Initial Product/Process Change Notification

Document #:IPCN24140Z2
Issue Date:15 Oct 2023

Title of Change:	Update to IPCN24140Z1 "Addition of onsemi Seremban as an assembly site for iBGA packaging" with qualification date for AR0220 family of products.
Proposed Changed Material First Ship Date:	15 May 2024 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 Mike.Webster@onsemi.com
PCN Samples Contact:	Contact your local onsemi Sales Office to place sample order. 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.
Additional Reliability Data:	Contact your local onsemi Sales Office or Amy.Wu@onsemi.com
Type of Notification:	This is an Initial Product/Process Change Notification (IPCN) sent to customers. An IPCN is an advance notification about an upcoming change and contains general information regarding the change details and devices affected. It also contains the preliminary reliability qualification plan.The completed qualification and characterization data will be included in the Final Product/Process Change Notification (FPCN). This IPCN notification will be followed by a Final Product/Process Change Notification (FPCN) at least 6 months prior to implementation of the change. In case of questions, contact <PCN.Support@onsemi.com>.

Change Category

Category	**Type of Change**
Process - Assembly	Move of all or part of assembly to a different location/site/subcontractor.

Description and Purpose:

This is an update to IPCN24140Z1 (“Addition of onsemi Seremban as an assembly site for iBGA packaging”) with qualification date for AR0220 family of products. The new qualification date for AR0220 family is November 15th 2023.

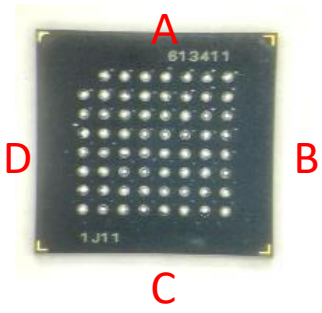
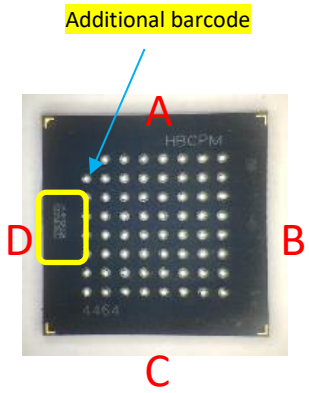
In order to provide higher and flexible capacity to meet growing demand, onsemi is proposing to add an additional site for iBGA assembly at its Seremban internal manufacturing facility. Key manufacturing site changes are shown in the table below. Units assembled in Seremban will be tested at KYEC. There is no change to the final test program.

Product ID	**CURRENT (Kingpak)**				**PROPOSED (onsemi, Seremban)**			
	Assembly	**Location**	**Final Test**	**Location**	**Assembly**	**Location**	**Final Test**	**Location**
AR0220	TongHsing	Taiwan	TongHsing	Taiwan	TongHsing	Taiwan	TongHsing	Taiwan
					Seremban	Malaysia	KYEC	Taiwan

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Products manufactured at Seremban will have an additional package barcode marking, used to identify die-level tracing.

	Current (Kingpak)	Proposed (onsemi)
Product marking change		

Reason / Motivation for Change:	Capacity improvement,Source/Supply/Capacity Changes Process/Materials Change,Source/Supply/Capacity Changes
Anticipated impact on fit, form, function, reliability, product safety or manufacturability:	The device will be qualified and validated based on the same Product Specification. No anticipated impacts.

Sites Affected:

onsemi Sites	**External Foundry/Subcon Sites**
onsemi Seremban, Malaysia	Tong Hsing Electronic Industries, Ltd, Taiwan

Marking of Parts/ Traceability of Change:	Date Code

Reliability Data Summary:

Below is the qualification plan for onsemi Seremban site for the proposed devices**.**

QV DEVICE NAME : AR0220AT
PACKAGE : iBGA

Test	Specification	Condition	Interval
HTOL	JESD22-A108	Ta= 105°C, 100 % max rated Vcc	1008 hrs
TC	JESD22 A104	-55°C to+125°C	1000 cycs
HAST	JESD22 A110	130°C/85% RH or 110°C/85% RH, 100 % max rated Vcc	96 hrs or 264hrs
uHAST	JESD22 A118	130°C/85% RH or 110°C/85% RH unbiased	96 hrs or 264hrs
HTSL	JESD22 A103	150°C	504 hrs
WBS	AEC-Q100-001	Wire Bond Shear Test: Cpk >1.67	-
WBP	Mil-Std-883 Meth 2011	Wire Bond Pull: Cpk>1.67	-
SBS	AEC Q100-010 AEC Q003	Solder Ball Shear	
SD	JEDEC J-STD-002D	Solderability	-
PD	JESD22 B100,B108	Physical Dimension: Critical Cpk>1.67	-
TEST	User/Supplier Spec	Pre and Post Stress Electrical Test	-
ED	Electrical Distribution	Electrical Test Cpk > 1.67	-

Electrical Characteristics Summary:

Electrical characteristicts will not be impacted. Electrical distribution data will be provided after qualification.

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
AR0220AT4R00XUEA1-B2-DPBM	NA	AR0220AT4R00XUEA1-DPBM
AR0220AT4R00XUEA1-TRBM	NA	AR0220AT4R00XUEA1-DPBM
AR0220AT4R00XUEA1-TPBM	NA	AR0220AT4R00XUEA1-DPBM
AR0220AT4R00XUEA1-VL-TPBM	NA	AR0220AT4R00XUEA1-DPBM
AR0220AT4R00XUEA1-DPBM	NA	AR0220AT4R00XUEA1-DPBM

onsemi

Appendix A: Changed Products

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DIKG: DIGI-KEY

Product	Customer Part Number	Qualification Vehicle	New Part Number	Replacement Supplier
AR0220AT4R00XUEA1-DPBM		AR0220AT4R00XUEA1-DPBM	NA	