

GERMANIUM ALLOY PNP

AUDIO POWER AMPLIFIER

The AD 143 is a germanium alloy junction PNP transistor in a Jedec TO-3 metal case. It is designed specifically for use in class A power amplifiers and in push-pull class B amplifiers.

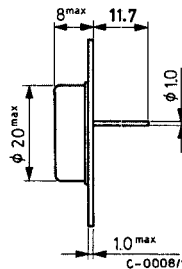
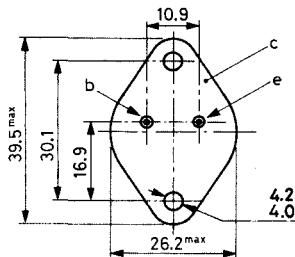
ABSOLUTE MAXIMUM RATINGS

V_{CBO}	Collector-base voltage ($I_E = 0$)	-40	V
V_{CES}	Collector-emitter voltage ($V_{BE} = 0$)	-40	V
V_{EBO}	Emitter-base voltage ($I_C = 0$)	-10	V
I_C	Collector current	-10	A
I_B	Base current	-3	A
P_{tot}	Total power dissipation at $T_c \leq 55^\circ\text{C}$	30	W
T_s	Storage temperature	-65 to 100	$^\circ\text{C}$
T_j	Junction temperature	100	$^\circ\text{C}$

MECHANICAL DATA

Dimensions in mm

Collector connected to case



(sim. to TO-3)

AD 143

THERMAL DATA

$R_{th\ j-c}$	Thermal resistance junction-case	max	1.5	°C/W
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ELECTRICAL CHARACTERISTICS ($T_c = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Test conditions	Min.	Typ.	Max.	Unit
I_{CBO} Collector cutoff current ($I_E = 0$)	$V_{CB} = -0.5\text{ V}$			-0.1	mA
I_{EBO} Emitter cutoff current ($I_C = 0$)	$V_{EB} = -10\text{ V}$			-2	mA
V_{CBO} Collector-base voltage ($I_E = 0$)	$I_C = -5\text{ mA}$	-40			V
V_{CEO} Collector-emitter voltage ($I_B = 0$)	$I_C = -0.6\text{ A}$	-35			V
$V_{CE(sat)}$ Collector-emitter saturation voltage	$I_C = -5\text{ A}$ $I_B = -250\text{ mA}$	-0.3			V
h_{FE} DC current gain Gr. 4 Gr. 5 Gr. 6	$I_C = -1\text{ A}$ $V_{CE} = -2\text{ V}$	30		60	—
	$I_C = -1\text{ A}$ $V_{CE} = -2\text{ V}$	50		110	—
	$I_C = -1\text{ A}$ $V_{CE} = -2\text{ V}$	100		200	—
	$I_C = -5\text{ A}$ $V_{CE} = -2\text{ V}$		45		—
h_{FE1}/h_{FE2} Matched pair	$I_C = -1\text{ A}$ $V_{CE} = -2\text{ V}$			1.4	—
f_T Transition frequency	$I_C = -0.5\text{ A}$ $V_{CE} = -2\text{ V}$	450			KHz