

### Excellence in Electronics

TYPE 2 N 1 3 O

The 2N130 is a 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 with insulating coating.

DATINGS - ADSOLUTE MAYIMUM VALUES

BASE: None (0.014" tinned flexible leads. Length: 1.5" min. Spacing: 0.04" center-to-center)

TERMINAL CONNECTIONS: (Red Dot is adjacent to Lead 1)

Lead 1 Collector

Lead 2 Base Lead 3 Emitter

MOUNTING POSITION: Any

### ELECTRICAL DATA

RATINGS - ABSOLUTE MAXIMUI	M VALUES:			
Collector Voltage (V <sub>C</sub> ) Peak Collector Voltage (V <sub>d</sub> )♦ Collector Current Collector Dissipation *	Φ	- 44	volts volts ma.	
Emitter Current Ambient Temperature		10 85	ma. °C	
AVERAGE CHARACTERISTICS:	(at 27°C)			
Collector Voltage Emitter Current Collector Resistance Base Resistance Emitter Resistance Base Current Amplification Fac Cut - off Current (approx.)		1.0 2.0 350 25 22	volts ma. meg. ohms ohms	
Noise Factor (max.)		25	$\mu$ a. db.	
AVERAGE CHARACTERISTICS -	- COMMON EMITTER: (at 27°C)			
Collector Voltage Emitter Current Input Resistance Load Resistance Power Gain (Matched Input)	- 1.5 0.5 1400 20,000 37	1.0 800 20,000	volts ma. ohms ohms db.	
AVERAGE CHARACTERISTICS -	COMMON COLLECTOR: (at 27°C)			
Collector Voltage Emitter Current Input Resistance  Load Resistance Power Gain (Matched Input)		1.0 0.35 20,000	meg.	
AVERAGE CHARACTERISTICS .	COMMON BASE: (at 27°C)			
Collector Voltage Emitter Current Input Resistance		1.0	volts ma. ohms	
Load Resistance Power Gain (Matched Input)		20,000	ohms db.	

Nominal Radius (Bottom) 0.070" 0.180" max.

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Red Dot

- This is the maximum operating or storage temperature recommended.
- Measured under conditions for grounded emitter operation at Vcb=-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 (TA) expected. It is approximately equal to 1.4 (85° C-TA) milliwatts in free air and to 3 (85° C-TA) when the case is clipped to the chassis.
- ♦ Collector Voltage V at which I c rises to 2 ma. in common emitter circuit with base lead connected directly to emitter lead. Ambient Temperature = 25 ° C.
- In circuits stabilized for Ic or Ie and which do not have critical distortion requirements, absolute maximum peak voltage is 75 volts.

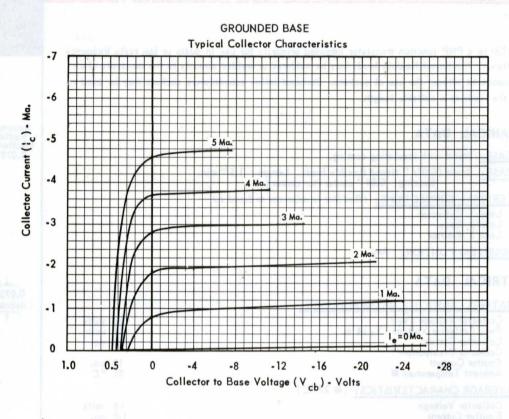
  Tentative Data

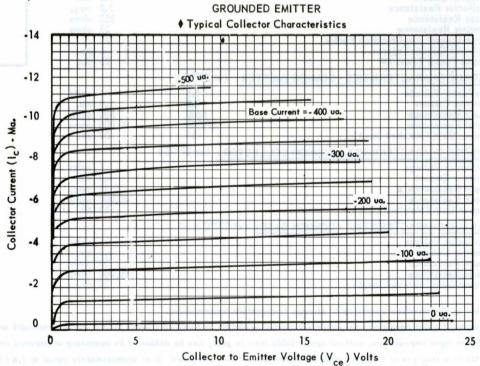
## RAYTHEON MANUFACTURING COMPANY

RECEIVING AND CATHODE RAY TUBE OPERATIONS



#### GERMANIUM TRANSISTOR



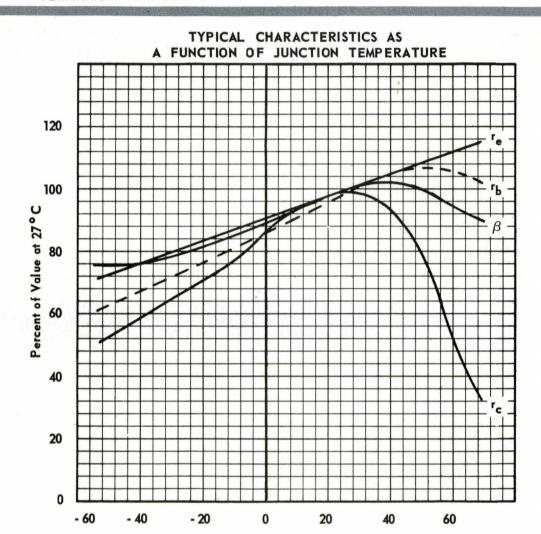


lacktriangle This family is a function of 1-a and thus changes appreciably with small changes in a.

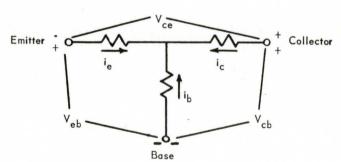
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#### **GERMANIUM TRANSISTOR**



Temperature - Degrees Centigrade



Arrows refer to positive electrode current flow.

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