
Electronic Packaging, Microelectronics, and Interconnection Dictionary

**Charles A. Harper
Martin B. Miller**

McGraw-Hill, Inc.

**New York San Francisco Washington, D.C. Auckland Bogotá
Caracas Lisbon London Madrid Mexico City Milan
Montreal New Delhi San Juan Singapore
Sydney Tokyo Toronto**

Library of Congress Cataloging-in-Publication Data

Harper, Charles A.

Electronic packaging, microelectronics, and interconnection
dictionary / Charles A. Harper, Martin B. Miller.

p. cm. — (Electronic packaging and interconnection series)

Includes index.

ISBN 0-07-026688-3

1. Electronic packaging—Dictionaries. 2. Microelectronic
packaging—Dictionaries. 3. Electronic apparatus and appliances—
Design and construction—Dictionaries. I. Miller, Martin B.
(Martin Boniface). II. Title. III. Series.

TK7804.H34 1993

621.381'046'3—dc20

92-40712

CIP

Copyright © 1993 by McGraw-Hill, Inc. All rights reserved. Printed in
the United States of America. Except as permitted under the United
States Copyright Act of 1976, no part of this publication may be repro-
duced or distributed in any form or by any means, or stored in a data
base or retrieval system, without the prior written permission of the
publisher.

1 2 3 4 5 6 7 8 9 0 DOC/DOC 9 9 8 7 6 5 4 3

ISBN 0-07-026688-3

*The sponsoring editor for this book was Daniel A. Gonneau, the editing
supervisor was Kimberly A. Goff, and the production supervisor was
Donald F. Schmidt.*

Printed and bound by R. R. Donnelley & Sons Company.

joints. *See also Dielectric Constant.*

Part *See Component.*

Partial Discharge A high-voltage electrical discharge that partially bridges the insulation between conductors. *Also called corona.*

Partial Discharge Pulse A voltage or current pulse as a result of a partial discharge.

Partial Lift A wire bond partially raised from the bonded pad.

Particle Impact Noise Detection (PIND) The detection of undesirable loose particles in a sealed microcircuit package by sensitive acoustic testing. Typical particles are dislodged wire or conductor fragments.

Parting Agent In the molding of a plastic part, a lubricant that is applied to the surface of the mold to prevent the finished parts from adhering to the mold. *Also called mold release or release agent.*

Parting Line In the molding of a plastic part, the line formed in the part by the mating surfaces of the mold halves.

Partitioned Mold Cooling The cooling of the mold by circulating water through the core.

Parts Density The number of parts per unit of volume. *See also Packaging Density.*

Parylene A polymer resin, poly-paraxylene, which provides a very thin (250–500 angstrom), uniform conformal coating on printed wiring assemblies and electronic components. It is applied by vacuum deposition and provides a very uniform coating on sharp edges, on complex shapes, and in holes. This beneficial feature is unique among circuit board coating processes. Trade-named by Union Carbide Company.

Passivated Region Any region covered by glass, silicon dioxide, nitrides, or other protective insulating coating materials.

Passivation (1) The application of an insulating layer of glass, SiO_2 , or nitride over circuits and circuit elements for protection against moisture, contaminants, or other harmful conditions. (2) The growth of an oxide or nitride layer on the surface of a semiconductor to provide electrical stability by isolating the surface from electrical and chemical conditions in the environment. *See also Glassivation.*

Passive Components Electrical components that do not change their character when an electrical impulse is applied. Examples are resistors, capacitors, and inductors. *See also Active Components.*

Passive Network (1) A network that has no source of energy. (2) A network of passive elements, such as screened resistors, that are interconnected by conductors.