

Silicon PNP Power Transistors

2SB834

DESCRIPTION

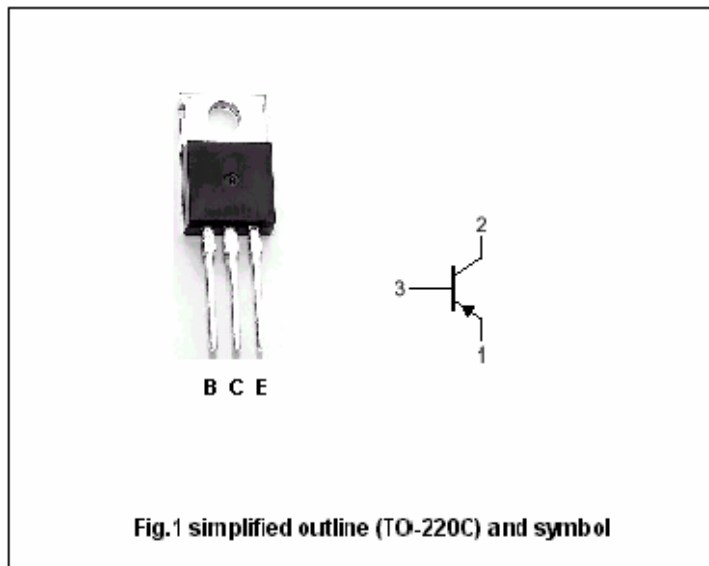
- With TO-220 package
- Low collector saturation voltage
- Complement to type 2SD880

APPLICATIONS

- Audio frequency power amplifier

PINNING

PIN	DESCRIPTION
1	Emitter
2	Collector;connected to mounting base
3	Base

Absolute maximum ratings ($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	-60	V
V_{CEO}	Collector-emitter voltage	Open base	-60	V
V_{EBO}	Emitter-base voltage	Open collector	-7	V
I_C	Collector current		-3	A
I_B	Base current		-0.5	A
P_C	Collector power dissipation	$T_a=25$	1.5	W
		$T_C=25$	30	
T_j	Junction temperature		150	
T_{stg}	Storage temperature		-55~150	

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CHARACTERISTICS

Tj=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR) CEO}$	Collector-emitter breakdown voltage	$I_C = -50mA$; $I_B = 0$	-60			V
V_{BE}	Base-emitter on voltage	$I_C = -0.5A$; $V_{CE} = -5V$		-0.7	-1.0	V
V_{CEsat}	Collector-emitter saturation voltage	$I_C = -3A$; $I_B = -0.3A$		-0.5	-1.0	V
I_{CBO}	Collector cut-off current	$V_{CB} = -60V$; $I_E = 0$			-0.1	mA
I_{EBO}	Emitter cut-off current	$V_{EB} = -7V$; $I_C = 0$			-0.1	mA
h_{FE-1}	DC current gain	$I_C = -0.5A$; $V_{CE} = -5V$	60		200	
h_{FE-2}	DC current gain	$I_C = -3A$; $V_{CE} = -5V$	20			
C_{ob}	Collector output capacitance	$I_E = 0$; $V_{CB} = -10V$; $f = 1MHz$		150		pF
f_T	Transition frequency	$I_C = -0.5A$; $V_{CE} = -5V$		9		MHz

Switching times

t_{on}	Turn-on time	$V_{CC} = -30V$; $R_L = 15\Omega$ $I_{B1} = -I_{B2} = -0.2A$		0.4		μs
t_s	Storage time			1.7		μs
t_f	Fall time			0.5		μs

◆ h_{FE-1} classifications

O	Y
60-120	100-200

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The technical drawing illustrates a mechanical component through three orthographic projections:

- Front View (Top):** Shows a rectangular base with a central circular feature. Key dimensions include a total width of 10.00, a central hole diameter of $\phi 3.50$, and a smaller hole below it with a diameter of $\phi 1.50 \pm 0.01$. Vertical dimensions from the top indicate features at 2.80, 0.00, 3.75, 8.30, 13.00, 15.80, and 26.30. A horizontal dimension of 8.76 defines the distance between the centerlines of the two holes.
- Side View (Right):** Displays the profile of the part. It shows a total height of 1.300 ± 0.01 . Internal steps are defined by vertical dimensions of 6.55, 9.25, and 5.00. Horizontal dimensions show a base thickness of 2.60 and a shoulder width of 0.45 ± 0.01 .
- Bottom View (Left):** Provides a plan view of the base, showing a square footprint with a side length of 4.30.

Additional geometric details include chamfers such as 30.00° and 15.00° , and various radii like R1.20 and R0.80.

Fig.2 outline dimensions (unindicated tolerance:±0.10 mm)

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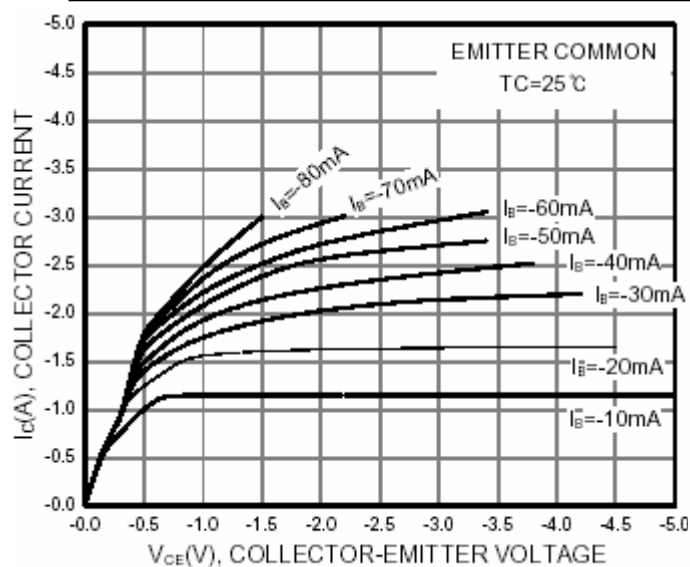


