Final Product/Process Change Notification

Document #:FPCN25336X
Issue Date:13 Nov 2023

Title of Change:	Qualification Assembly site in UTAC Thailand for FSA2257L10X, FSUSB11L10X
Proposed First Ship date:	28 Feb 2024 or earlier if approved by customer
Contact Information:	Contact your local onsemi Sales Office or mitch.paris@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.
Additional Reliability Data:	Contact your local onsemi Sales Office or Lalan.Ortega@onsemi.com
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:	The affected products will be identified with date code
Change Category:	Assembly Change
Change Sub-Category(s):	Manufacturing Site Transfer, Material Change

Sites Affected:

onsemi Sites	**External Foundry/Subcon Sites**
None	UTAC, Thailand

Description and Purpose:

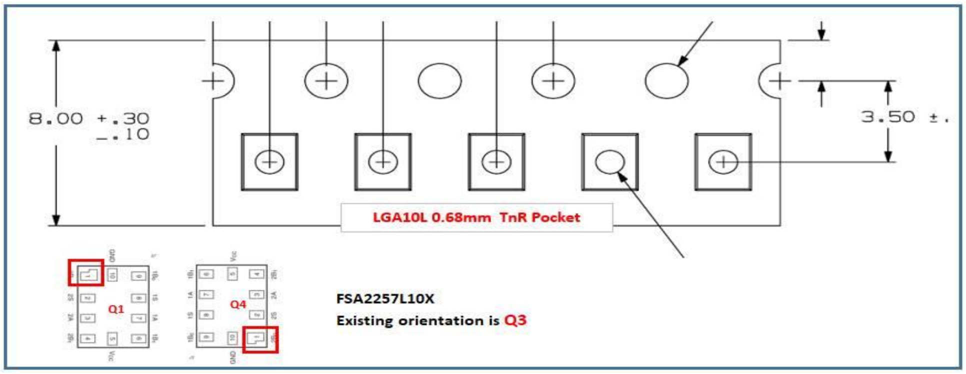
This final notification wants to notify customers regarding the Qualification Assembly site in UTAC Thailand with new die attach, mold compound, package substrate and Carrier tape for FSA2257L10X and FSUSB11L10X.

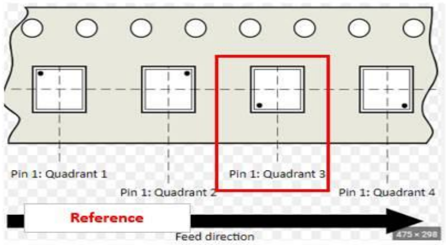
Product material change description:

	From	To
Assembly Site	HANA Thailand	UTAC Thailand
Die Attach	DA FILM LI LE5003 P8AS 100ST	DAF HR5104
Mold Compound	MC NITTO GE100LFCG 14MMX4.6G	Kyosera / KE-G1250LKDS-30 BU10C
Package Substrate	PS LGAB LOGIC KINSUS	FAST PRINT LGA SUBSTRATE
Carrier tape	Carrier tape for package thickness at 0.55 max & 0.65max	Carrier tape for package thickness at 0.68 max
MPQ/ PCQ	5,000 pcs	3,000 pcs
Packing PIN 1 orientation	Q3	Q1

There is no product marking change because of this change.

