AC
MCW33172	MCW78M05C	MCW79M05C
MCW33174	MCW78M06C	MCW79M08C
MCW34071	MCW78M08C	MCW79M12C
MCW34072	MCW78M09C	MCW79M15C
MCW34074	MCW78M12C	NCPW623-4.5
MCW34074A	MCW78M15C	NCV2901CTR
MCW7805AC	MCW78M18C	NCVW1117ST15
MCW7806AC	MCW78M20C	NCVW285-1.2
MCW7808AC	MCW78M24C	NCVW2951
MCW7809AC	MCW7905C	TLW431A
MCW7812AC	MCW7906C	TLW431B