Fig.3 Static Characteristic

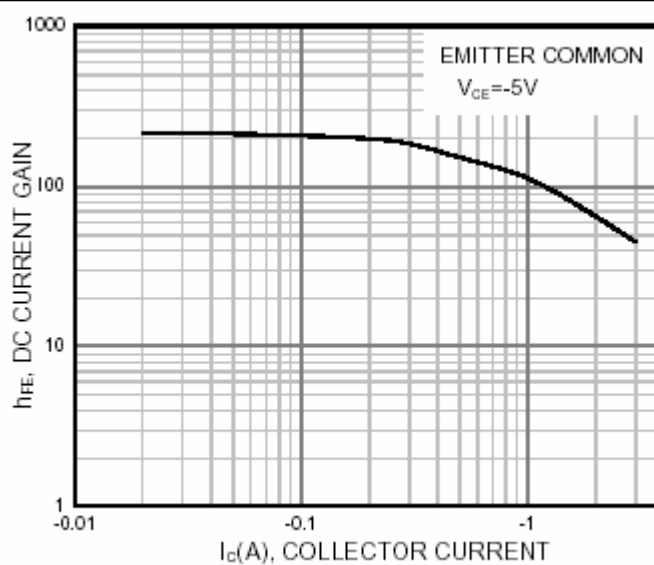


Fig.4 DC current Gain

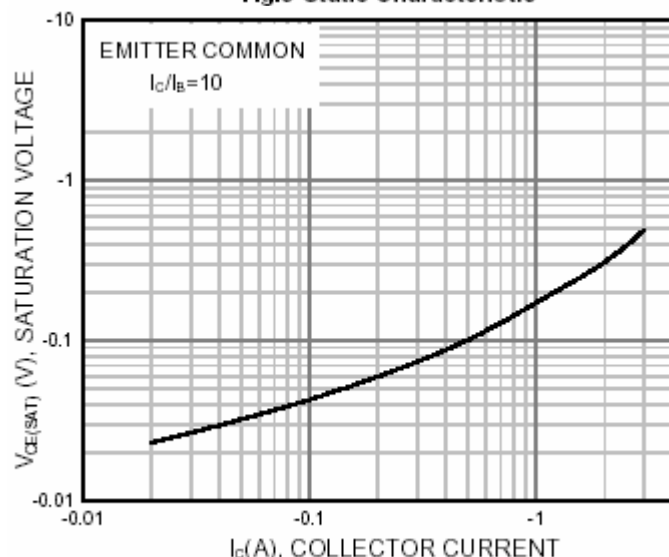


Fig.5 Collector-Emitter Saturation Voltage

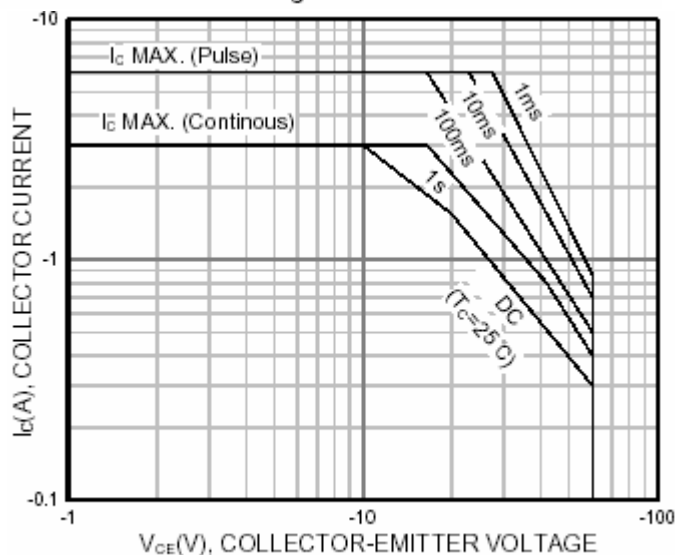


Fig.6 Safe Operating Area

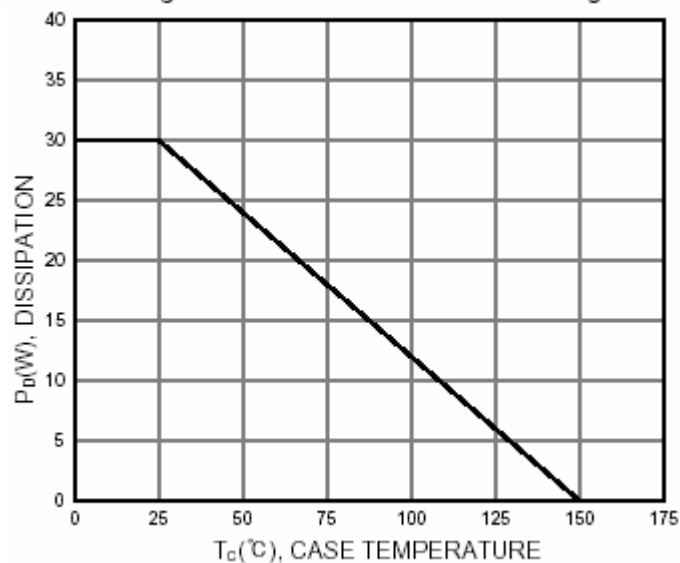


Fig.7 Power Derating