Final Product/Process Change Notification

Document #:FPCN24132ZB
Issue Date:16 Nov 2021

Title of Change:	Transfer assembly from KINGPAK To Tong Hsing Electronic Industries for AR0231AT7C00XUD20
Proposed Changed Material First Ship Date:	16 May 2022 or earlier if approved by customer
Current Material Last Order Date:	22 Nov 2021 *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:	15 May 2022 *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 or <PCN.samples@onsemi.com>. 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.
Sample Availability Date:	15 Nov 2021
PPAP Availability Date:	01 Dec 2021
Additional Reliability Data:	Contact your local onsemi Sales Office or Amy.Wu@onsemi.com
Type of Notification:	This is a Final Product/Process Change Notification (FPCN) sent to customers. The change will be implemented at 'Proposed Change Material First Ship Date' in compliance to J-STD-46 or ZVEI, or earlier upon customer approval, or per our signed agreements. onsemi will consider this proposed change and it's conditions acceptable, unless an inquiry is made in writing within 45 days of delivery of this notice. To do so, 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:

onsemi is relocating AR0231-based family of products for die reconstruct assembly from Kingpak, Chung Lee, Taiwan to Tong Hsing Electronics Limited (THELT), Long Tan, Taiwan. Kingpak is a wholly owned subsidiary of Tong Hsing. The existing Kingpak facility will stop RECON production as of 12/31/21. The proposed site has passed the qualification requirements as per AEC-100 guidelines. The table below summarizes the change. There is no change in the shipping tape. The AR0220 was used as the qualification vehicle for the AR0231; these have the same technology MFG process.

	Before Change Description	After Change Description
Reconstruct Assembly Site	Kingpak	Tong Hsing Electronic Industries

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

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

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	Kingpak, Taiwan
	Tong Hsing Electronic Industries, Ltd. , Taiwan

Marking of Parts/ Traceability of Change:	Date Code

Reliability Data Summary:

QV DEVICE NAME : AR0220AT RECON
PACKAGE : THELT RECON, Tiny iBGA as QV

Test	Specification	Condition	Interval	Results
HTOL	JESD22-A108	Ta= 125 °C Tj, 100 % max rated Vcc	1008 hrs	0/231
ELFR	AEC Q100-008	Ta= 125 °C	24 hrs	0/2400
PC	J-STD-020 JESD-A113	MSL 3 @ 260 °C		Pass
HTSL	JESD22-A103	Ta= 150 °C	1008 hrs	0/90
TC	JESD22-A104	Ta= -55 °C to +125 °C	1000 cyc	0/231
HAST	JESD22-A110	130°C, 85% RH, with bias	96 hrs	0/231
uHAST	JESD22-A118	130°C, 85% RH, unbiased	96 hrs	0/231
WBS	AEC Q100-001 AEC Q003	CPK >1.67		Pass
WBP	MIL-STD883 Method 2011 AEC Q003	CPK >1.67, 0 Fails after TC (test #A4)		Pass
HBM	AEC Q100-002	0 Fails; 2KV HBM		Pass
CDM	AEC Q100-011	0 Fails: 750V for corner pins, 500V all other pins		Pass
LU	AEC Q100-004	0 Fails		Pass
ED	AEC Q100-009 AEC Q003	Elect. Distribution: (Test @ C/ R/ H)		Pass

Electrical Characteristics Summary:

Electrical characteristics are not impacted.

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
AR0231AT7C00XUD20	NA	AR0231AT7C00XUD20