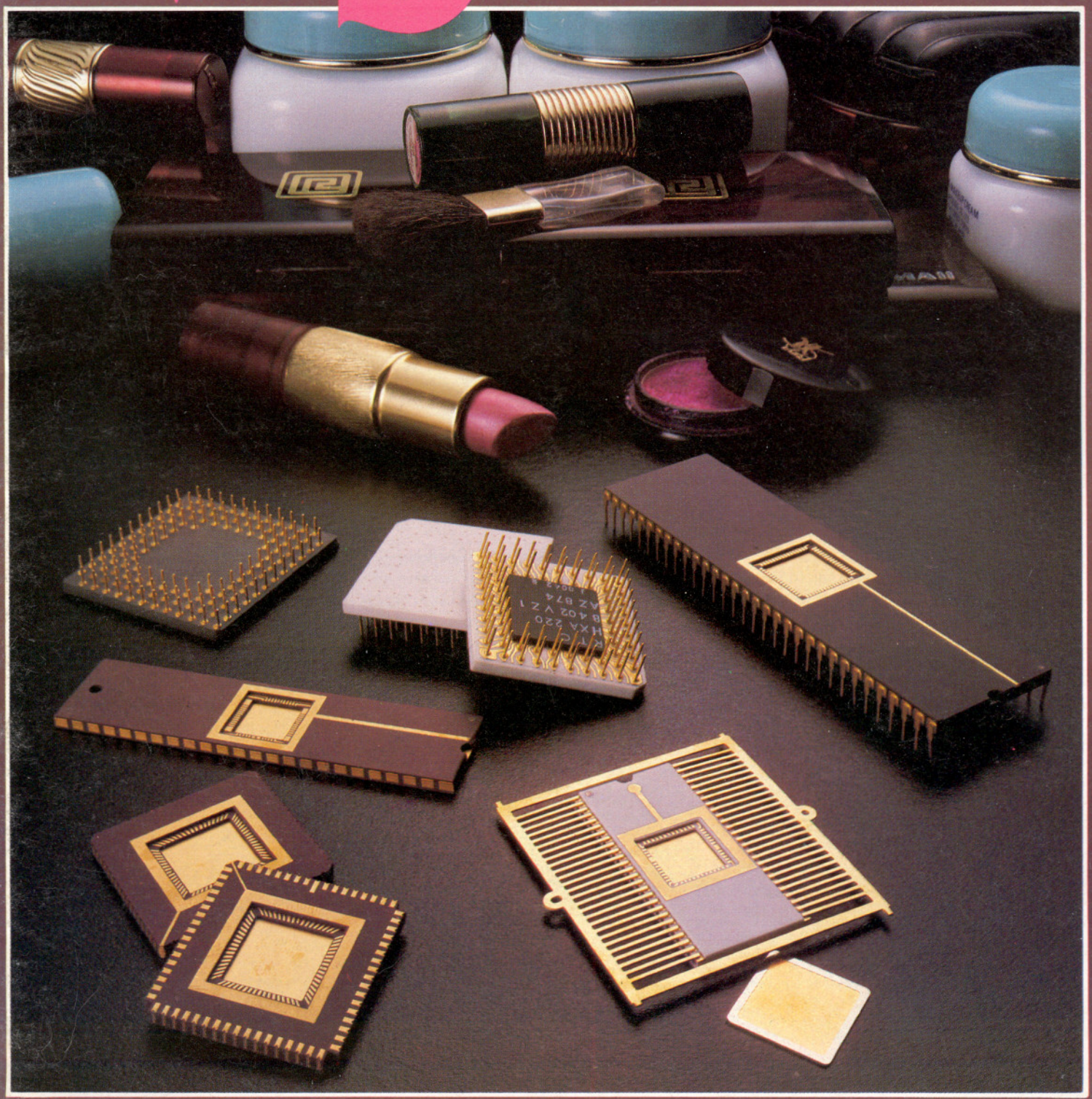
VLSI DESIGN

(FORMERLY LAMBDA)

NOVEMBER/DECEMBER 1982



VLSI packaging: the beauty is more than pin deep.

Publisher
Douglas G. Fairbairn

Editor-in-Chief
Jerry Werner

Managing Editor
Barbara S. Haymond

Technical Editor
Barbara Clifford

Contributing Editor
William D. Jansen

Technical Advisors
Robert P. Larsen
Allen F. Podell
Dr. Daniel G. Schweikert
Dr. Carlo H. Séquin

Editorial/Circulation
Monica Berg

Director of Promotion and Circulation
Joy Deason Mole

Circulation Manager
Lorri Ungaretti

Design Consultant
Mike Shenon

Designer
Willy Keats

Sales Representatives

West Coast	East Coast
Neal Manning	Charles Winnicky
(415) 966-8340	(201) 234-9497

VLSI DESIGN, November/December 1982, Volume III, No. 6. Publication of Redwood Systems Group, P.O. Box 50518, Palo Alto, CA 94303-0518. (415) 966-8340. The subscription rates for VLSI DESIGN are $19.95/6 issues and $37.95/12 issues (U.S.); $29.55/6 issues and $57.15/12 issues (Canada); $45/6 issues and $90/12 issues (Europe/S.Am./Mexico/C.Am.); and $55/6 issues and $110/12 issues (Japan/Asia/Australia). Foreign rates include airmail delivery (except Canada). All payments must be made in U.S. dollars drawn on a U.S. bank. Foreign subscriptions must be prepaid.

