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.

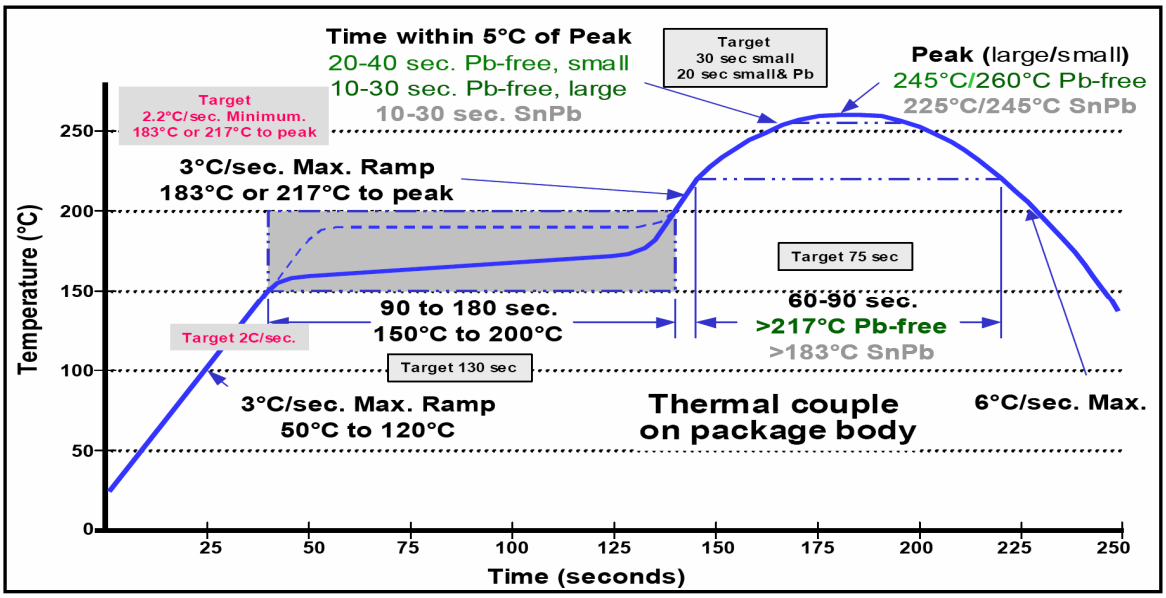


Figure 1: Reflow Profile

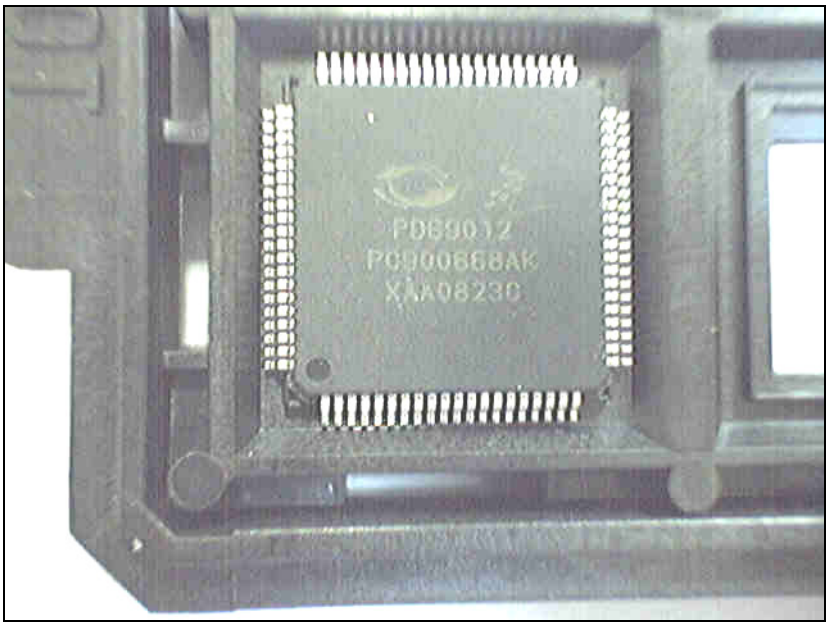
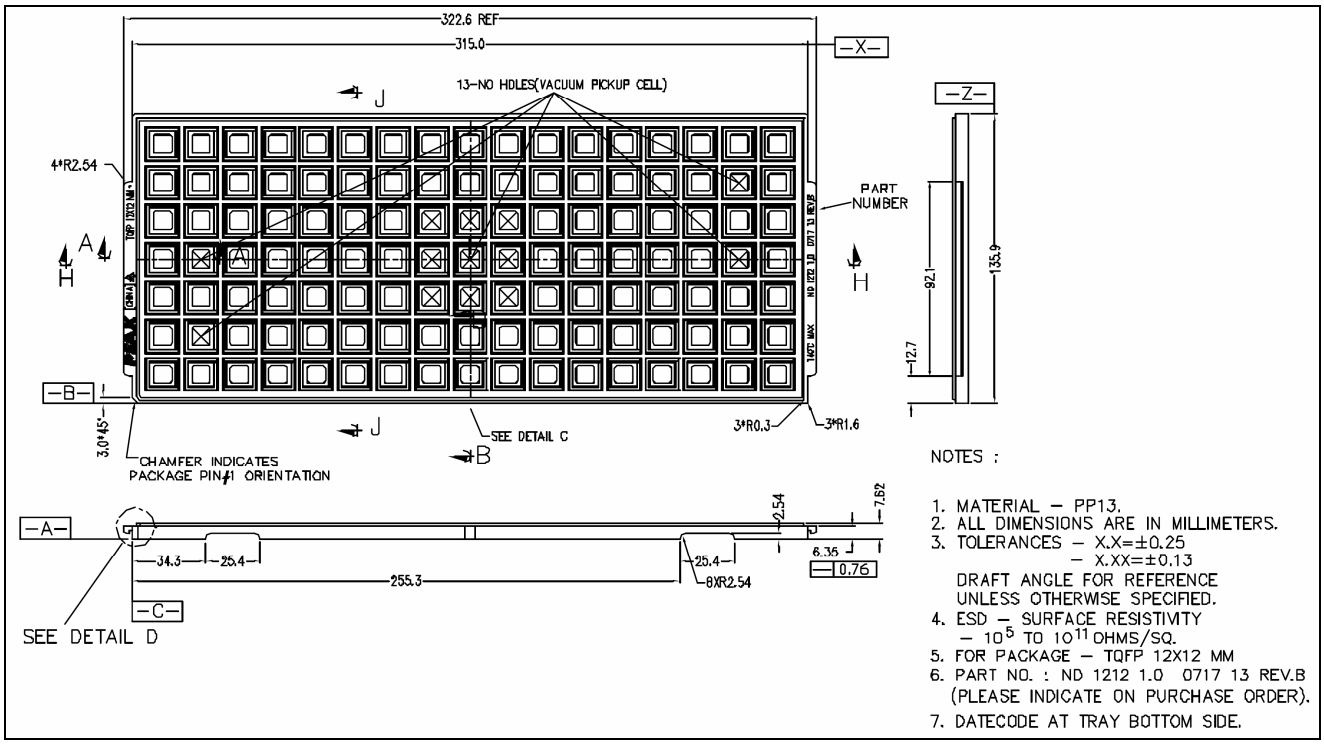


