

Introduction

This document contains general guidelines as well as specific requirements for the handling and production of Microsemi's PoE Power Manager PD69012/PD69008. Special considerations should be taken into account for the exposed pad of the PD69012/PD69008 during reflow.

Packing Methods

Devices are disposed in a high-impact carrier tray, shown in Figure 2. This tray has a total of 119 pockets, with 17 columns and 7 rows. The tray and devices are packed into a laminated plastic bag that prevents moisture contents from rising above 0.1% by weight - for up to one year. Moisture is absorbed by a desiccant (silica crystals), packed in a small bag and a moisture indicator is also enclosed in a sealed bag. The packed and sealed devices must be stored at normal room temperature (between 10°C to 30°C) and in an atmosphere of less than 60% relative humidity (RH).

Using Devices from a Sealed Bag

As soon as the PD69012/ PD69008's are removed from their protective environment, they are immediately exposed to local moisture. To prevent the devices from absorbing excessive moisture, they must be soldered within 168 hours. The moisture sensitivity level of the PD69012/ PD69008 plastic package is MSL 3.

During this period, the devices are to be maintained at a temperature of 30°C and at an RH of 60% maximum. To prevent damage to the devices during production, they must be dried out first before soldering. For the PD69012/ PD69008, the maximum drying time is 10 hours at 125 ± 5°C. A longer drying period or a higher drying temperature may deteriorate solderability.

Resealing a Bag

If certain devices from an opened bag are not used, the bag desiccant is to be replaced and the bag resealed within half an hour. Use a new or reconditioned desiccant.

Reflow Guidelines

Reflow Profile

The actual profile parameters depend upon the used solder paste, oven temperature and the PWB assembly mass. Recommendations provided by paste manufacturers are to be followed. The reflow profile for exposed pad packages should not be different than the one used for non-thermally/electrically enhanced packages. Oven settings may require adjustments to achieve the above-mentioned reflow requirements.

