

LECTURE-11

Fabrication Step of MOSFET

- Circuit design
- Mask/layout design
- Mask making and artwork
- Fabrication process
- Device testing for parametric and functional test
- Packaging and Reliability Test

Mask Design

MOSFET Masking Step

- Mask 1: Source Drain Mask
- Mask 2: Gate Mask
- Mask 3: Contact mask
- Mask 4: Metallization Mask

Introduction

- Mask design is very important before fabrication process can be done.
- Design rules must be followed to prevent defect in the process.
- In this design, gate length is varied from 30um, 50um, 100um, 150um, 200um and 300um.
- Different gate length will have different gate mask and different distance from source to drain.
- The smaller the gate size, the better the transistor in speed.