The 2N170 is a high-gain NPN germanium transistor intended for use in high-frequency circuits by amateurs, hobbyists, and experimenters. The 2N170 can be used in any of the many published circuits where a low voltage, high-frequency transistor is necessary such as for regenerative receivers, high-frequency oscillators, etc. If you desire to use the 2N170 NPN transistor in a circuit showing a PNP type transistor, it is only necessary to change the connections to the power supply as sketched below:

**Specifications**

**Absolute Maximum Ratings**

- Voltage Collector to Emitter \( V_{CE} \): 6 volts
- Current Collector \( I_C \): 20 mA
- Power Collector Disipation \( P_{D} \): 25 milliwatts
- Temperature Range Operating and Storage \( T_{O} \): -55 to 50 °C

*Denote 1 mA/°C increase in ambient temperature.

**Electrical Characteristics**

- High Frequency Characteristics
  - Input Impedance (Common Collector): \( Z_{in} \) = 800 ohms
  - Collector to Base Capacitance (if \( f = 1 \) mc): \( C_{CB} \) = 0.2 pF
  - Frequency Cutoff \( (V_{CE} = 5 \text{v}) \): \( f_{T} \) = 30Mc
  - Power Gain (Common Collector): \( G_{T} \) = 24 db

- Low Frequency Characteristics
  - Input Impedance \( h_{i} \) = 15K ohms
  - Voltage Feedback Ratio \( h_{v} \) = 4 x 10^-6
  - Current Gain \( h_{t} \) = 56
  - Output Admittance \( h_{o} \) = 3 x 10^-9 ohms
  - Common Emitter Base Current Gain \( h_{ie} \) = 32

- Cutoff Characteristics
  - Collector Cutoff Current \( (V_{CE} = 5 \text{v}) \): \( I_{C} \) = 5 microamps

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