VLSI DESIGN (ISSN 0279-2834) is published six times a year by Redwood Systems Group, P.O. Box 50518, Palo Alto, CA 94303-0518. Second class controlled circulation postage paid at Mountain View, CA and additional entry office, San Jose, CA.

POSTMASTER: Send address changes to VLSI DESIGN, P.O. Box 50518, Palo Alto, CA 94303-0518.

VLSI DESIGN was founded to explore, expand, and define the interrelations between very-large-scale integrated circuits (VLSI) and computer architecture, design strategies, costs, and aids, as well as the electronics industry as a whole. VLSI DESIGN is unique in that it is written by and for the participants in this dynamic field. VLSI DESIGN intends to be the communication focus of a new VLSI design community, encourage its development, and help define its directions.

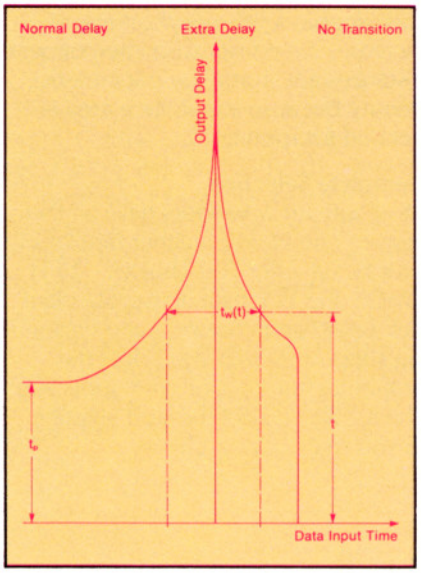
VLSI DESIGN

Volume III, No. 6 November/December 1982

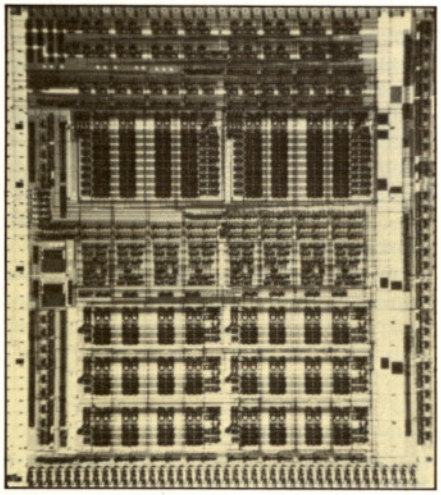
Cover

Although VLSI packages are often quite attractive, their selection is not merely a matter of cosmetics. VLSI designers must go beyond simple pin-count and package "footprint" considerations, and look into power dissipation, parasitics arising from die-to-package wiring, and the ease of mounting VLSI devices on printed-circuit boards. Cover photo by Jay Carlson, San Francisco, CA. LSI/VLSI packages provided by Signetics Corporation, Sunnyvale, CA.

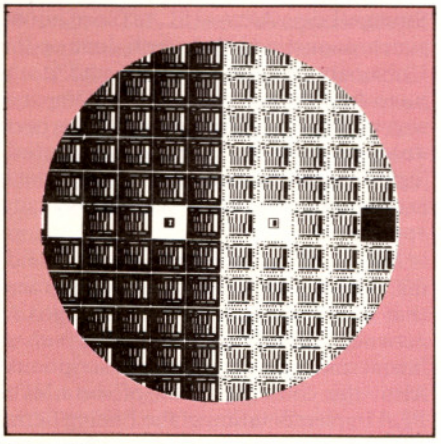
Departments



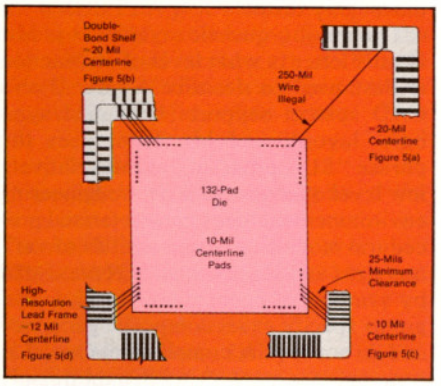
Page 56



Page 16



Page 28



Page 44

Articles