Final Product/Process Change Notification

Document #:FPCN23597ZC
Issue Date:25 Nov 2021

Title of Change:	Conversion of select onsemi, Czech Republic (Roznov) wafer fab technologies from 150mm to 200mm wafer diameter.
Proposed Changed Material First Ship Date:	30 May 2022 or earlier if approved by customer
Current Material Last Order Date:	N/A *Orders received after the Current Material Last Order Date expiration are to be considered as orders for new changed material as described in this PCN. Orders for current (unchanged) material after this date will be per mutual agreement and current material inventory availability*.
Current Material Last Delivery Date:	N/A *The Current Material Last Delivery Date may be subject to change based on build and depletion of the current (unchanged) material inventory*
Product Category:	Active components – Integrated circuits
Contact information:	Contact your local onsemi Sales Office or Jan.Gryzbon@onsemi.com
PCN Samples Contact:	Contact your local onsemi Sales Office to place sample order or <PCN.samples@onsemi.com>. Sample requests are to be submitted no later than 45 days after publication of this change notification. Samples delivery timing will be subject to request date, sample quantity and special customer packing/label requirements.
Sample Availability Date:	20 Dec 2021
PPAP Availability Date:	20 Dec 2021
Additional Reliability Data:	Contact your local onsemi Sales Office or Tomas.Vajter@onsemi.com
Type of Notification:	This is a Final Product/Process Change Notification (FPCN) sent to customers. The change will be implemented at 'Proposed Change Material First Ship Date' in compliance to J-STD-46 or ZVEI, or earlier upon customer approval, or per our signed agreements. onsemi will consider this proposed change and it's conditions acceptable, unless an inquiry is made in writing within 45 days of delivery of this notice. To do so, contact PCN.Support@onsemi.com.

Change Category

Category	Type of Change
Process - Wafer Production	New wafer diameter

Description and Purpose:

The purpose of this FPCN is to announce the conversion of smaller wafer size to larger wafer size at the onsemi, Czech Republic (Roznov) wafer fab to increase fab productivity.

A full electrical characterization over the temperature range has been performed on each product to ensure the device functionality remain unchanged and electrical performance within specification.

Qualification tests are also performed on the transferred devices to ensure the reliability of these devices remain unchanged.

Before Change

Increase wafer fab productivity by converting smaller wafer size to larger wafer size.
Wafer size: **150mm**
Location: onsemi, Czech Republic (Roznov) wafer fab

After Change

Increase wafer fab productivity by converting smaller wafer size to larger wafer size.
Wafer size: **200mm**
Location: onsemi, Czech Republic (Roznov) wafer fab

Reason / Motivation for Change:	Process/Materials Change
Anticipated impact on fit, form, function, reliability, product safety or manufacturability:	The device has been qualified and validated based on the same Product Specification. The device has successfully passed the qualification tests. Potential impacts can be identified, but due to testing performed by onsemi in relation to the PCN, associated risks are verified and excluded. No anticipated impacts.

Sites Affected:

onsemi Sites	**External Foundry/Subcon Sites**
onsemi Roznov, Czech Republic	None

Marking of Parts/ Traceability of Change:	The affected products will be identified with date code

Reliability Data Summary:

QV DEVICE NAME : NCV33074ADR2G
RMS# 69241
PACKAGE: SOIC14

Test	Specification	Condition	Interval	Results
HTOL	JA108	Ta= 125°C, Test @ R, H, C	2016 hrs	0/240
PC	JA112 JA113	SMD only, Test @ 0 & EP		0/231
SAT		Test pre- and post- PC		pass
ELFR	JA018	TA = 125°C for 48 hrs; Test @ R, H	48hrs	0/2400
TC	JA104	Test @ R, H	1000cyc	0/270
BS	AEC-Q100-001	30 bonds from 5units; after TC500/1000cyc		pass
BPS	M883 Method 2011	3gm Pull Force Min; after TC500/1000cyc		pass
ESD HBM	AEC-Q100-002	c = 0, Test @ R, H	2kV	0/3
ESD CDM	AEC-Q100-011	c = 0, Test @ R, H	1kV	0/3
ED	ON Data Sheet	Cpk > 1.67 Test @ R, H, C	Cpk>1.67	Pass (3 wafer lots)
LU	AEC-Q100-004	Test @ EP; Test & Stress @ R, H	LU+>100mA LU->100mA	0/6

NOTE: AEC-1pager is attached.