- Packing PIN 1 orientation in TnR will change from Q3 to Q1

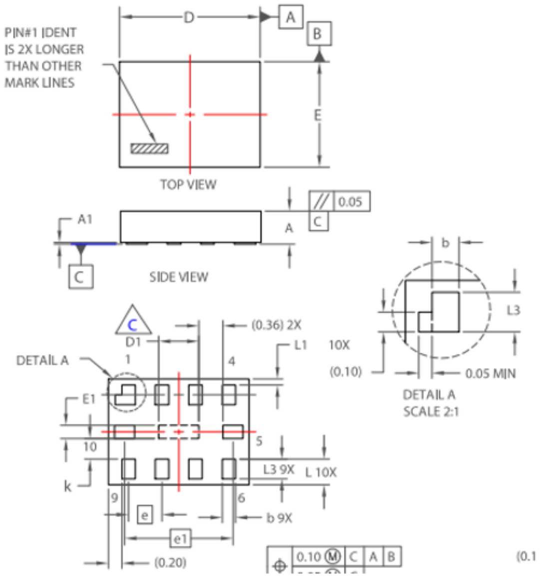




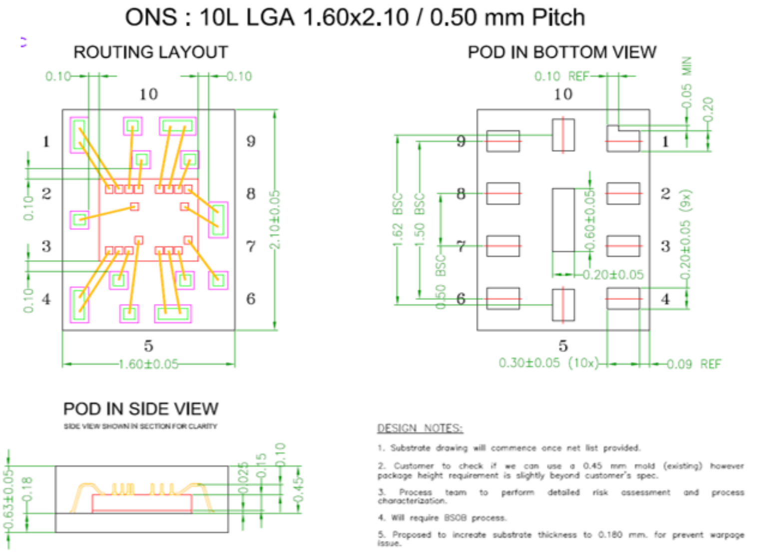
Dimension	HANA Thailand (existing)			UTAC Thailand (new site)			Remark
	Min	Nom	Max	Min	Nom	Max	
A	**0.50**	**0.55**	**0.65**	0.58	0.63	0.68	UTAC thicker than HANA

- Only dimension A was changed.

HANA Thailand



UTAC Thailand



DESIGN NOTES:

1. Substrate drawing will commence once net list provided.
2. Customer to check if we can use a 0.45 mm mold (existing) however package height requirement is slightly beyond customer's spec.
3. Process team to perform detailed risk assessment and process characterization.
4. Will require BSOB process.
5. Proposed to increate substrate thickness to 0.180 mm. for prevent warpage issue.

Reliability Data Summary:

QV DEVICE NAME - FSA2257L10X
RMS - 78724
PACKAGE - UQFN-10

Test	Specification	Condition	Interval	Test Result (Lot A)	Test Result (Lot B)	Test Result (Lot C)
High Temperature Operating Life	JESD22-A108	Ta=125°C, 100 % max rated Vcc	1008 hrs	0/84	0/84	0/84
High Temperature Storage Life	JESD22-A103	Ta= 150°C	1008 hrs	0/80	0/80	0/80
Preconditioning	J-STD-020 JESD-A113	MSL 1 @ 260 °C		done	done	done
Temperature Cycling	JESD22-A104	Ta= -65°C to +150°C	500 cyc	0/80	0/80	0/80
Highly Accelerated Stress Test	JESD22 A110	TA= +130°C, RH = 85%, PSIG= 18.8, bias	96 hrs	0/84	0/84	0/84
Unbiased Highly Accelerated Stress Test	JESD22-A118	T= +130°C, RH=85%, p = 18.8 psig unbiased	96 hrs	0/80	0/80	0/80
Solderability	JSTD002	Ta = 245°C, 5 sec		0/15	0/15	0/15
Physical Dimensions	JESD22-B120			0/10	0/10	0/10

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*****.**

Part Number	Qualification Vehicle
FSUSB11L10X	FSA2257L10X
FSA2257L10X	FSA2257L10X