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TYPE 2N119

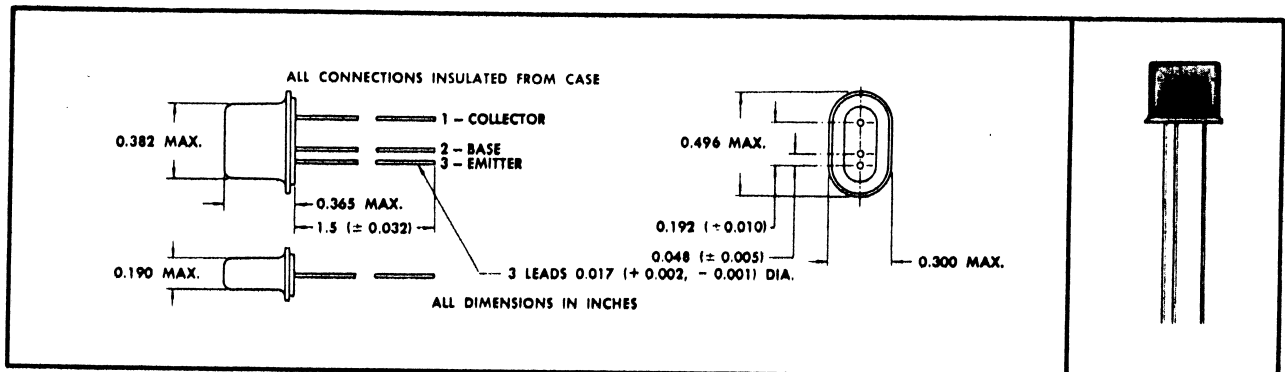
N-P-N GROWN JUNCTION SILICON TRANSISTOR

36 to 86 beta spread

Specifically designed for high gain at high temperatures

mechanical data

Welded case with glass-to-metal hermetic seal between case and leads. Approximate weight is 1.7 grams.



absolute maximum ratings at 25°C ambient [except where advanced temperatures are indicated]

Collector Voltage Referred to Base	45 V
Emitter Voltage Referred to Base	1 V
Collector Current	25 mA
Emitter Current	- 25 mA
Collector Dissipation	150 mW
at 100°C	100 mW
at 150°C	50 mW

junction temperature

Maximum Range -65°C to +175°C

common base design characteristics at T_j = 25°C [except where advanced temperatures are indicated]

		test conditions		min.	design center	max.	unit
BV _{CEO}	Collector Breakdown Voltage	I _C = 50μA	I _E = 0	45	—	—	Volt
I _{CBO}	Collector Cutoff Current	V _{CB} = 30V	I _E = 0	—	—	2	μA
	at 100°C	V _{CB} = 5V	I _E = 0	—	—	10	μA
	at 150°C	V _{CB} = 5V	I _E = 0	—	—	50	μA
h _{ib}	Input Impedance	V _{CB} = 5V	I _E = -1mA	30	42	80	Ohm
h _{ob}	Output Admittance	V _{CB} = 5V	I _E = -1mA	0.0	0.4	1.2	μmho
h _{fb}	Feedback Voltage Ratio	V _{CB} = 5V	I _E = -1mA	50	400	1000	X10 ⁻⁶
h _{fb}	Current Transfer Ratio	V _{CB} = 5V	I _E = -1mA	-0.9735	-0.98	-0.989	—
PG _e	Power Gain*†	V _{CE} = 20V	I _E = -2mA	—	42	—	db
NF	Noise Figure*†	V _{CE} = 5V	I _E = -1mA	—	20	—	db
f _{αb}	Frequency Cutoff	V _{CB} = 5V	I _E = -1mA	—	6	—	mc
C _{ob}	Output Capacitance (1mc)	V _{CB} = 5V	I _E = -1mA	—	7	—	μμf
R _{cs}	Saturation Resistance*	I _B = 2.2mA	I _C = 5mA	—	100	200	Ohm

*Common Emitter

†R_g = 1k; R_L = 20k

‡Conventional Noise—Compared to 1000 ohm resistor, 1000 cps and 1 cycle band width

