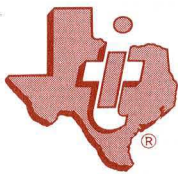


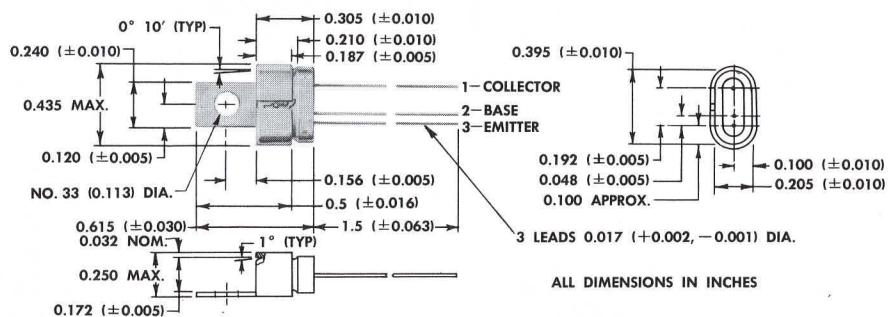
TYPE 2N244 N-P-N GROWN JUNCTION SILICON TRANSISTOR



Texas Instruments Type 2N244 N-P-N grown junction *silicon* transistor is especially designed for use in audio or servo amplifier stages requiring medium power output. Beta is limited to a 3 to 1 spread, permitting closer control in circuit design. The large energy gap of silicon permits operation at ambient temperatures up to 150°C. Each unit is thoroughly temperature cycled. This process consists of four temperature shock cycles from -55°C to +150°C and four cycles at 95% relative humidity from -55°C to +75°C. In addition, the hermetic seal is checked by vacuum testing. Every unit is completely tested for design characteristics and undergoes a rigorous tumble test to check for mechanical reliability.

mechanical data

Metal case with glass-to-metal hermetic seal between case and leads. Approximate weight is 2 grams.



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

Collector Voltage Referred to Base	60 v
Collector Current	60 ma
Collector Dissipation at 100°C	750 mw
Collector Dissipation at 125°C	300 mw
	150 mw

junction temperature

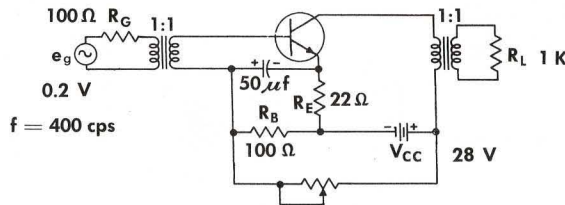
Maximum Range -55°C to +150 °C

design characteristics at T_j = 25°C

		test conditions		min.	design center	max.	unit
BV _{CO}	Collector Breakdown Voltage	I _C = 50 uA	I _E = 0	60	—	—	Volt
I _{CO}	Collector Cutoff Current	V _{CB} = 30 V	I _E = 0	—	—	1	μA
V _{BE}	Bias Voltage	I _B = 3 mA	I _C = 20 mA	—	—	1	Volt
R _{CS}	Collector Saturation Resistance	I _B = 3 mA	I _C = 20 mA	—	—	350	Ohm
h _{ib}	Input Impedance	V _{CB} = 10 V	I _E = -5 mA	—	12	30	Ohm
h _{rb}	Reverse Voltage Transfer Ratio	V _{CB} = 10 V	I _E = -5 mA	—	60	300	X10 ⁻⁶
h _{fb}	Forward Current Transfer Ratio	V _{CB} = 10 V	I _E = -5 mA	-0.961	-0.97	-0.989	—
PG _e	Power Gain*	V _{CB} = 28 V	I _C = 20 mA	30	—	—	db

* As measured in the circuit shown below.

