



Initial Product/Process Change Notification

Document #: IPCN24632X1

Issue Date: 27 Sep 2023

Title of Change:	Update to IPCN24632X: to include Toppan site change for CFA processing.	
Proposed First Ship date:	01 Aug 2024 or earlier if approved by customer	
Contact Information:	Contact your local onsemi Sales Office or Mike.Webster@onsemi.com	
PCN Samples Contact:	Contact your local onsemi Sales Office. Sample requests are to be submitted no later than 30 days from the date of first notification, Initial PCN or Final PCN, for this change. Samples delivery timing will be subject to request date, sample quantity and special customer packing/label requirements.	
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 90 days prior to implementation of the change. In case of questions, contact < PCN.Support@onsemi.com >	
Marking of Parts/ Traceability of Change:	Date Code	
Change Category:	Wafer Fab Change	
Change Sub-Category(s):	Manufacturing Site Transfer	
Sites Affected:		
onsemi Sites	External Foundry/Subcon Sites	
None	TSMC Semiconductor, Taiwan	
	Toppan Chunghwa Electronics Co., Ltd, Taiwan	
Description and Purpose:		
<p>This is an updated change notice regarding a transfer for front-end imager manufacturing site changes regarding the AR1335 family. It will address changes for front-end Fab as well as post-Fab CFA processing.</p> <p>The proposed change is to transfer all front side CMOS manufacturing of the AR1335 from TSMC Fab 12 to TSMC Fab 14. These two facilities use identical manufacturing equipment, processes, and maintenance plans. They are located on separate TSMC sites in Taiwan.</p> <p>In addition to the wafer FAB change, the CFA site will also transfer. All CFA processing will transfer to the Toppan CFA FAB in Shanghai China. Toppan currently performs the CFA manufacturing for AR1335 products at their facility in Taiwan. They have informed us that they will no longer support CFA processing past December 2023. The China and Taiwan facilities use the same CFA chemicals that are critical to imager performance. There is a different tool set between the CFA sites. Product qualification will verify performance matching.</p> <p>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
CFA MFG Site	Toppan – Taiwan	Toppan - China



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Qualification Plan:

QV DEVICE NAME : AR1335

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)	

Estimated date for Qualification Completion: April 20, 2024

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**.

Part Number	Qualification Vehicle
AR1335CSC32SMD20-RC1	AR1335CSC32SMD20-RC1
AR1335CSC32SMD20	AR1335CSC32SMD20-RC1
AR1335CSC11SMKA0-CP	AR1335CSC11SMKA0-CP



Appendix A: Changed Products

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DIKG: DIGI-KEY

Product	Customer Part Number	Qualification Vehicle	New Part Number	Replacement Supplier
AR1335CSCC11SMKA0-CP		AR1335CSCC11SMKA0-CP	NA	