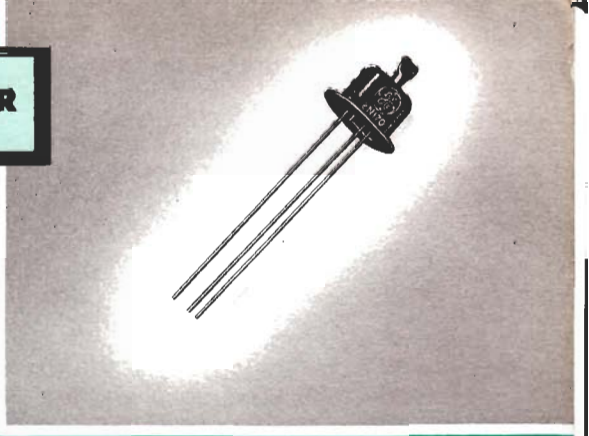
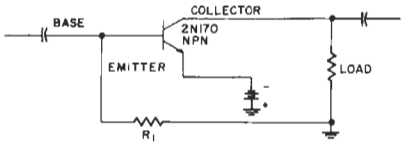
NPN JUNCTION TRANSISTOR

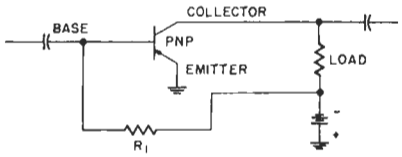


TYPE 2N170

The 2N170 is a rate grown 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:



TYPICAL NPN AMPLIFIER



TYPICAL PNP AMPLIFIER

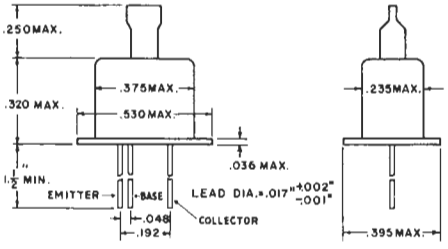
SPECIFICATIONS

ABSOLUTE MAXIMUM RATINGS

Voltage		
Collector to Emitter	V_c	6 volts
Current		
Collector	I_c	20 ma
Power		
Collector Dissipation @ 25°C*	P_c	25 mw
Temperature Range		
Operating and Storage	T_s	−55 to 50 °C

*Derate 1 mw/°C increase in ambient temperature.

OUTLINE DRAWING



ELECTRICAL CHARACTERISTICS**

High Frequency Characteristics		
(I_E = 1 ma; V_{CE} = 5v; f = 455 KC except as noted)		
Input Impedonce (Common Emitter)	Z_{in}	800 ohms
Output Impedance (Common Emitter)	Z_{out}	15K ohms
Collector to Base Capacitance (f = 1 mc)	C_{ob}	3 μμf
Frequency Cutoff (V_{CB} = 5V)	f_{ab}	5 mc
Power Goin (Comman Emitter)	G_e	24 db
Low Frequency Characteristics		
(I_E = 1 ma; V_{CE} = 5v; f = 270 cps)		
Input Impedance	h_{ib}	55 ohms
Voltage Feedback Ratio	h_{rb}	4×10^{-4}
Current Gain	h_{fb}	.97
Output Admittance	h_{ob}	$.3 \times 10^{-6}$ μmhos
Common Emitter Base Current Gain	h_{fe}	32
Cutoff Characteristics		
Collector Cutoff Current (V_{CB} = 5v)	I_{co}	5 μa max

**All values are typical unless indicated as a min. or max.

ELECTRONICS DIVISION

GENERAL ELECTRIC

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