The 2N63 is a hermetically sealed PNP junction transistor intended primarily for use in audio or low radio frequency applications. The tinned flexible leads may be soldered or welded directly to the terminals of circuit components without the use of sockets. Standard inline subminiature sockets may be used by cutting the leads to a suitable length.

MECHANICAL DATA

CASE: Metal and Glass
BASE: None (0.016" tinned flexible leads. Length: 1.5" min.
Spacing: Leads 1 & 4 0.144" center-to-center;
Other Leads 0.048" center-to-center)

TERMINAL CONNECTIONS:
- Lead 1 Collector
- Lead 4 Base
- Lead 5 Emitter
MOUNTING POSITION: Any

ELECTRICAL DATA

RATINGS - ABSOLUTE MAXIMUM VALUES:
- Collector Voltage \( V_{cc} \): -22 volts
- Peak Collector Voltage \( V_{cc} \): -44 volts
- Collector Current: -10 mA
- Collector Dissipation \( P_{dd} \): 10 mA
- Ambient Temperature \( T_A \): 85 °C

AVERAGE CHARACTERISTICS: (at 27°C)
- Collector Voltage: -6 volts
- Emitter Current: 1.0 mA
- Collector Resistance: 2.0 meg.
- Base Resistance: 350 ohms
- Emitter Resistance: 25 ohms
- Base Current Amplification Factor: 22
- Cut-off Current (approx.): 6 µA
- Noise Factor (max.): 25 db

AVERAGE CHARACTERISTICS - COMMON EMITTER: (at 27°C)
- Collector Voltage: 1.5 volts
- Emitter Current: 0.5 mA
- Input Resistance: 1400 ohms
- Load Resistance: 20,000 ohms
- Power Gain (Matched Input): 37

AVERAGE CHARACTERISTICS - COMMON COLLECTOR: (at 27°C)
- Collector Voltage: -6 volts
- Emitter Current: 1.0 mA
- Input Resistance: 0.35 meg.
- Load Resistance: 20,000 ohms
- Power Gain (Matched Input): 13 db.

AVERAGE CHARACTERISTICS - COMMON BASE: (at 27°C)
- Collector Voltage: -6 volts
- Emitter Current: 1.0 mA
- Input Resistance: 50 ohms
- Load Resistance: 0.1 meg.
- Power Gain (Matched Input): 32 db

This is the maximum operating temperature recommended. However, characteristic damage will not result from occasional exposures to storage temperatures up to 100°C.

* Measured under conditions for grounded emitter operation at \( V_{cc} = 2.5 \) volts for a 1 cycle bandwidth at 1000 cycles.

** Higher input impedances, without appreciable loss in gain, can be achieved by operating at lowered collector current.

* This is a function of maximum ambient temperature \( T_A \) expected. It is approximately equal to \( 1.7 (\text{85°C} \cdot T_A) \) milliwatts.

* In circuits stabilized for \( I_c \) or \( I_e \) and which do not have critical distortion requirements, absolute maximum peak voltage is 75 volts.

* Collector voltage \( V_{ce} \) at which \( I_c \) rises to 2 mA in common emitter circuit with base lead connected directly to emitter lead. Ambient temperature = 25°C.

Tentative Data

RAYTHEON MANUFACTURING COMPANY
RECEIVING AND CATHODE RAY TUBE OPERATIONS

February 22, 1955
NEWTON 58, MASS.
Page 1 of 3
GROUNDED BASE
Typical Collector Characteristics

GROUNDED EMITTER
Typical Collector Characteristics

This family is a function of $1-\alpha$ and thus changes appreciably with small changes in $\alpha$.  

Raytheon Manufacturing Company
Receiving and Cathode Ray Tube Operations

October 8, 1954
Newton 58, Mass.
GERMANIUM TRANSISTOR

TYPICAL CHARACTERISTICS AS
A FUNCTION OF JUNCTION TEMPERATURE

Temperature - Degrees Centigrade

Percent of Value at 27°C

Arrows refer to positive electrode current flow.