

Silicon NPN Power Transistors

2SD1133 2SD1134

DESCRIPTION

- With TO-220C package
- Complement to type 2SB857/858

APPLICATIONS

- For low frequency power amplifier applications

PINNING

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

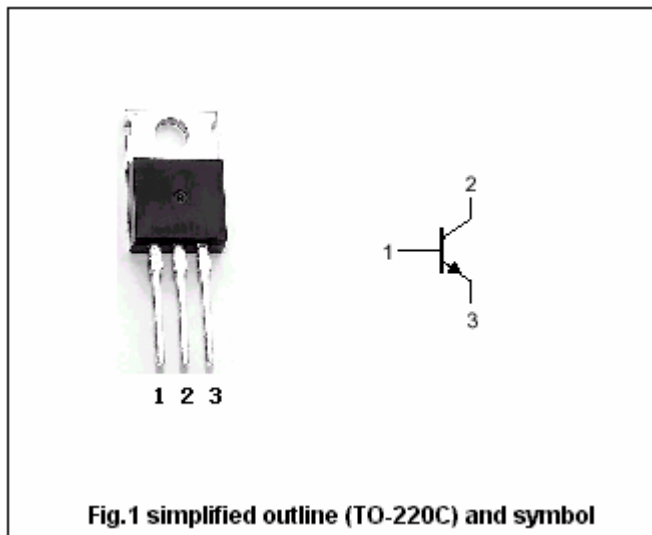


Fig.1 simplified outline (TO-220C) and symbol

Absolute maximum ratings(Tc=25)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	70	V
V_{CEO}	Collector-emitter voltage	2SD1133	50	V
		2SD1134	60	
V_{EBO}	Emitter-base voltage	Open collector	5	V
I_C	Collector current		4	A
I_{CP}	Collector current-peak		8	A
P_C	Collector power dissipation	$T_C=25$	40	W
T_j	Junction temperature		150	
T_{stg}	Storage temperature		-45~150	

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2SD1133 2SD1134

CHARACTERISTICS

T_j=25 unless otherwise specified

SYMBOL	PARAMETER		CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-emitter breakdown voltage	2SD1133	I _C =50mA; R _{BE} =	50			V
		2SD1134		60			
V _{(BR)CBO}	Collector-base breakdown voltage		I _C =10 μ A; I _E =0	70			V
V _{(BR)EBO}	Emitter-base breakdown voltage		I _E =10 μ A; I _C =0	5			V
V _{CEsat}	Collector-emitter saturation voltage		I _C =2 A; I _B =0.2 A			1.0	V
V _{BE}	Base-emitter voltage		I _C =1A; V _{CE} =4V			1.0	V
I _{CBO}	Collector cut-off current		V _{CB} =50V; I _E =0			1	μ A
h _{FE-1}	DC current gain		I _C =1A; V _{CE} =4V	60		320	
h _{FE-2}	DC current gain		I _C =0.1A; V _{CE} =4V	35			
f _T	Transition frequency		I _C =0.5A; V _{CE} =4V		7		MHz

