Each contact creates a metal-semiconductor (Schottky) diode. Depletion regions are shown for zero bias voltage.
1958 First Integrated Circuit

1 Transistor
1 Capacitor
3 Resistors

Hand soldered interconnect
1961 First Commercial ICs

Fairchild Bipolar RTL RS Flip-Flop

Using

- Planar Bipolar Transistors
- Back to back PN junctions to provide isolation
- Integrated interconnect
- Resistor Transistor Logic

RTL NOR gate