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

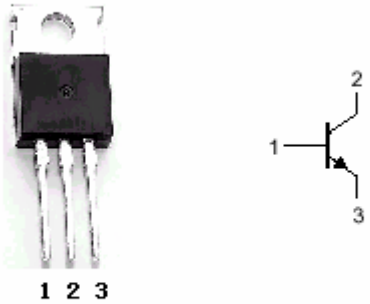

Fig.1 simplified outline (TO-220C) and symbol

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	Open base	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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CHARACTERISTICS

Tj=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=10μA; I_E=0	70			V
$V_{(BR)EBO}$	Emitter-base breakdown votage		I_E=10μA; 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	μA
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

PACKAGE OUTLINE

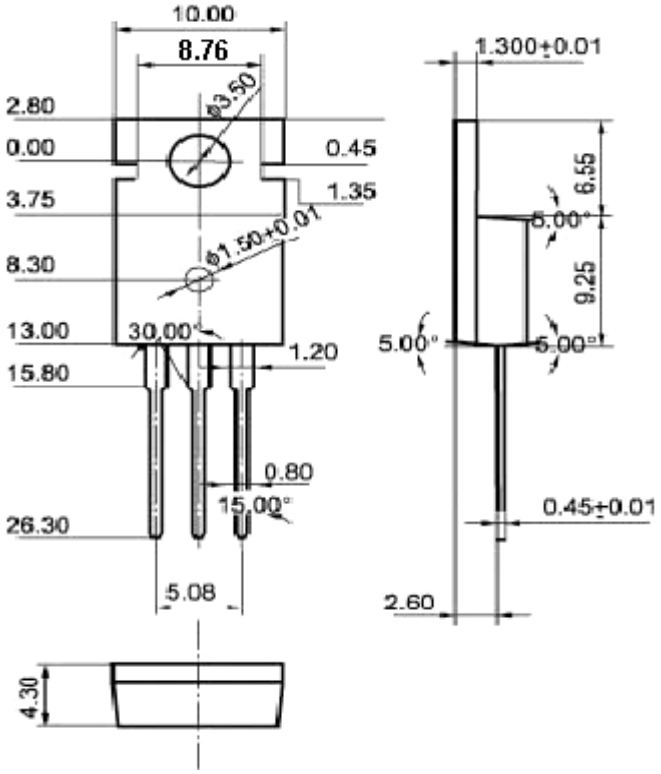

Fig.2 Outline dimensions (unindicated tolerance:±0.10 mm)

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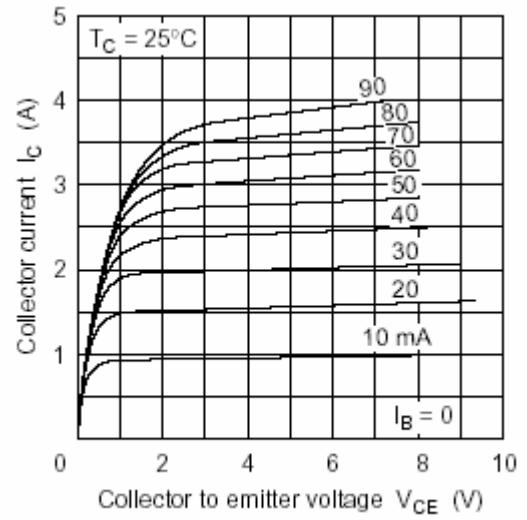

Fig.3 Static Characteristic

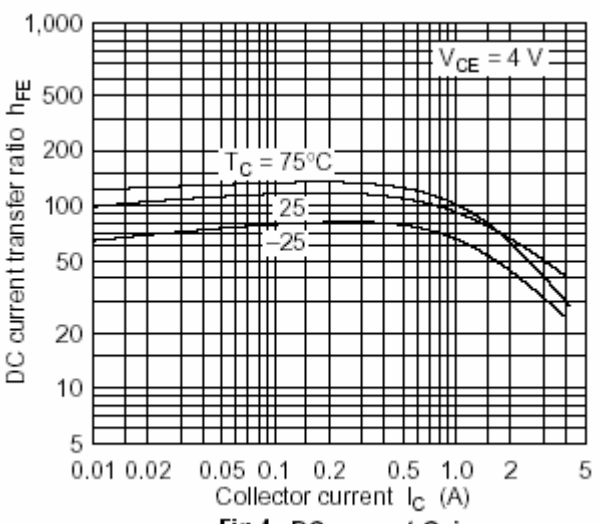

Fig.4 DC current Gain

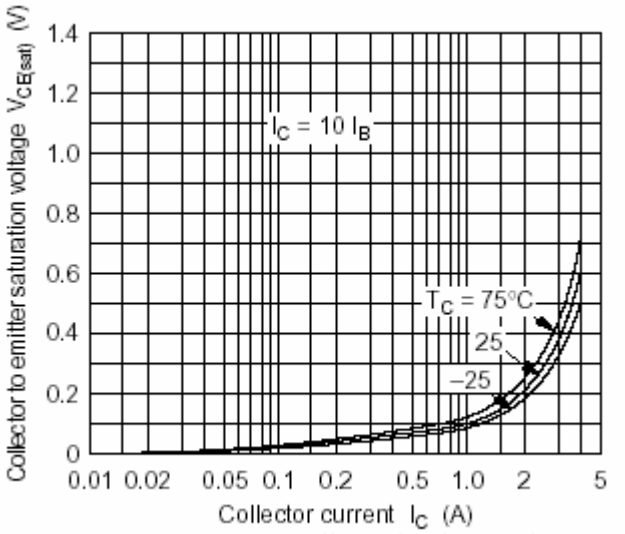

Fig.5 Collector-Emitter Saturation Voltage

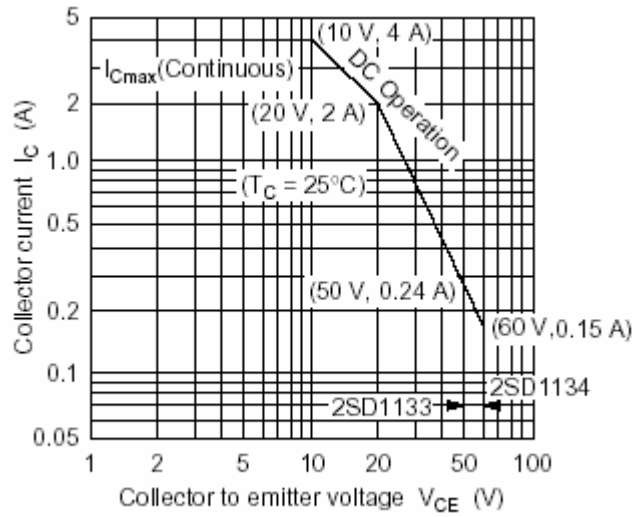

Fig.6 Safe Operating Area