Initial Product/Process Change Notification

Document #: IPCN24911XC
Issue Date: 29 Sep 2022

Title of Change:	Qualify JCET/ISMF as alternative site for process of Bump and Silicon etch for x4DFN products.
Proposed First Ship date:	23 Sep 2023 or earlier if approved by customer
Contact Information:	Contact your local onsemi Sales Office or Lan.Vu@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:	No change in device marking. Affected parts with this changing will be identified by the date code
Change Category:	Assembly Change
Change Sub-Category(s):	Manufacturing Site Addition

Sites Affected:

onsemi Sites	**External Foundry/Subcon Sites**
onsemi, ISMF Malaysia	JCET, China

Description and Purpose:

This IPCN announces the qualification of JCET (China) and ISMF (Malaysia) for bumping and Silicon-etching process of devices in X4DFN package (molded- WLCSP).

Upon completion of this qualification, new manufacturing flow of JCET/ISMF/Seremban will be utilized as an alternative flow to produce X4DFN products.

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

	From	**To**	
Bumping/Silicon etching/ASY&TST Site	Niigata/Niigata /Seremban	Niigata/Niigata /Seremban	JCET/ISMF/Seremban
Bump/Pillar Structure	CuSnAg	No change	CuSnAg
Polymer Material, Thickness	WPR5100, 10um	No change	HD4100, 10um
Bump/Pillar Height	15um	No change	15um
UBM Material, Thickness, Diameter	TiCu 1750/3500	No change	TiCu 1000/4000

Qualification Plan:

QV DEVICE NAME: ESDL4151MX4T5G
PACKAGE: X3DFN-2, 1.0x0.6mm, 0.65P

Test	Specification	Condition	Interval
HTRB	JESD22-A108	Ta = 150°C, 100% max rated V	1008 hrs
HTSL	JESD22-A103	Ta = 150°C	1008 hrs
PC	J-STD-020 JESD-A113	MSL 1 @ 260°C	-
TC	JESD22-A104	Ta = -40°C to +125°C	1700 cycs
HAST	JESD22-A110	130°C, 85% RH, 18.8psig, bias	96 hrs
uHAST	JESD22-A118	130°C, 85% RH, 18.8psig, unbiased	96 hrs

Estimated date for qualification completion**: 1 June 2023**

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
ESDL1012MX4T5G	ESDL4151MX4T5G
ESDM2032MX4T5G	ESDL4151MX4T5G
ESDL4151MX4T5G	ESDL4151MX4T5G
ESDM1121MX4T5G	ESDL4151MX4T5G
ESDM1051MX4T5G	ESDL4151MX4T5G
ESDM1031MX4T5G	ESDL4151MX4T5G
ESDL1531MX4T5G	ESDL4151MX4T5G
ESDM1131MX4T5G	ESDL4151MX4T5G
ESDL2031MX4T5G	ESDL4151MX4T5G
ESDL2012MX4T5G	ESDL4151MX4T5G