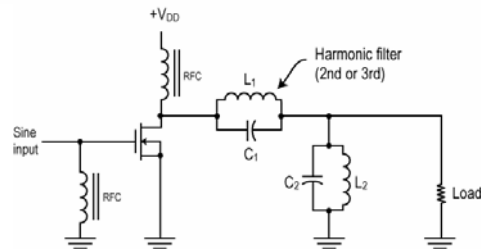


## Switching Amplifiers: Switching RF Power Amplifiers

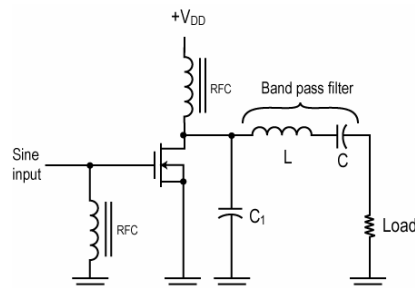
### Objectives:

1. Differentiate between classes of RF amplifiers.
  2. Describe amplifier performance in terms of gain, frequency response, the power output, efficiency, and the total harmonic distortion.
  3. Describe the effects of harmonic distortion related to amplifier types.
  4. Explain switching amplifier operation at the component level.
  5. Identify applications of switching amplifiers.
- 
1. When class D amplifiers are utilized in RF circuits, the circuit is simplified because the \_\_\_\_\_ is not used.
    - a. FM
    - b. PM
    - c. Power supply
    - d. PWM
  2. Switching amplifiers used in RF applications are generally classified as
    - a. Class A, B, and C
    - b. Class D, E, and F
    - c. Class AB
    - d. Class 1, 2, and 3
  3. In a class D RF amplifier, the output of the amplifier is fed through a
    - a. Band pass filter
    - b. Band stop filter
    - c. High pass filter
    - d. Low pass filter
  4. Class D amplifiers use a push pull arrangement of the power transistors while class E amplifiers use
    - a. Band stop filter
    - b. Bridged amplifier
    - c. Dual power supply
    - d. Single power transistor
  5. A class F amplifier uses a \_\_\_\_\_ circuit to set the operating frequency and remove unwanted harmonics.
    - a. MOSFET
    - b. Parallel resonant
    - c. Series resonant
    - d. Series tank



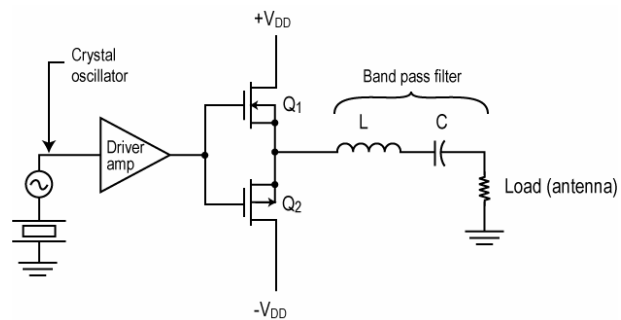
6. What class of RF amplifier is represented in this graphic?

- a. Class AB
- b. Class D
- c. Class E
- d. Class F



7. What class of RF amplifier is represented in this graphic?

- a. Class AB
- b. Class D
- c. Class E
- d. Class F



8. What class of RF amplifier is represented in this graphic?

- a. Class AB
- b. Class D
- c. Class E
- d. Class F



9. How are class D, E, and F RF amplifiers used?
- a. Car radios, larger auto sound systems, public address (PA), and computer sound cards
  - b. CD players, MP3 players, and DVD players
  - c. Multiple speaker “surround sound” systems
  - d. Portable FM radio communications equipment