

The common source amplifier exhibited the behavior of a logical inverter with low input voltage yielding high output voltage and high input voltage yielding low output voltage. At V_{in} lower than threshold, the transistor operates in cutoff, and V_{out} is therefore at its highest value. When V_{in} exceeds threshold, current begins to flow which causes a voltage drop across the resistor, thus decreasing V_{out} . The current continues to increase as V_{in} increases, resulting in larger voltage drops across the resistor which further decreases V_{out} . Eventually, the transistor hits triode mode and current levels off. The bias point, like the common drain amplifier, occurs in the middle of the saturation region and corresponds to the steepest slope in the curve.