◆ h_{FE-1} classifications

B	C	D
60-120	100-200	160-320

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PACKAGE OUTLINE

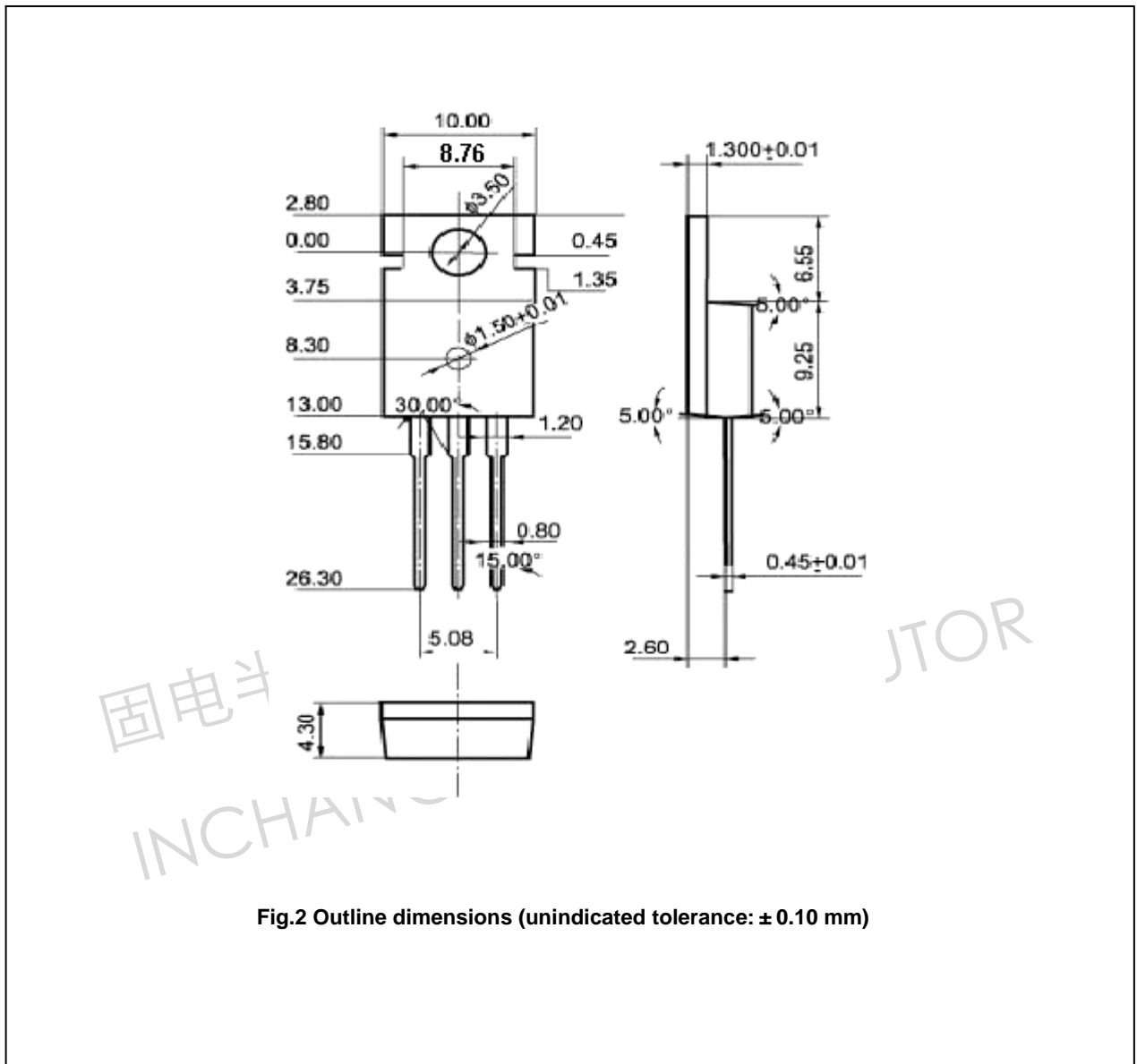


Fig.2 Outline dimensions (unindicated tolerance: ± 0.10 mm)

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2SD1133 2SD1134

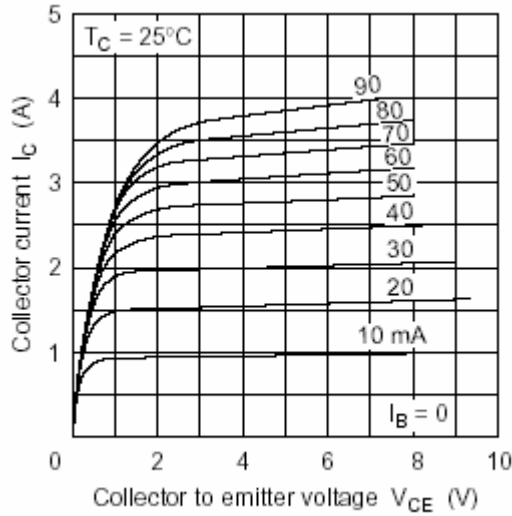


Fig.3 Static Characteristic

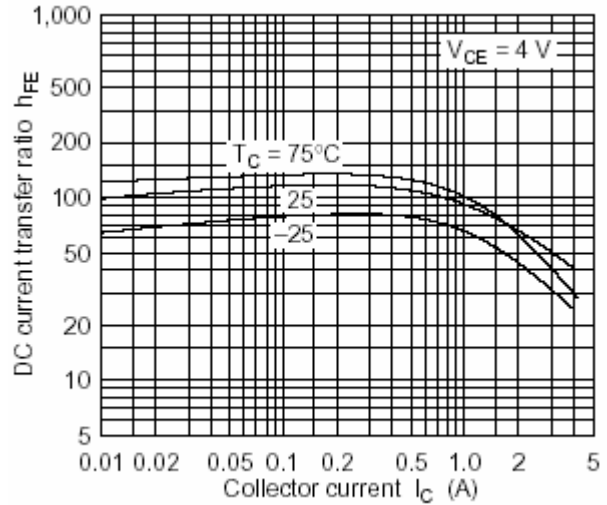


Fig.4 DC current Gain

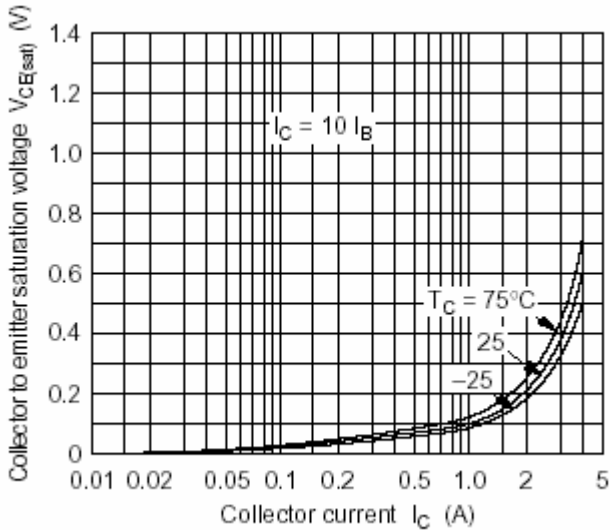


Fig.5 Collector-Emitter Saturation Voltage

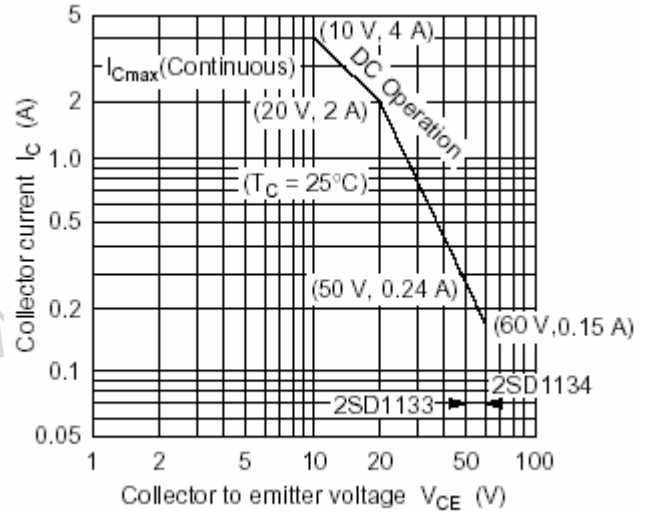


Fig.6 Safe Operating Area