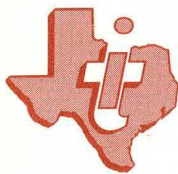


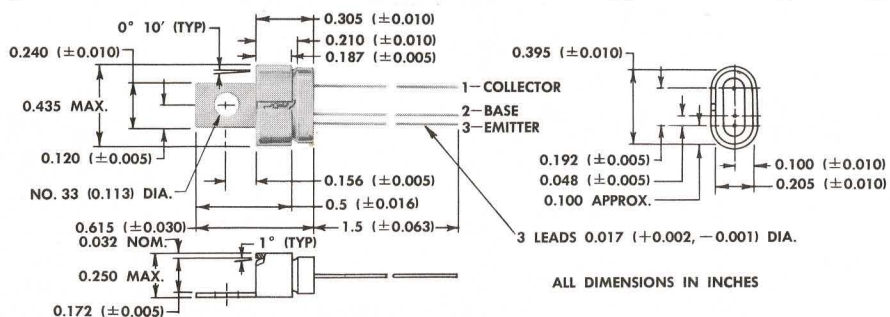
TYPE 2N243 N-P-N GROWN JUNCTION SILICON TRANSISTOR



Texas Instruments Type 2N243 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 case temperature [except where advanced temperatures are indicated]

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

junction temperature

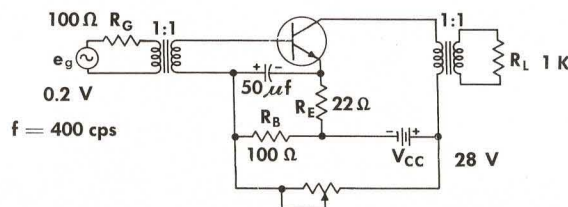
Maximum Range -55°C to +150 °C

typical design characteristics at $T_j = 25^\circ\text{C}$

		test conditions	min.	design center	max.	unit
BV_{CO}	Collector Breakdown Voltage	$I_C = 50 \mu\text{A}$ $I_E = 0$	60	—	—	Volt
I_{CO}	Collector Cutoff Current	$V_{CB} = 30 \text{ V}$ $I_E = 0$	—	—	1	μA
V_{BE}	Bias Voltage	$I_B = 3 \text{ mA}$ $I_C = 20 \text{ mA}$	—	—	1	Volt
R_{cs}	Collector Saturation Resistance	$I_B = 3 \text{ mA}$ $I_C = 20 \text{ mA}$	—	—	350	Ohm
h_{ib}	Input Impedance	$V_{CB} = 10 \text{ V}$ $I_E = -5 \text{ mA}$	—	12	30	Ohm
h_{rb}	Reverse Voltage Transfer Ratio	$V_{CB} = 10 \text{ V}$ $I_E = -5 \text{ mA}$	—	60	300	$\times 10^{-6}$
h_{fb}	Forward Current Transfer Ratio	$V_{CB} = 10 \text{ V}$ $I_E = -5 \text{ mA}$	-0.9	-0.94	-0.968	—
PG_e	Power Gain*	$V_{CB} = 28 \text{ V}$ $I_C = 20 \text{ mA}$	30	—	—	db

* As measured in the circuit shown below.

