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

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**Issue Date:** 25-Feb-2015

**TITLE:** Roznov Fab 100mm to 150mm Wafer Conversion for Wafer Sales Devices – TCAW0372

**PROPOSED FIRST SHIP DATE:** 02-Jun-2015 or sooner with customer acceptance

**AFFECTED CHANGE CATEGORY(S):** wafer size change

**FOR ANY QUESTIONS CONCERNING THIS NOTIFICATION:**

Contact your local ON Semiconductor Sales Office or <[Shannon.Riggs@onsemi.com](mailto:Shannon.Riggs@onsemi.com)>

**SAMPLES:** Contact your local ON Semiconductor Sales Office

**ADDITIONAL RELIABILITY DATA:** Available

Contact your local ON Semiconductor Sales Office or <[ken.fergus@onsemi.com](mailto:ken.fergus@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](mailto:quality@onsemi.com)>.

**DESCRIPTION AND PURPOSE:**

This update is issued to document an omission on the original FPCN (16555). TCAW0372 is impacted by the referenced change in wafer size. All details of the original PCN remain relevant to this addition to the affected device list and are listed below for reference:

From FPCN 16555 "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."



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<b>RELIABILITY DATA SUMMARY:</b>					
<b>Device Tested:</b> CS51411EDR8G (EG30)					
<b>Number of Lots Tested:</b> 3					
<b>Test</b>	<b>Conditions</b>	<b>Measure</b>	<b>Interval</b>	<b>Rejects</b>	<b>Sample</b>
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 , 3 X IR at 260°C			0	250
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

<b>Device Tested:</b> MC34167D2TR4G (EPI80)					
<b>Number of Lots Tested:</b> 3					
<b>Test</b>	<b>Conditions</b>	<b>Measure</b>	<b>Interval</b>	<b>Rejects</b>	<b>Sample</b>
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 , 3 X IR at 245°C			0	250
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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<b>Device Tested: NCP1117DT50RKG (EPI85S)</b>					
<b>Number of Lots Tested: 3</b>					
<b>Test</b>	<b>Conditions</b>	<b>Measure</b>	<b>Interval</b>	<b>Rejects</b>	<b>Sample</b>
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 , 3 X IR at 260°C			0	250
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

<b>Device Tested: NCV317BTG (EPI44)</b>					
<b>Number of Lots Tested: 3</b>					
<b>Test</b>	<b>Conditions</b>	<b>Measure</b>	<b>Interval</b>	<b>Rejects</b>	<b>Sample</b>
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, 18,8 psi, bias	room & hot	96hrs.	0	240
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



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

<b>Device Tested:</b> MC33204 (EPI92)					
<b>Number of Lots Tested:</b> 3					
<b>Test</b>	<b>Conditions</b>	<b>Measure</b>	<b>Interval</b>	<b>Rejects</b>	<b>Sample</b>
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

**ELECTRICAL CHARACTERISTIC SUMMARY:**

No change. Devices continue to meet all datasheet specifications and requirements.

**CHANGED PART IDENTIFICATION:**

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

**List of affected General Parts:**

TCAW0372