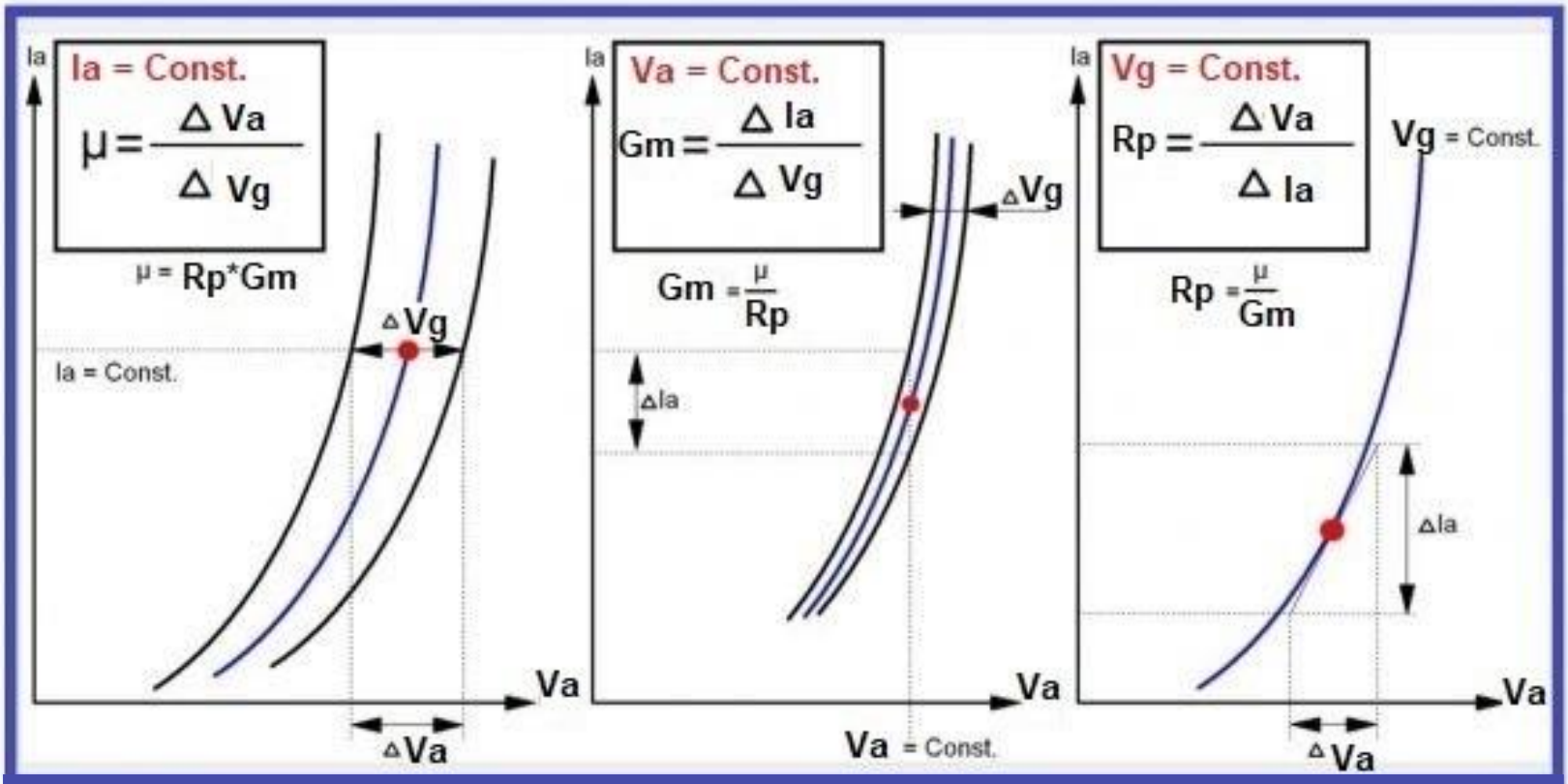

Legend:

- Va = Volts Anode/Plate
- Vg = Volts Grid
- Ia = Current Anode/Plate
- Rp = Internal Tube Plate Resistance - Typically found on a tube's datasheet as Rp, Ri, or Plate Resistance. Note: this is not the same as the plate load resistor external to the tube.

Amplification Factor (μ or mu) :

- μ or mu = ΔVa / ΔVg where Ia is constant
- μ equals the change in plate voltage divided by a change in grid voltage
- μ has no unit of measure
- μ is a measure of grid efficiency. The higher the μ, the larger the plate voltage change (output signal) is as a result of a change in grid voltage (input signal)
- Amplification Factor or mu is typically provided on a tube's datasheet

Transconductance (Gm):

- Gm = ΔIa / ΔVg where Va is constant
- Gm equals a change in plate current divided by a change in grid voltage with the plate voltage held constant.
- Thus, if you know the Gm value from the datasheet, you know the amount of plate current you will vary with a given change in grid voltage
- Gm unit is in μmhos (umhos)
- Transconductance or Gm is typically provided on a tube's datasheet.

Tube Characteristics Interrelationships:

- μ = Gm * Rp
- Rp = μ / Gm
- Gm = μ / Rp