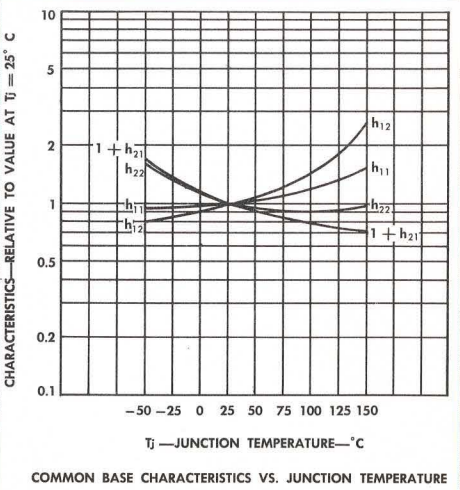
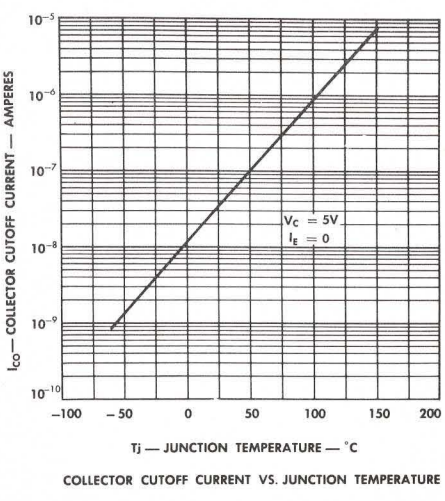
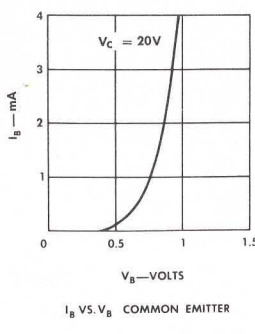
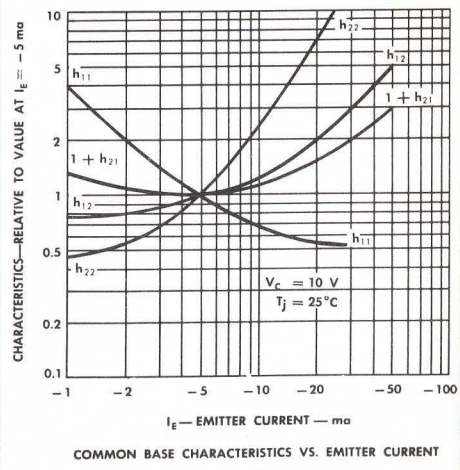
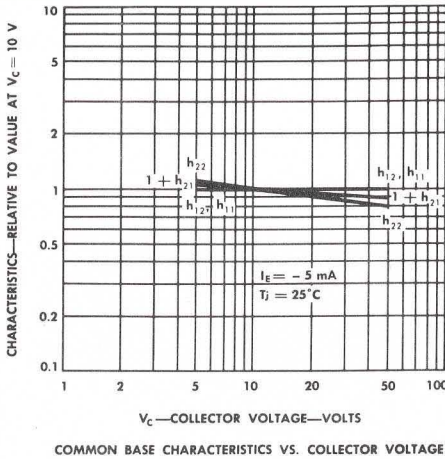
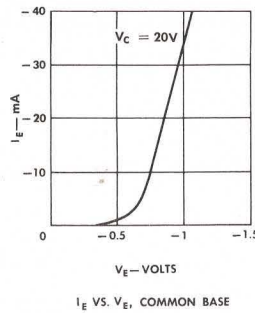
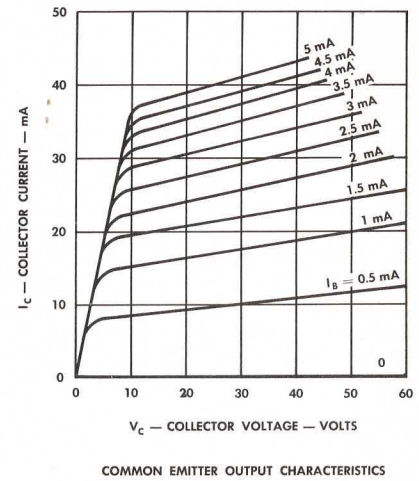
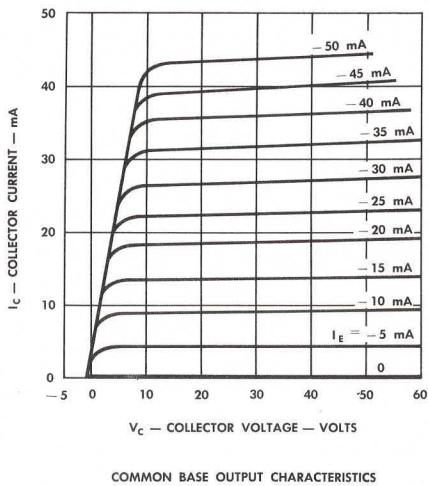
test circuit



LICENSED UNDER BELL SYSTEM PATENTS

TYPE 2N243

TYPICAL CHARACTERISTICS



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

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