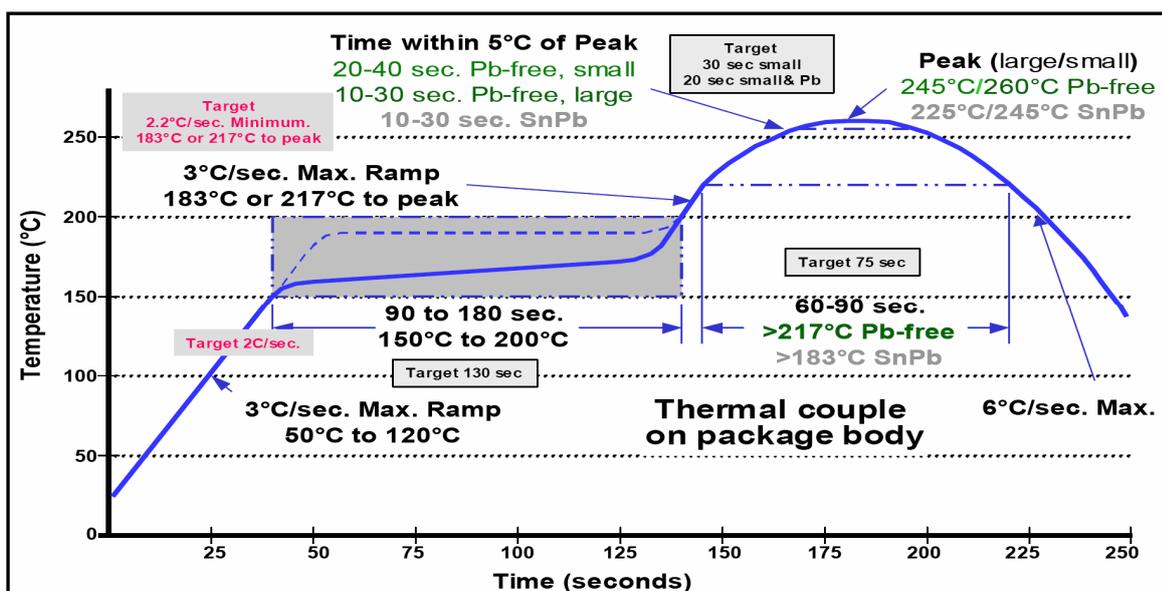


Figure 1: Reflow Profile

Company Confidential



Figure 2: PD69012 the Carrying Tray

Company Confidential

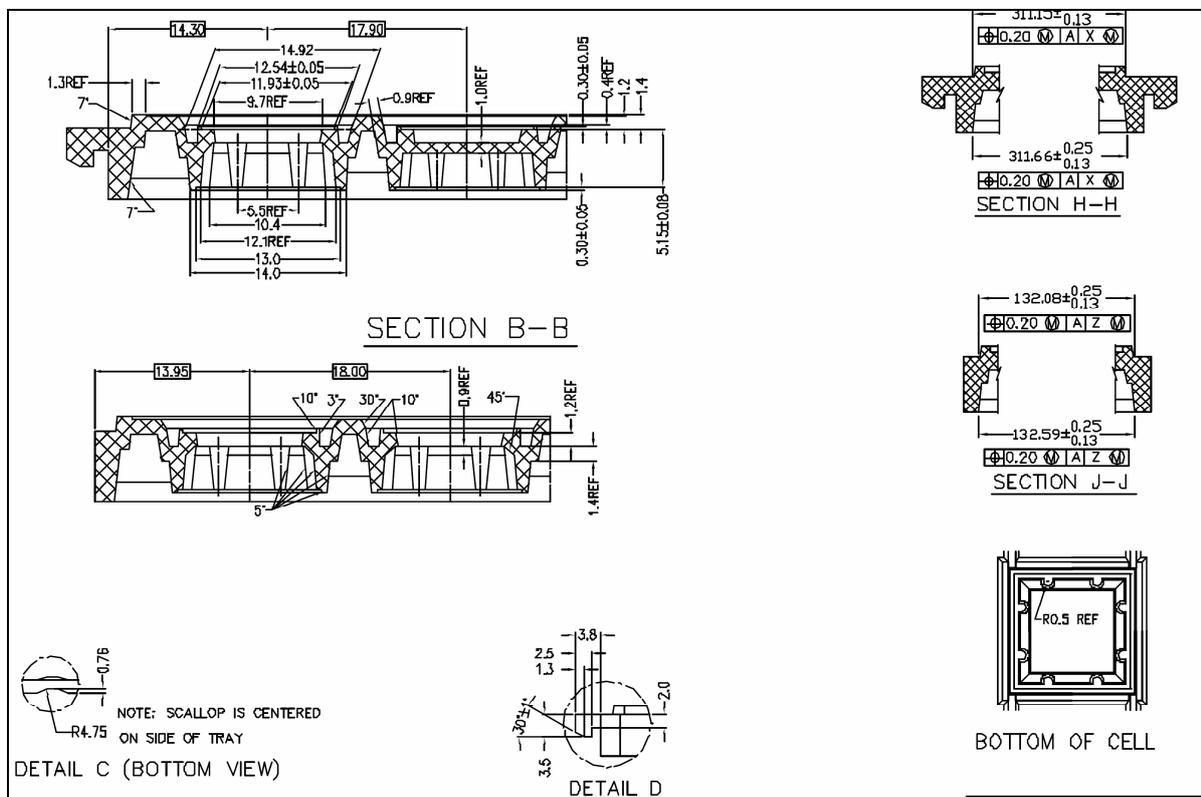
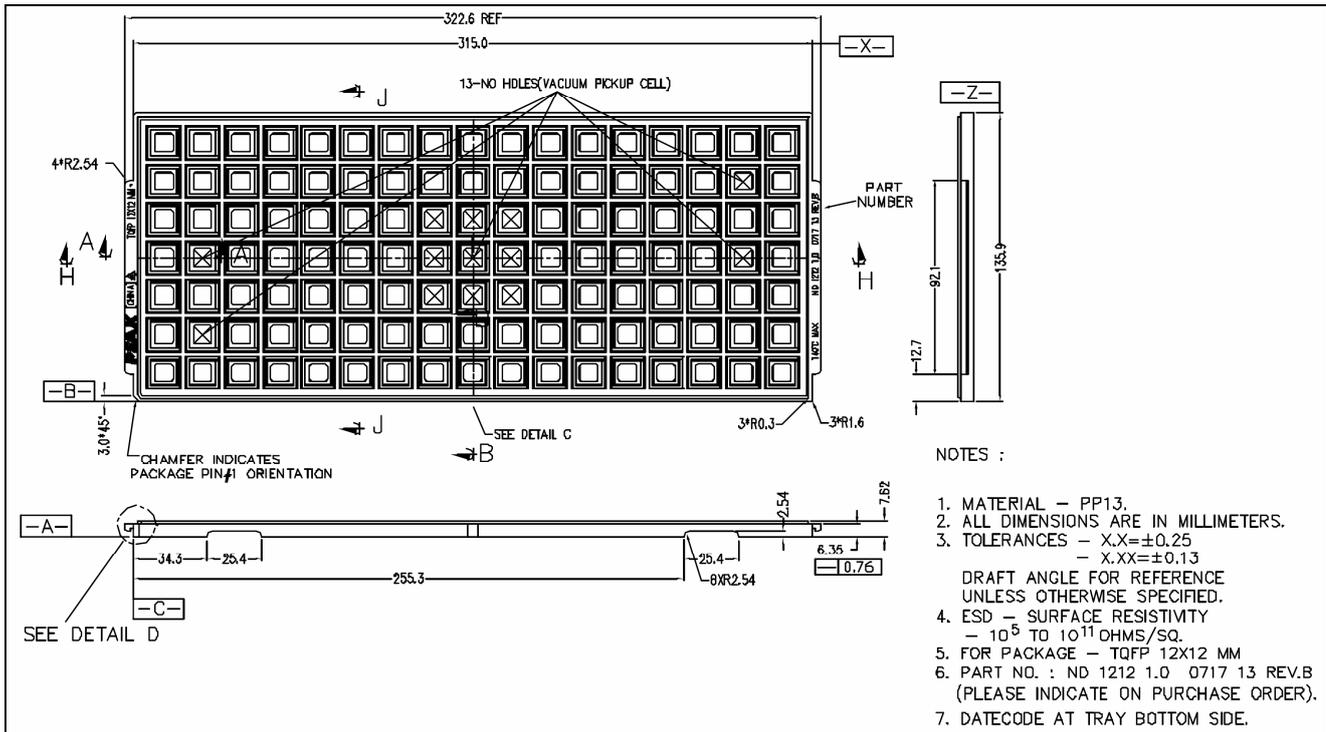


