

Product / Process Change Notification (PCN)

909 N Sepulveda Blvd., Suite 230, El Segundo, CA 90245

Notification Date: July 17, 2014

PCN Number: PCN140601

PCN Title: EPC2012 Process and Material Change

Effective Date: Lot C4228B00.1 (E605) onward

Product Identification:

The following part numbers will be affected by this change:

EPC Part Number

EPC2012

Description of Changes:

1. In order to ensure EPC's manufacturing capacity for the product EPC2012, we have qualified one additional bump site for the lead free bump. This resulted in the following changes:

Original ASE PbF SAC405 bump:

- UBM: 2KÅ Ti / 3.25KÅ Ni-Vd / 8KÅ Cu for PbF Solder (Cu is last deposit)
- Polyimide is outside of the passivation opening
- Lead Free Solder is SAC405 Sn95.5%, Ag4%, Cu 0.5%

New Chipbond PbF Sn/Ag2.5% bump for EPC2XXX products:

- UBM: Sputter 2KÅ Ti / 4KÅ Cu, plate 5um Cu / 3um Ni
- Polyimide is inside of the passivation opening.
- Lead Free Solder is Sn97.5%, Ag2.5%
- There was no reduction in the bump contact area to the aluminum in the bond pad.
- UBM size is unchanged

Chipbond is a certified ISO-9001 company and is an existing qualified partner of EPC for other production processes.

2. Mask change to improve device dynamic performance. Device Miller ratio has been improved.

Device Identification

EPC will begin to ship new product beginning June 2014. The new product will be identified by product lot date code as defined below where Marking Line 2 will contain values of 4228 or higher.

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Laser Markings	
Lot_Date Code Marking line 2	Lot_Date Code Marking Line 3
YYYY	ZZZZ

Samples

Available upon request

Reliability Data

Bump family qualification data available upon request.

Information Request

If there are any questions, comments or information required regarding this PCN please contact your local EPC Sales Representative or the following EPC contacts directly.

PC Sales Contact: Renee Yawger +1.908.475.5702 (renee.yawger@epc-co.com)
EPC Engineering Contact: Bhasy Nair +1.972.805.8585 (bhasy.nair@epc-co.com)

EPC CONSIDERS THIS CHANGE APPROVED IF THE CUSTOMERS DO NOT GIVE US ANY WRITTEN OBJECTION WITHIN 30 DAYS FROM NOFITIFACTION DATE OF THIS PCN LETTER.

EPC Approval:

This PCN has been reviewed and approved by EPC's Quality & Reliability department:

Quality Director: Yanping Ma

Date: <u>June 24, 2014</u>

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