New Jersey Semi-Conductor Products, Inc.

20 STERN AVE.
SPRINGFIELD, NEW JERSEY 07081
U.S.A.

TELEPHONE: (973) 376-2922
(212) 227-6005
FAX: (973) 376-8960

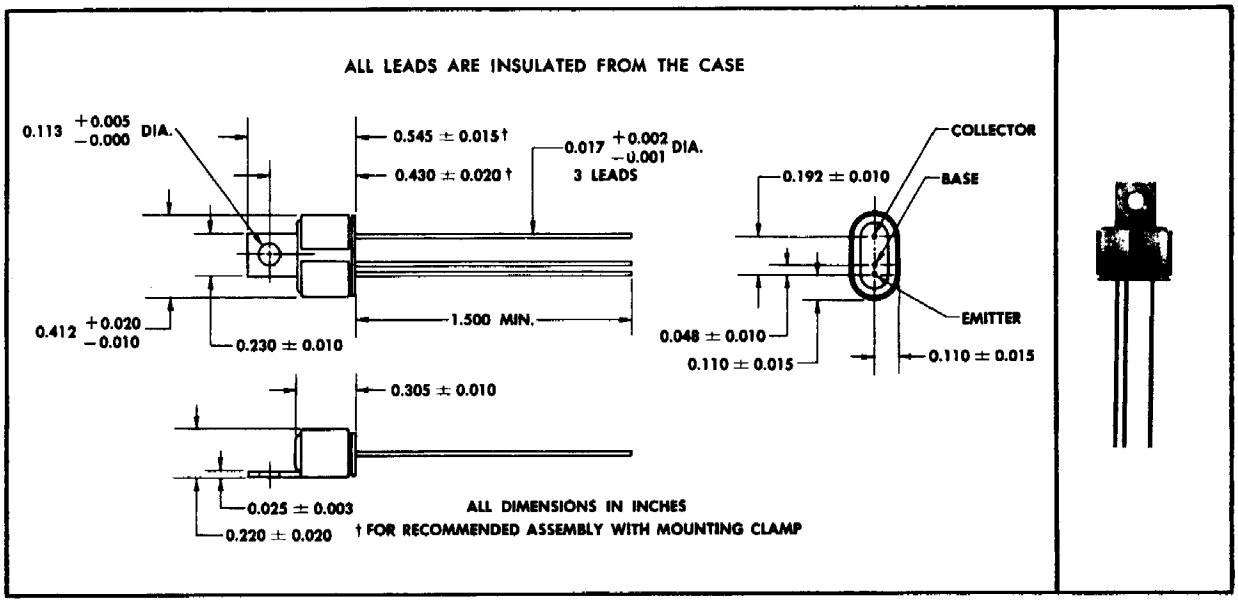
2N243, 2N244

N-P-N GROWN SILICON TRANSISTORS

Oval Welded Package

mechanical data

The transistor is in an oval welded package with glass-to-metal hermetic seal between case and leads. Unit weight is approximately 1 gram. The mounting clip is hardware supplied with the transistor.



***absolute maximum ratings at 25°C case temperature (unless otherwise noted)**

Collector-Base Voltage	60 v
Collector Current	60 ma
Total Device Dissipation (see note 1)	750 mw
Collector Junction Operating Temperature	+150°C
Storage Temperature Range	−55° to +150°C

NOTE: 1. Derate linearly to 150°C case temperature at the rate of 6 mw/°C.

†Indicates JEDEC registered data.

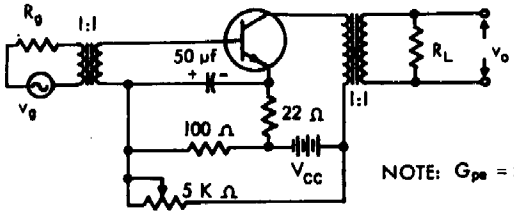
electrical characteristics at 25°C case temperature (unless otherwise noted)

parameter		test conditions		types	min*	typ	max*	unit
I_{CBO}	Collector Cutoff Current	$V_{CB} = 30$ v,	$I_E = 0$	All			1	μa
I_{CBO}	Collector Cutoff Current	$V_{CB} = 30$ v, $T_C = 150$°C	$I_E = 0$	All		15		μa
BV_{CBO}	Collector-Base Breakdown Voltage	$I_C = 50$ μa,	$I_E = 0$	All	60			v
BV_{CEO}	Collector-Emitter Breakdown Voltage	$I_C = 100$ μa,	$I_B = 0$	All		60		v
V_{BE}	Base-Emitter Voltage	$I_B = 3$ ma,	$I_C = 20$ ma	All			1	v
$r_{CE(sat)}$	DC Collector-Emitter Saturation Resistance	$I_B = 3$ ma,	$I_C = 20$ ma	All			350	ohm
h_{fb}	AC Common-Base Forward Current Transfer Ratio	$V_{CB} = 10$ v, $f = 1$ kc	$I_E = -5$ ma	2N243 2N244	–0.9 –0.961	–0.94 –0.97	–0.968 –0.989	— —
h_{ib}	AC Common-Base Input Impedance	$V_{CB} = 10$ v, $f = 1$ kc	$I_E = -5$ ma	All		12	30	ohm
h_{rb}	AC Common-Base Reverse Voltage Transfer Ratio	$V_{CB} = 10$ v, $f = 1$ kc	$I_E = -5$ ma	All		60×10^{-4}	300×10^{-4}	—

functional tests at 25°C case temperature

G_{pe}	Common-Emitter Power Gain (See Circuit Below)	$V_{CB} = 28$ v $R_g = 100\ \Omega$, $f = 1$ kc,	$I_C = 20$ ma $R_L = 1\text{K}\Omega$ $V_g = 0.2$ v	All	30			db

POWER GAIN TEST CIRCUIT



NOTE: $G_{pe} = 10 \log \frac{4 R_g}{R_L} \left(\frac{V_o}{V_g}\right)^2$