Final Product/Process Change Notification
Document #:FPCN24632X
Issue Date:06 Mar 2025

Title of Change:	Consumer CIS AR1335 manufacturing site transfer from TSMC Fab12 to Fab14, combined with CFA site transfer from Toppan/TCE to Toppan/TSES
Proposed First Ship date:	13 Jun 2025 or earlier if approved by customer
Contact Information:	Contact your local onsemi Sales Office
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.
Additional Reliability Data:	Contact your local onsemi Sales Office
Type of Notification:	This is a Final Product/Process Change Notification (FPCN) sent to customers. FPCNs are issued 90 days prior to implementation of the change. onsemi will consider this change accepted, unless an inquiry is made in writing within 30 days of delivery of this notice. To do so, contact PCN.Support@onsemi.com
Marking of Parts/ Traceability of Change:	Changed material may be identified by 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 China, China (ISBU)

Description and Purpose:

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. The Fab 12 facility is no longer manufacturing CMOS image sensors; therefore, all future production must come from the Fab 14 facility, which is currently manufacturing other image sensor products for onsemi.

In addition, this change will include the transfer of CFA manufacturing location between two Toppan sites, moving from TCE in Taiwan to TSES in Shanghai China. The two CFA facilities use identical manufacturing equipment, CFA chemicals, and processes.

There will be no change to the form, fit or function of the product.

	Before Change Description	After Change Description
Front-End MFG Site	TSMC Fab 12	TSMC Fab 14
CFA MFG Site	Toppan – TCE (Taiwan)	Toppan – TSES (China)

There are no product material changes as a result of this change.

There is no product marking change as a result of this change.

Reliability Data Summary:

QV DEVICE NAME : AR1335CSSC11SMKA0-CP
PACKAGE : CSP

Test	Specification	Condition	Interval	Result
HTOL	JESD22-A108	Ta = 105 °C, 100 % max rated Vcc, 504hrs	504hrs	0/231
PC	J-STD-020 JESD-A113	MSL 4 @ 245 °C	-	0/270
HTSL	JESD22-A103	Ta= 150 °C, 504hr	504hrs	0/135
TC	JESD22-A104	Ta= -55 °C to +125 °C, 500cyc	500cyc	0/135
THB	JEITA ED4701-100	60°C, 90% RH, with bias, 504hrs	504hrs	0/135

All reliability tests have passed.

Electrical Characteristics Summary:

There is no change to Electrical characteristics or Image performance.

			Control Lot		Qual Lot			
Supply	Mode	Unit	Mean	Std Dev	Mean	Std Dev	Mean Diff (%)	STD DEV Diff (abs)
IAA	MIPI, Streaming, 13M Full Res 30fps	mA	31.64	1.3	31.77	1.45	0.41	0.15
IDD	MIPI, Streaming, 13M Full Res 30fps	mA	107.03	1.12	106.92	1.28	-0.1	0.16
IDD_IO	MIPI, Streaming, 13M Full Res 30fps	mA	29.07	1.75	29.38	1.99	1.07	0.24
IDD_ANA	MIPI, Streaming, 13M Full Res 30fps	mA	18.09	0.53	17.99	0.58	-0.55	0.05

AR1335 CFA performance	Uniformity (%)		Color_Ratio (%)		Visual_Defect (%)		Mid-Level Image Clusters (%)	
	Avg.	STD	Avg.	STD	Avg.	STD	Avg.	STD
Baseline (Fab 12 & TCE)	2.91	2.3	1.65	1.7	3.35	1.33	1.22	0.53
Qual Process (Fab 14 & TSES)	2.98	2.16	0.13	0.2	0.6	0.16	1.37	0.24

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
AR1335CSSM11SMKA0-CP	AR1335CSSC11SMKA0-CP
AR1335CSSC32SMD20-RC1	AR1335CSSC11SMKA0-CP
AR1335CSSC32SMD20	AR1335CSSC11SMKA0-CP
AR1335CSSC11SMKA0-CP	AR1335CSSC11SMKA0-CP