To view attachments:
1. Download pdf copy of the PCN to your computer
2. Open the downloaded pdf copy of the PCN
3. Click on the paper clip icon available on the menu provided in the left/bottom portion of the screen to reveal the Attachment field
4. Then click on the attached file.

QV DEVICE NAME : NCV317BD2TR4G
RMS# 67729
PACKAGE: D2PAK

Test	Specification	Condition	Interval	Results
HTOL	JA108	Ta= 125°C	2016 hrs	0/240
PC	JA112 JA113	SMD only, Test @ 0 & EP		0/372
SAT		Test pre- and post- PC		pass
ELFR	JA018	TA = 125°C for 48 hrs	48hrs	0/2400
TC	JA104	Test @ R	500cyc	0/276
BS	AEC-Q100-001	Cpk 1.33, 30 bonds from 5units		pass
BPS	M883 Method 2011	3gm Pull Force Min After TC		pass
ESD HBM	AEC-Q100-002	c = 0, Test @ R	2kV	0/3
ESD MM	AEC-Q100-003	c = 0, Test @ R	200V	0/3
ESD CDM	AEC-Q100-011	c = 0, Test @ R	1kV	0/3
ED	ON Data Sheet	Cpk > 1.67 Test @ R, H, C	Cpk>1.67	pass
LU	AEC-Q100-004	Test @ EP; Test & Stress @ R	LU+>100mA LU->100mA	0/6

QV DEVICE NAME : NCV1413BDR2G
RMS# 68977
PACKAGE: SOIC16

Test	Specification	Condition	Interval	Results
HTOL	JA108	Ta= 125°C	2016 hrs	0/240
PC	JA112 JA113	SMD only, Test @ 0 & EP		0/372
SAT		Test pre- and post- PC		pass
ELFR	JA018	TA = 125°C for 48 hrs	48hrs	0/2400
TC	JA104	Test @ R	1000cyc	0/270
BS	AEC-Q100-001	Cpk 1.33, 30 bonds from 5units		pass
BPS	M883 Method 2011	3gm Pull Force Min After TC		pass
ESD HBM	AEC-Q100-002	c = 0, Test @ R	2kV	0/3
ESD CDM	AEC-Q100-011	c = 0, Test @ R	1.5kV	0/3
ED	ON Data Sheet	Cpk > 1.67 Test @ R, H, C	Cpk>1.67	pass
LU	AEC-Q100-004	Test @ EP; Test & Stress @ R	LU+>100mA LU->100mA	0/6

Electrical Characteristics Summary:

Electrical characteristics are not impacted. All Data Sheet specifications remain the same.

List of Affected Parts:

Note: *Only the standard (off the shelf) part numbers are listed in the parts list. Any custom parts affected by this PCN are shown in the customer specific PCN addendum in the PCN email notification, or on the* ***PCN Customized Portal****.*

Current Part Number	New Part Number	Qualification Vehicle
NCV317BTG	NA	NCV317BD2TR4G

NCV1413BDR2G	NA	NCV1413BDR2G
NCV317MBSTT3G	NA	NCV317BD2TR4G
NCV2903DR2G	NA	NCV33074ADR2G
NCV2903DMR2G	NA	NCV33074ADR2G
NCV2901DTBR2G	NA	NCV33074ADR2G
NCV2901DR2G	NA	NCV33074ADR2G