

**PRODUCT / PROCESS CHANGE INFORMATION**

**1. PCI basic data**

<b>1.1 Company</b>		STMicroelectronics International N.V
<b>1.2 PCI No.</b>	MDG/23/13817	
<b>1.3 Title of PCI</b>	BlueNRG-LPS (BlueNRG-332x) seal ring compatibility with WLCSP Package	
<b>1.4 Product Category</b>	BlueNRG-332x	
<b>1.5 Issue date</b>	2023-01-09	

**2. PCI Team**

<b>2.1 Contact supplier</b>	
<b>2.1.1 Name</b>	NEMETH KRISZTINA
<b>2.1.2 Phone</b>	+49 89460062210
<b>2.1.3 Email</b>	krisztina.nemeth@st.com
<b>2.2 Change responsibility</b>	
<b>2.2.1 Product Manager</b>	Ricardo Antonio DE SA EARP
<b>2.1.2 Marketing Manager</b>	Veronique BARLATIER
<b>2.1.3 Quality Manager</b>	Pascal NARCHE

**3. Change**

<b>3.1 Category</b>	<b>3.2 Type of change</b>	<b>3.3 Manufacturing Location</b>
General Product & Design	Die redesign: Mask or mask set change with new die design – seal ring modification (dimension, vertical structure)	TSMC Fab14 DIFF

**4. Description of change**

	<b>Old</b>	<b>New</b>
<b>4.1 Description</b>	Seal ring with square edges at each corner for dice in QFN32 package.	Seal ring with beveled edges at each corner for dice in QFN32 and WLCSP packages.
<b>4.2 Anticipated Impact on form,fit, function, quality, reliability or processability?</b>	Form: Sealring change is not visible, No functional change, No marking change Fit: No change Function: No change	

**5. Reason / motivation for change**

<b>5.1 Motivation</b>	Seal Ring used for QFN32 is not compatible with WLCSP package. Beveled edge seal ring is mechanically more reliable for WLCSP and is compatible with QFN package. Uniformization of the seal ring is mandatory for manufacturing flexibility.
<b>5.2 Customer Benefit</b>	SERVICE IMPROVEMENT

**6. Marking of parts / traceability of change**

<b>6.1 Description</b>	Traceability ensured by ST internal tools
------------------------	---

**7. Timing / schedule**

<b>7.1 Date of qualification results</b>	2023-03-22
<b>7.2 Intended start of delivery</b>	2023-03-31
<b>7.3 Qualification sample available?</b>	Not Applicable

**8. Qualification / Validation**

<b>8.1 Description</b>			
<b>8.2 Qualification report and qualification results</b>	In progress	<b>Issue Date</b>	

**9. Attachments (additional documentations)**

13817 Public product.pdf 13817 PCI13817_Additional information.pdf
---

10. Affected parts		
10. 1 Current		10.2 New (if applicable)
10.1.1 Customer Part No	10.1.2 Supplier Part No	10.1.2 Supplier Part No
	BLUENRG-332AT	

## **IMPORTANT NOTICE – PLEASE READ CAREFULLY**

Subject to any contractual arrangement in force with you or to any industry standard implemented by us, STMicroelectronics NV and its subsidiaries (“ST”) reserve the right to make changes, corrections, enhancements, modifications, and improvements to ST products and/or to this document at any time without notice. Purchasers should obtain the latest relevant information on ST products before placing orders. ST products are sold pursuant to ST’s terms and conditions of sale in place at the time of order acknowledgement.

Purchasers are solely responsible for the choice, selection, and use of ST products and ST assumes no liability for application assistance or the design of Purchasers’ products.

No license, express or implied, to any intellectual property right is granted by ST herein.

Resale of ST products with provisions different from the information set forth herein shall void any warranty granted by ST for such product.

ST and the ST logo are trademarks of ST. All other product or service names are the property of their respective owners.

Information in this document supersedes and replaces information previously supplied in any prior versions of this document.

© 2022 STMicroelectronics – All rights reserved