

KNOWLEDGE PROBE 5: METAL OXIDE SEMICONDUCTOR FIELD EFFECT TRANSISTORS (MOSFETS) AND COMMON ELECTRONIC CIRCUITS

Handling MOSFET

Learning Objectives

1. Describe advantages and disadvantages to using MOSFETs.
 2. Describe how to handle MOSFETs
-
1. What makes MOSFETs so susceptible to damage by static electricity?
 - a. Limited current handling capability
 - b. Low voltage operation
 - c. Small size
 - d. Thin, low voltage gate dielectric
 2. Discrete MOSFETs are often protected by internal
 - a. Capacitors
 - b. LEDs
 - c. Silicon diodes
 - d. Zener diodes
 3. Clamp diodes protect MOSFETs by limiting the gate voltage to which voltages? Assume a +5 volt supply and a 0.7 volt diode drop.
 - a. +0.7 and -0.7 volts
 - b. +4.7 and 0.7 volts
 - c. +5 and -5 volts
 - d. +5.7 and -0.7 volts
 4. The best way to protect a MOSFET or IC is to
 - a. Avoid touching the leads altogether
 - b. Ground your self to an earth ground
 - c. Use insulated tweezers
 - d. Wear a helmet made of aluminum foil
 5. Which of the following should you do before you replace a MOSFET in a circuit?
 - a. Be sure all power to the circuit is off
 - b. Ground your hand
 - c. Ground your soldering iron
 - d. All of the above