

DataSourceCD Q1-2003: Xilinx Packaging and Thermal Characteristics

Package Drawings

XAPP415: Thermal Packaging Management Application Note (v1.0) 12/19/01
XAPP425: Solder Reflow Guidelines for BGA Application Note (v1.0) 12/9/02
XAPP426: Flip Chip Implementation Guidelines Application Note (v1.0) 12/9/02

Package Information

This section contains the following information:

Introduction to Xilinx Packaging

Package Technology Briefs

Inches and Millimeters

Dimensions for Xilinx Quad Flat Packs

Suggested Board Layout of Soldered Pads for BGA Packages

Recommended PCB Design Rules

Cavity Up or Cavity Down

Pressure Handling Capacity

Clockwise or Counterclockwise

Summary of Thermal Resistance for Packages

Package Electrical Characterization

This section contains the following information:

Theoretical Background

Analytical Formulas for Lead Inductance

General Measurement Procedure

Data Acquisition and Package Electrical Database

Component Mass (Weight) by Package Type

Thermally Enhanced Packaging

This section contains the following information:

The Package Offering

Overview

Where and When Offered

Mass Comparison

Thermal Data for the HQ

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Moisture Sensitivity of PSMCs

This section contains the following information:

Moisture Induced Cracking During Solder Reflow

Package Moisture Sensitivity Levels per J-STD-020

Factory Floor Life

Dry Bake Recommendation and Dry Bag Policy

Handling Parts in Sealed Bags

Tape and Reel

This section contains the following information:

Benefits

Cover Tape

Reel

Bar Code Label

Shipping Box

Tape and Reel Packaging

Reflow Soldering Process Guidelines

This section contains the following information:

Solder Reflow Process

Soldering Problems Summary

Typical Conditions for IR Reflow

Typical Conditions for Vapor Phase Reflow Soldering

Sockets

This section contains the following information:

Socket Manufacturers

-- START HERE Page --