Electrical Overstress – 1

Multiple Choice Quiz

TI Precision Labs – Op Amps

Quiz: Electrical Overstress – 1

1. EOS damage occurs when you exceed _____.

a. The specified minimum voltage level.
b. Two times the maximum specified voltage level.
c. The absolute maximum voltage rating.
d. The maximum allowable frequency for input signals.

2. (T/F) EOS events are typically longer in duration than ESD events.

a. True
b. False

3. A TVS diode is _____.

a. A crystal diode used to minimize RF interference.
b. A Zener diode optimized for fast turn on time and large power dissipation.
c. A diode with a low forward voltage that is placed in parallel with ESD diodes.
d. A specialized diode that minimizes leakage over temperature.

Quiz: Electrical Overstress – 1

4. Positive LDO (low-drop-out) linear voltage regulators can _____.

a. Sink but not source current
b. Source and sink current equally
c. Source but not sink current

5. The goal of the TVS diode is to _____.

a. Limit the input current to less than 10mA during EOS events
b. Limit the supply voltage to less than the absolute maximum during EOS
c. Direct EOS energy to an absorption device.
d. Maintain the temperature of the device during EOS

6. What generally limits the resistance which can be connected to the output of an amplifier?

a. The amplifier bandwidth.
b. The amplifier output swing
c. The amplifier slew rate
d. The amplifier offset drift.

Quiz: Electrical Overstress – 1

7. (T/F) Applying an overstress voltage to a device input can cause the absorption device to latch on and draw excessive current.

a. True
b. False

8. Assume than an EOS event turns on the absorption device while the IC is powered on. Once the EOS event ends, the absorption device _____.

a. Will return to normal operation
b. Will return to normal operation with degraded performance
c. Will continue to draw excessive current until power is cycled.

Electrical Overstress – 1

Multiple Choice Quiz: Solutions

TI Precision Labs – Op Amps

Quiz: Electrical Overstress – 1

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