Figure 3: Carrying Tray

Company Confidential

The information contained in the document is PROPRIETARY AND CONFIDENTIAL information of Microsemi and cannot be copied, published, uploaded, posted, transmitted, distributed or disclosed or used without the express duly signed written consent of Microsemi. If the recipient of this document has entered into a disclosure agreement with Microsemi, then the terms of such Agreement will also apply. This document and the information contained herein may not be modified, by any person other than authorized personnel of Microsemi. No license under any patent, copyright, trade secret or other intellectual property right is granted to or conferred upon you by disclosure or delivery of the information, either expressly, by implication, inducement, estoppel or otherwise. Any license under such intellectual property rights must be approved by Microsemi in writing signed by an officer of Microsemi.

Microsemi reserves the right to change the configuration, functionality and performance of its products at anytime without any notice. This product has been subject to limited testing and should not be used in conjunction with life-support or other mission-critical equipment or applications. Microsemi assumes no liability whatsoever, and Microsemi disclaims any express or implied warranty, relating to sale and/or use of Microsemi products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright or other intellectual property right. The product is subject to other terms and conditions which can be located on the web at <http://www.microsemi.com/legal/tnc.asp>

Revision History

| Revision Level / Date | Para. Affected | Description |
|---------------------------|----------------|-----------------------------|
| Revision 1.0/ 11/11/ 2008 | | Initial release |
| Revision 1.1/ 17/02/ 2009 | | Typo in IC P/N. |
| Revision 1.2/ 15/06/ 2009 | | Update of header and footer |

© 2009 Microsemi Corp.**All rights reserved.**For support contact: sales_AMSG@microsemi.comVisit our web site at: www.microsemi.com

Company Confidential**Catalog Number: 06-0027-081**