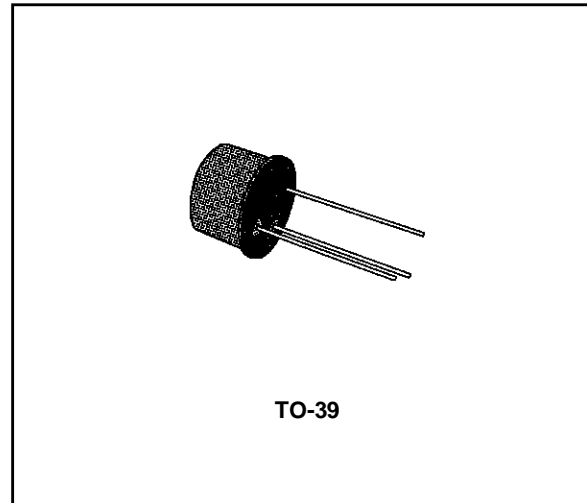


**AUDIO AMPLIFIER**

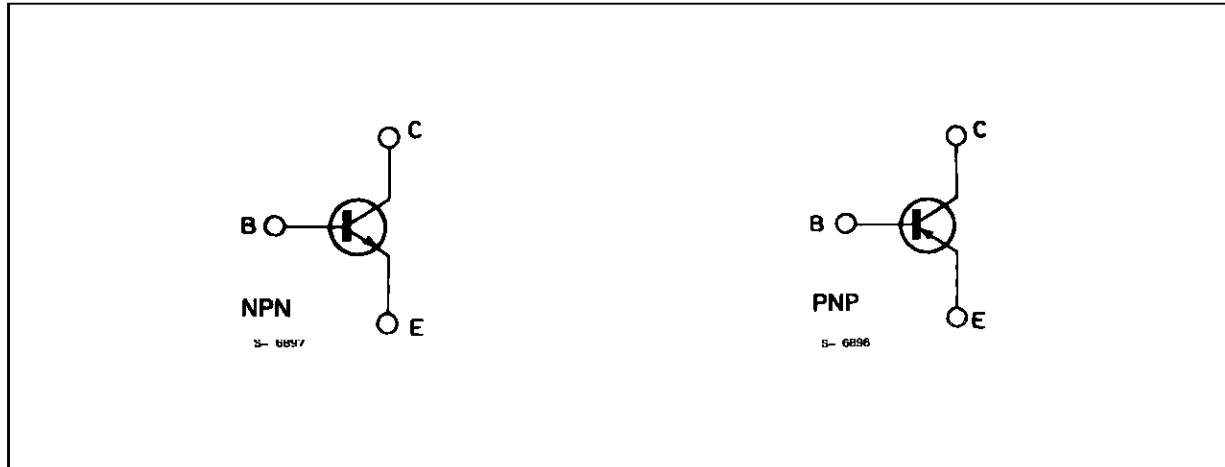
**DESCRIPTION**

The BC286 is a silicon planar epitaxial NPN transistor in Jedec TO-39 metal case. It is mainly intended for use as audio amplifier.

The complementary PNP type is the BC287.



**INTERNAL SCHEMATIC DIAGRAM**



**ABSOLUTE MAXIMUM RATINGS**

Symbol	Parameter	Value	Unit
$V_{CBO}$	Collector-base Voltage ( $I_E = 0$ )	70	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

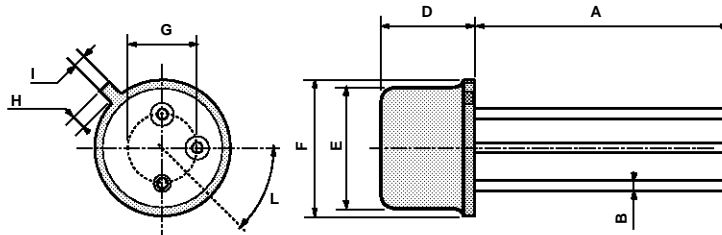
**ELECTRICAL CHARACTERISTICS** ( $T_{amb} = 25\text{ °C}$  unless otherwise specified)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$I_{CBO}$	Collector Cutoff Current ( $I_E = 0$ )	$V_{CB} = 30\text{ V}$			20	nA
$V_{(BR)CBO}$	Collector-base Breakdown Voltage ( $I_E = 0$ )	$I_C = 100\ \mu\text{A}$	70			V
$V_{(BR)CEO}^*$	Collector-emitter Breakdown Voltage ( $I_B = 0$ )	$I_C = 30\text{ mA}$	60			V
$V_{(BR)EBO}$	Collector-emitter Breakdown Voltage ( $I_C = 0$ )	$I_E = 100\ \mu\text{A}$	5			V
$V_{CE(sat)}^*$	Collector-emitter Saturation Voltage	$I_C = 500\text{ mA}$ $I_B = 50\text{ mA}$		0.4		V
		$I_C = 1\text{ A}$ $I_B = 0.1\text{ A}$		0.7	1	V
$V_{BE}^*$	Base-emitter Voltage	$I_C = 500\text{ mA}$ $V_{CE} = 2\text{ V}$		1		V
$h_{FE}^*$	DC Current Gain	$I_C = 100\text{ mA}$ $V_{CE} = 2\text{ V}$		90		
		$I_C = 500\text{ mA}$ $V_{CE} = 2\text{ V}$	20	60		
$f_T$	Transition Frequency	$I_C = 50\text{ mA}$ $V_{CE} = 5\text{ V}$ $f = 100\text{ MHz}$		100		MHz
$C_{CBO}$	Collector-base Capacitance	$I_E = 0$ $V_{CB} = 10\text{ V}$ $f = 1\text{ MHz}$		12		pF

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

## 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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