Figure 2: PD69012 the Carrying Tray



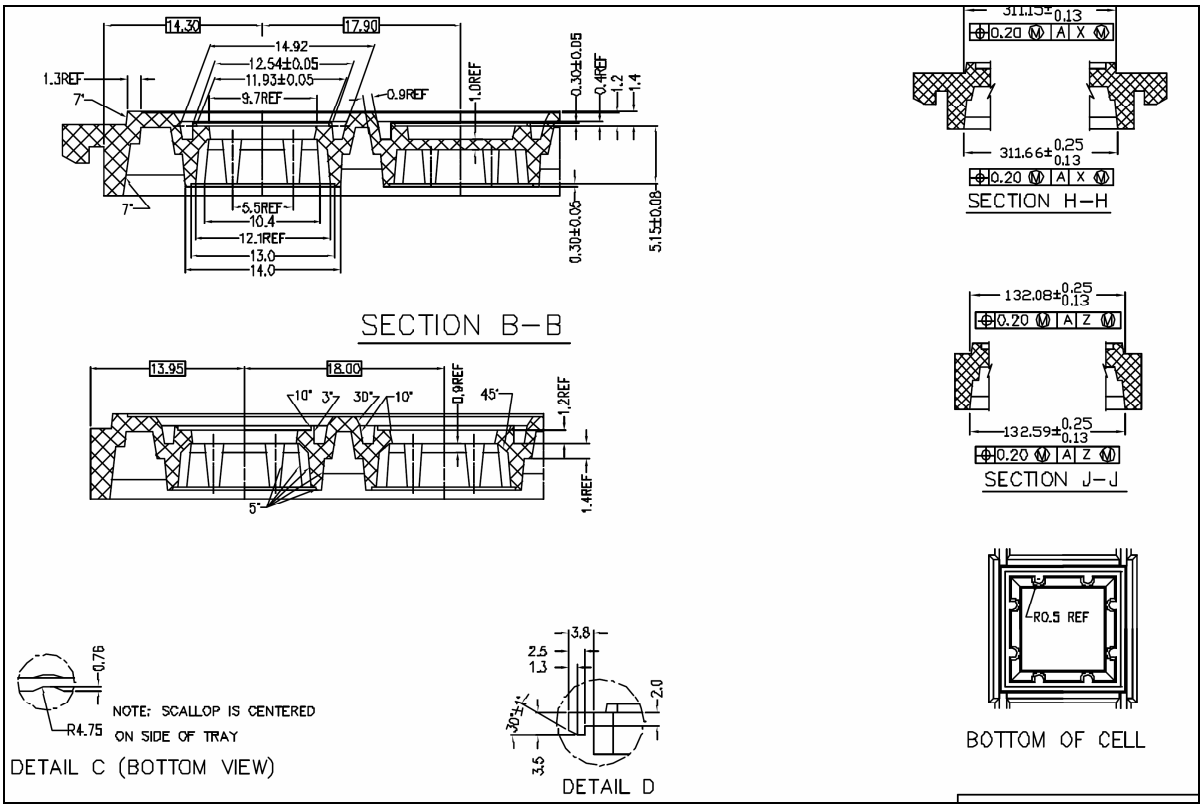


Figure 3: Carrying Tray

Microsemi
Analog Mixed Signal Group
1 Hanagar st., P.O/ Box 7220 Hod Hasharon 45421, Israel Tel: +972-9-7755100 Fax: +972-9-7755111

Company Confidential

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

For support contact: sales_AMSG@microsemi.com
Visit our web site at: www.microsemi.com

Microsemi
Analog Mixed Signal Group
1 Hanagar st., P.O/ Box 7220 Hod Hasharon 45421, Israel Tel: +972-9-7755100 Fax: +972-9-7755111