

PRODUCT CHANGE NOTIFICATION



Reference: SMLPCN32
Title: Notification of Change of Seal Process for LCC1 packages
Issue Date: 28/07/2017
Engineer: Paul Wallace
Distribution: TT Electronics Semelab; Customers taking LCC1 (C1) package types

1 Summary

This change notification is provided to inform the customers of affected products of changes listed in the table below. The change is classified as Minor.
Minor is for customer information only. Customers may need to consider the impact of the change before orders can be processed in the future.

1.1 Affected products

All parts which use LCC1 (also known as SOC-23 or UB) style packages (see outlines shown below)

Part numbers containing the following suffix:

PartNumberCSMx

PartNumberC1x

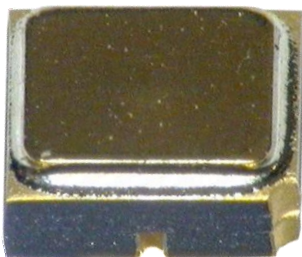
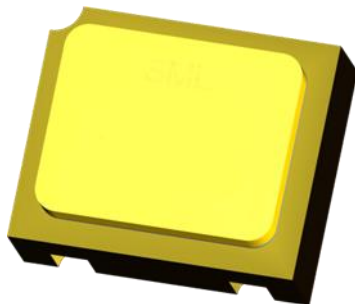
Note: x denotes trailing characters may be present

2 Change Information

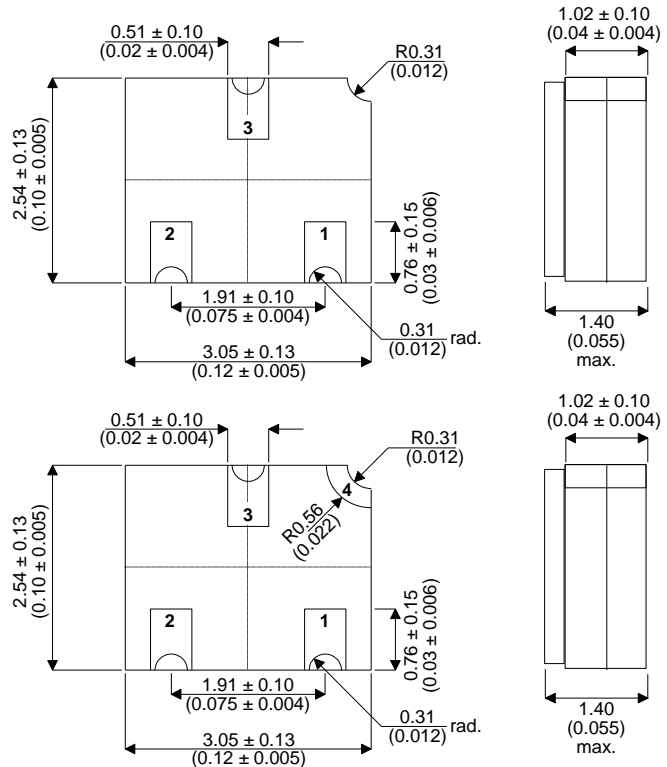
2.1 Detail of change

The process for sealing the lids onto LCC1 (3 & 4 terminal case variants) packages is to be changed from the existing manual attachment process (operation ref: SEAL-hotblock) to a tooled vacuum furnace reflow attachment process (operation ref: SEAL-ATV). The tooling for the SEAL-ATV process provides the static alignment and pressure required to form the hermetic seal.

The bill of materials used to manufacture the parts and critical interfaces have not changed.



New Lid Seal Example



Important information / Disclaimer

Semelab Limited reserves the right to change test conditions, parameter limits and package dimensions without notice.

Information furnished by Semelab is believed to be both accurate and reliable at the time of publication. However, Semelab assumes no responsibility for any errors or omissions discovered in its use. Semelab encourages customers to verify that product availability, information and datasheets are current before placing orders.

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2.2 Reason for Change

The change has been made as part of our program of continuous improvement with focus on control of the lid seal solder fillet and an improvement in production efficiency. The new tooled SEAL-ATV process creates a smooth solder fillet with a clean intermetallic formation of the bond from the lid to the package, minimizing variation and solder spread.

2.3 Qualification of change

During the process development Semelab has performed screening operations in accordance with ESA high reliability requirements including: Visual checks, X-ray analysis, temperature cycling (standard screen of 20 cycles -55°C to +175°C + extended >100 cycles), Acceleration, PIND, Hermetic Seal (fine & gross leak), RGA and SEM/EDX analysis.

Environmental and Mechanical lot validation requirements of ESCC5000 chart F4 have been completed to internally qualify the change.

2.4 Change impact

There is no fit, form or function impact to the customer.

There are no perceived updates required for customer specifications.

The operation routing of each part will be updated in the MRP system to remove the existing operation and replace it with the new operation (SEAL-ATV).

3 Implementation of change

3.1 Implementation date

Semelab will begin to transition to the new process for all LCC1 type packages with immediate effect.

3.2 Applicable Open orders:

Open orders will not be changed if production has already started.

3.3 Identification of changed product:

If required, identification of the changed product can be made with traceability from the C of C or data pack to the Semelab MRP system which retains the full manufacturing history.

4 Contact information

To contact Semelab regarding this change please use the details at the foot of this document or contact your local Semelab sales representative:

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