



Initial Product/Process Change Notification

Document #: IPCN24416Z

Issue Date: 26 Jan 2022

Title of Change:	Dual source front end manufacturing location for AR0323.	
Proposed Changed Material First Ship Date:	01 Jun 2023 or earlier if approved by customer	
Current Material Last Order Date:	01 Apr 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 May 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>The proposed change is to transfer all front side CMOS manufacturing of the AR0323 from TSMC Fab 12 to TSMC Fab 14.</p> <p>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.</p> <p>In an effort to expand manufacturing capacity at TSMC, we will qualify material to run front-side MFG entirely at the Fab 14 facility. These two facilities use identical manufacturing equipment, processes and maintenance plans.</p> <p>The 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	Both TSMC Fab 12 and 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:	Source/Supply/Capacity Changes		
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		
None	TSMC Semiconductor, Taiwan		
Marking of Parts/ Traceability of Change:	Lot history		
Reliability Data Summary:			
QV DEVICE NAME : AR0323AT			
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)	
Data will be available after AEC-Q100 Qualification; provided In Final PCN			
Electrical Characteristics Summary:			
Electrical characteristics will be available after correlation between sites; provided in Final PCN.			
List of Affected Parts:			
<i>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.</i>			
Current Part Number	New Part Number	Qualification Vehicle	
AR0323ATSB17XUEA0-DRBR	NA	AR0323ATSB17XUEA0-DRBR	