



## Integrated circuit

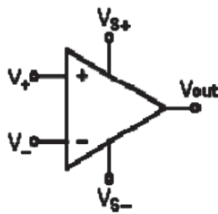
1. Principle of integrated circuit.
2. Classification and selection of integrated circuit .

### Operational amplifier 741

1. Principle of operational amplifier 741.
2. Application of operational amplifier 741.

### Operational amplifier 741

the circuit symbol for an op-amp is shown to the right, where:



$V_{i+}$  : non-inverting input

$V_{i-}$  : inverting input

$V_{out}$  : output

$V_{S+}$  : positive power supply

$V_{S-}$  : negative power supply



## Applications

- 1) audio- and video-frequency pre-amplifiers and buffers
- 2) voltage comparators
- 3) differential amplifiers
- 4) differentiators and integrators
- 5) filters
- 6) precision rectifiers
- 7) precision peak detectors
- 8) voltage and current regulators
- 9) analog calculators
- 10) analog-to-digital converters
- 11) digital-to-analog converter
- 12) voltage clamps
- 13) oscillators and waveform generators