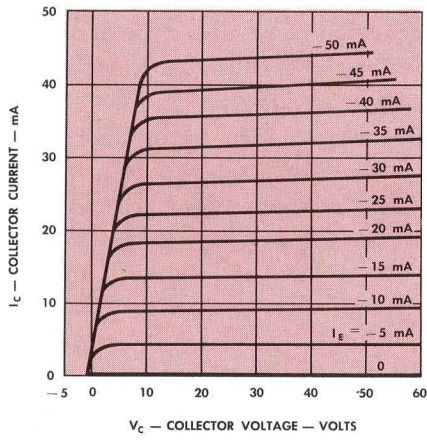
test circuit



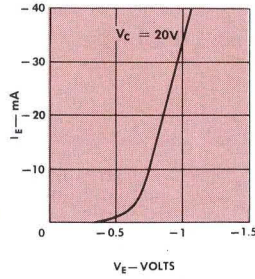
LICENSED UNDER BELL SYSTEM PATENTS

TYPE 2N244

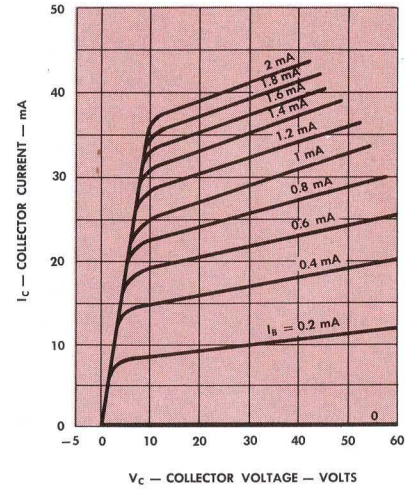
TYPICAL CHARACTERISTICS



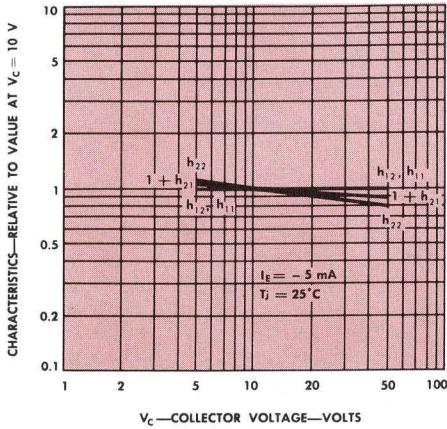
COMMON BASE OUTPUT CHARACTERISTICS



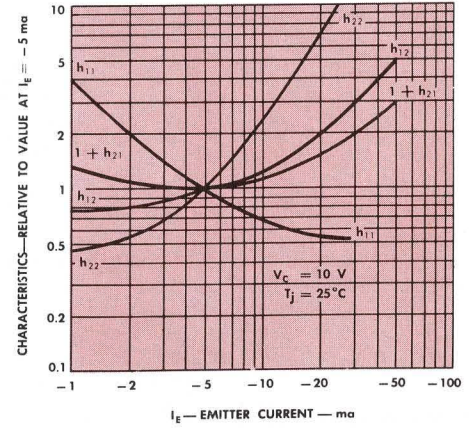
I_e VS. V_e , COMMON BASE



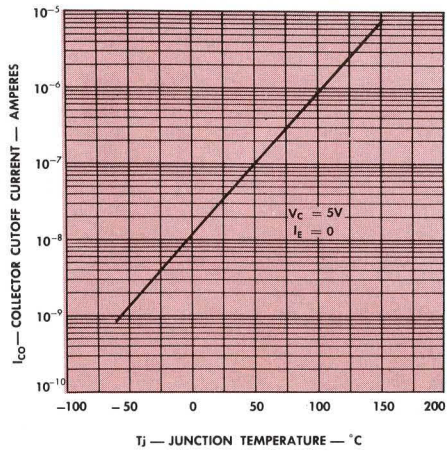
COMMON EMITTER OUTPUT CHARACTERISTICS



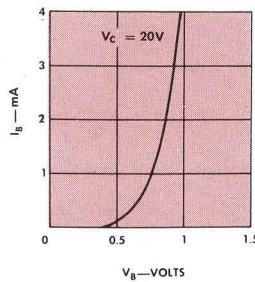
COMMON BASE CHARACTERISTICS VS. COLLECTOR VOLTAGE



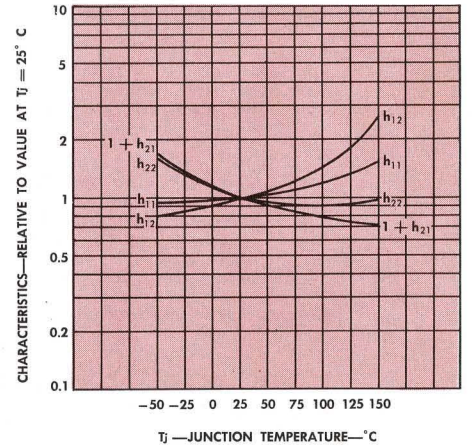
COMMON BASE CHARACTERISTICS VS. EMITTER CURRENT



COLLECTOR CUTOFF CURRENT VS. JUNCTION TEMPERATURE



I_b VS. V_b , COMMON EMITTER



COMMON BASE CHARACTERISTICS VS. JUNCTION TEMPERATURE

TO SUPPLY THE BEST PRODUCTS POSSIBLE, TEXAS INSTRUMENTS RESERVES THE RIGHT TO MAKE CHANGES AT ANY TIME IN ORDER TO IMPROVE DESIGN.