

VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT

S.Y. BSc

Electronics

CAN Course : PCB Design and Technology

PCB LAYOUT PLANNING, GENERAL RULES AND PARAMETERS :

General considerations, PCB sizes, layout approaches, resistance, capacitance, inductance of PCB conductors, conductor spacing, supply and ground conductors, component placing and mounting, package density and cooling requirements.

DESIGN RULES FOR ANALOG AND DIGITAL CIRCUITS :

Component conductor, signal conductors, supply and ground conductor, reflections, TTL, CMOS and ECL integrated circuits, crosstalk, ground and supply line noise, EM interference from pulse type EM fields.

ARTWORK :

Introduction and basis approaches to artwork, general artwork rules and taping guidelines,

FILM MASTER PRODUCTION :

Film emulsion parameters, reprographic camera, film processing.

PROPERTIES OF COPPER CLAD LAMINATES :

Properties of laminates, type of laminates, specification and test methods manual and machine cleaning processes.

PHOTO AND SCREEN PRINTING :

Basic processes for double sides PCB's photoresist : wet film resists and dry film resists, exposure and processing of wet and dry film resists, screen fabrics, screen frame preparation, pattern transfer on to the screen reclamation of the screen fabrics printing.

PLATING :

Immersion plating, electrons plating, electroplating, alternative finishes comparative performance of different coating.

ETCHING PROCESSES :

Etching machines, etching systems.

LIST OF RECOMMENDED BOOKS :

1. W. C. Bosshart, Printed circuit Boards design and Technology, Cedt series, 1989, TMH, New Delhi.
2. Clyde F. Coombs, printed circuits Handbook, 2nd . Ed. McGraw Hill Book Co.