



Initial Product/Process Change Notification

Document #: IPCN24376Z1

Issue Date: 14 Nov 2022

Title of Change:	Update to IPCN24376Z to adjust schedule of first ship date	
Proposed Changed Material First Ship Date:	01 Aug 2023 or earlier if approved by customer	
Current Material Last Order Date:	02 Jan 2023 <i>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.</i>	
Current Material Last Delivery Date:	31 Jul 2023 <i>The Current Material Last Delivery Date may be subject to change based on build and depletion of the current (unchanged) material inventory</i>	
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 - Wafer Production	Move of all or part of wafer fab to a different location/site/subcontractor	
Description and Purpose:		
<p>This is an updated IPCN to reflect the update to the overall Fab transfer schedule. The Reliability qualification of AR0233 is expected to complete by January and a final PCN will be distributed at that time. Samples from Fab 14 are currently available. We will be requesting an aggressive approval of six months.</p> <p>PCN context from first IPCN:</p> <p>The proposed change is to transfer all front side CMOS manufacturing of the AR0233 from TSMC Fab 12 to TSMC Fab 14. The current manufacturing wafer process flow is for front side processing to occur in FAB 12 and then backside processing to occur in Fab 14, with wafers shipping to Fab 14 after completing in Fab 12. In an effort to improve efficiency for Gen 2 product at TSMC, we will qualify material to run entirely at the Fab 14 facility. These two facilities use identical manufacturing equipment, processes and maintenance plans. They are located on separate TSMC sites in Taiwan. There will be no change to form, fit or function of the product.</p>		
	Before Change Description	After Change Description
Front-End MFG Site	TSMC Fab 12	TSMC Fab 14
There are no product material changes as a result of this change.		
There is no product marking change as a result of this change.		



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Reason / Motivation for Change:	Capacity improvement		
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	
None		TSMC Semiconductor, Taiwan	
Marking of Parts/ Traceability of Change:	Date code		
Reliability Data Summary:			
Qual plan is ongoing			
QV DEVICE NAME : AR0233AT			
PACKAGE : iBGA			
Test	Specification	Condition	Interval
HTOL	JESD22-A108	Ta= <u>125</u> °C Tj, 100 % max rated Vcc	1008 hrs
ELFR	AEC Q100-008	Ta= <u>125</u> °C	24 hrs
PC	J-STD-020 JESD-A113	MSL 3 @ 260 °C	
HTSL	JESD22-A103	Ta= <u>150</u> °C	1008 hrs
TC	JESD22-A104	Ta= <u>-55</u> °C to <u>+125</u> °C	1000 cyc
HAST	JESD22-A110	110°C, 85% RH, with bias	264 hrs
uHAST	JESD22-A118	110°C, 85% RH, unbiased	264 hrs
WBS	AEC Q100-001 AEC Q003	CPK >1.67	
WBP	MIL-STD883 Method 2011 AEC Q003	CPK >1.67, 0 Fails after TC (test #A4)	
HBM	AEC Q100-002	0 Fails; 2KV HBM	
CDM	AEC Q100-011	0 Fails: 750V for corner pins, 500V all other pins	
LU	AEC Q100-004	0 Fails	
ED	AEC Q100-009 AEC Q003	Elect. Distribution: (Test @ C/ R/ H)	
Electrical Characteristics Summary:			
Electrical characteristics data will demonstrate to be equivalent between sites.			



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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
AR0233ATSC17XUEA1-TRBR	NA	AR0233ATSC17XUEA1-DRBR
AR0233ATSC17XUEA1-TPBR	NA	AR0233ATSC17XUEA1-DRBR
AR0233ATSC17XUEA1-DRBR	NA	AR0233ATSC17XUEA1-DRBR
AR0233ATSC17XUEA1-DPBR	NA	AR0233ATSC17XUEA1-DRBR
AR0233ATSE17XUD20	NA	AR0233ATSC17XUEA1-DRBR

Appendix A: Changed Products

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DIKG: DIGI-KEY

Product	Customer Part Number	Qualification Vehicle	New Part Number	Replacement Supplier
AR0233ATSC17XUEA1-DRBR		AR0233ATSC17XUEA1-DRBR	NA	
AR0233ATSC17XUEA1-DPBR		AR0233ATSC17XUEA1-DRBR	NA	