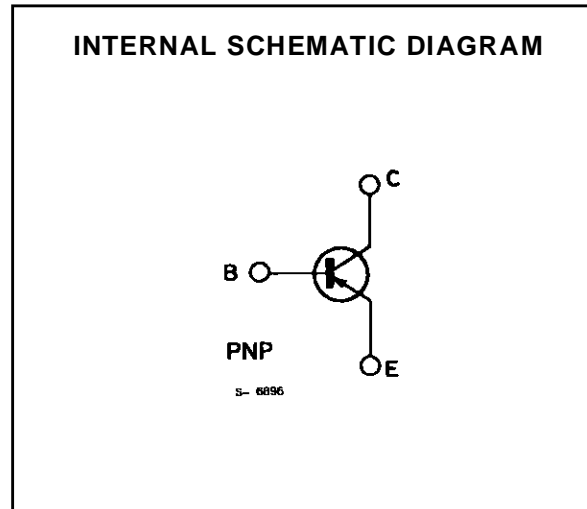
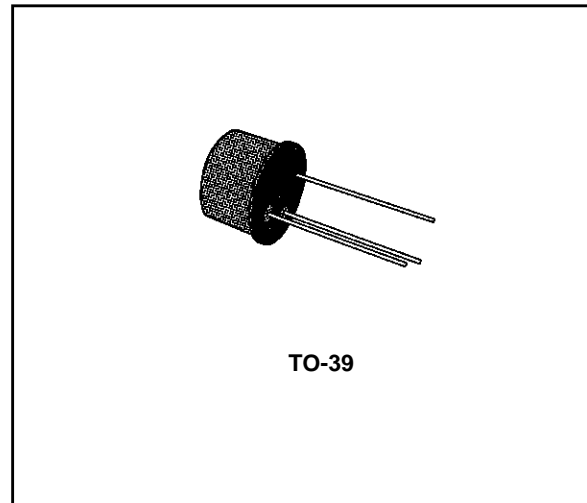


AUDIO AMPLIFIER

DESCRIPTION

The BC143 is a silicon planar epitaxial PNP transistor specially designed for use in the driver of high power audio amplifiers.



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-base Voltage ($I_E = 0$)	- 60	V
V_{CEO}	Collector-emitter Voltage ($I_B = 0$)	- 60	V
V_{EBO}	Emitter-base Voltage ($I_C = 0$)	- 5	V
I_C	Collector Current	- 1	A
P_{tot}	Total Power Dissipation at $T_{amb} \leq 25\text{ }^\circ\text{C}$ at $T_{case} \leq 25\text{ }^\circ\text{C}$	0.75	W
		4	W
T_{stg}, T_j	Storage and Junction Temperature	- 55 to 175	$^\circ\text{C}$

THERMAL DATA

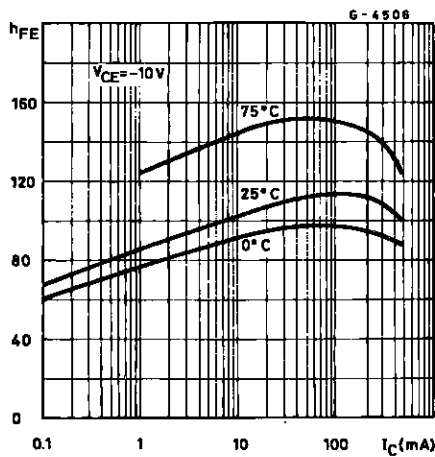
$R_{th\ j-case}$	Thermal Resistance Junction-case	Max	37	°C/W
$R_{th\ j-amb}$	Thermal Resistance Junction-ambient	Max	200	°C/W

ELECTRICAL CHARACTERISTICS ($T_{amb} = 25\ ^\circ C$ unless otherwise specified)

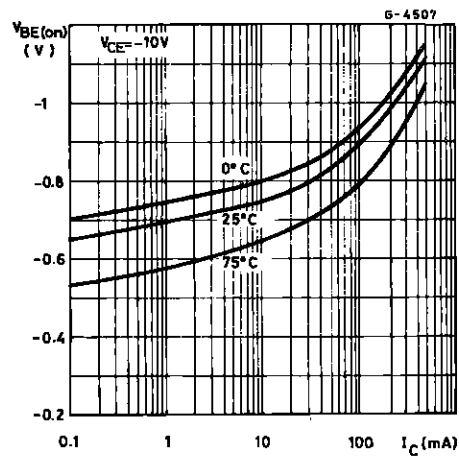
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CBO}	Collector Cutoff Current ($I_E = 0$)	$V_{CB} = -30\ V$ $V_{CB} = -30\ V$ ($T_{amb} = 150\ ^\circ C$)			- 50 - 50	nA μA
$V_{(BR)CBO}$	Collector-base Breakdown Voltage ($I_E = 0$)	$I_C = 100\ \mu A$	- 60			V
$V_{(BR)CEO}^*$	Collector-emitter Breakdown Voltage ($I_B = 0$)	$I_C = 10\ mA$	- 60			V
$V_{(BR)EBO}$	Emitter-base Breakdown Voltage ($I_C = 0$)	$I_E = 10\ \mu A$	- 5			V
$V_{CE(sat)}^*$	Collector-emitter Saturation Voltage	$I_C = 500\ mA$ $I_B = 50\ mA$ $I_C = 1A$ $I_B = 100\ mA$		- 0.25 - 0.7	- 0.5 - 1	V V
V_{BE}^*	Base-emitter Voltage	$I_C = -500\ mA$ $V_{CE} = -10\ V$		- 1.1		V
h_{FE}^*	DC Current Gain	$I_C = 10\ mA$ $V_{CE} = -10\ V$ $I_C = 100\ mA$ $V_{CE} = -10\ V$ $I_C = -300\ mA$ $V_{CE} = -1\ V$ $I_C = 500\ mA$ $V_{CE} = -1\ V$		110 110 40 25		
h_{fe}	High Frequency Current Gain	$I_C = 50\ mA$ $V_{CE} = -10\ V$ $f = 100\ MHz$		1.5		
C_{CBO}	Collector-base Capacitance	$I_E = 0$ $V_{CB} = -10\ V$ $f = 1\ MHz$		13		pF

* Pulsed : pulse duration = 300 μs , duty cycle = 1 %.

DC Current Gain vs. Collector Current.

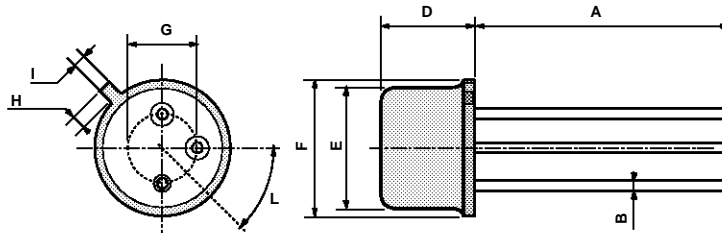


Base-emitter on Voltage vs. Collector Current.



TO39 MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	12.7			0.500		
B			0.49			0.019
D			6.6			0.260
E			8.5			0.334
F			9.4			0.370
G	5.08			0.200		
H			1.2			0.047
I			0.9			0.035
L	45° (typ.)					



P008B

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