

**Silicon PNP Power Transistors**

**2SB1375**

**DESCRIPTION**

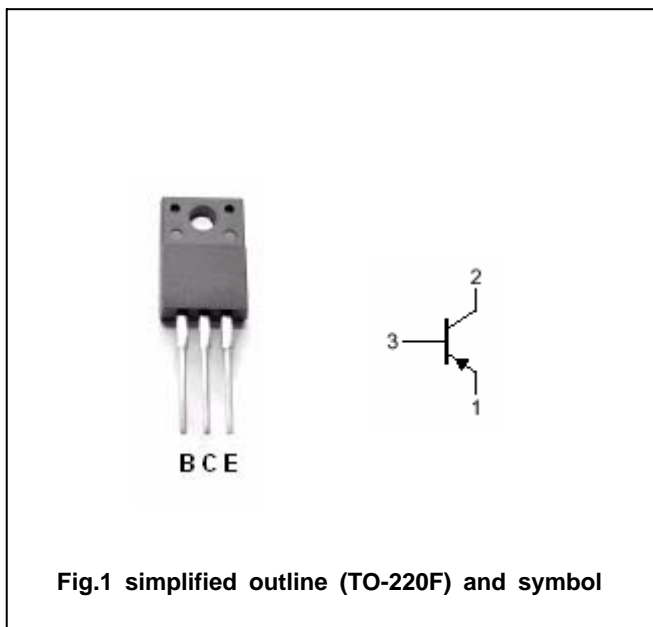
- With TO-220F package
- Complement to type 2SD2012
- Low collector saturation voltage:  
 $V_{CE(SAT)} = -1.5V(\text{Max})$  at  $I_C = -2A, I_B = -0.2A$
- Collector power dissipation:  
 $P_C = 25W(T_C = 25^\circ C)$

**APPLICATIONS**

- Audio frequency power amplifier

**PINNING**

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter



**Absolute maximum ratings (Ta=25 °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 dissipation	$T_a = 25$	2.0	W
		$T_C = 25$	25	
$T_j$	Junction temperature		150	
$T_{stg}$	Storage temperature		-55~150	

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## CHARACTERISTICS

T<sub>j</sub>=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-emitter breakdown voltage	I <sub>C</sub> =-50mA ; I <sub>B</sub> =0	-60			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =-2A ; I <sub>B</sub> =-0.2A		-1.0	-1.5	V
V <sub>BE</sub>	Base-emitter voltage	I <sub>C</sub> =-0.5A ; V <sub>CE</sub> =-5V		-0.75	-1.0	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =-60V ; I <sub>E</sub> =0			-10	μA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =-7V ; I <sub>C</sub> =0			-10	μA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =-0.5A ; V <sub>CE</sub> =-5V	100		320	
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =-2A ; V <sub>CE</sub> =-5V	15			
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =-0.5A ; V <sub>CE</sub> =-5V		9		MHz
C <sub>OB</sub>	Collector output capacitance	I <sub>E</sub> =0 ; f=1MHz ; V <sub>CB</sub> =-10V		50		pF

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PACKAGE OUTLINE

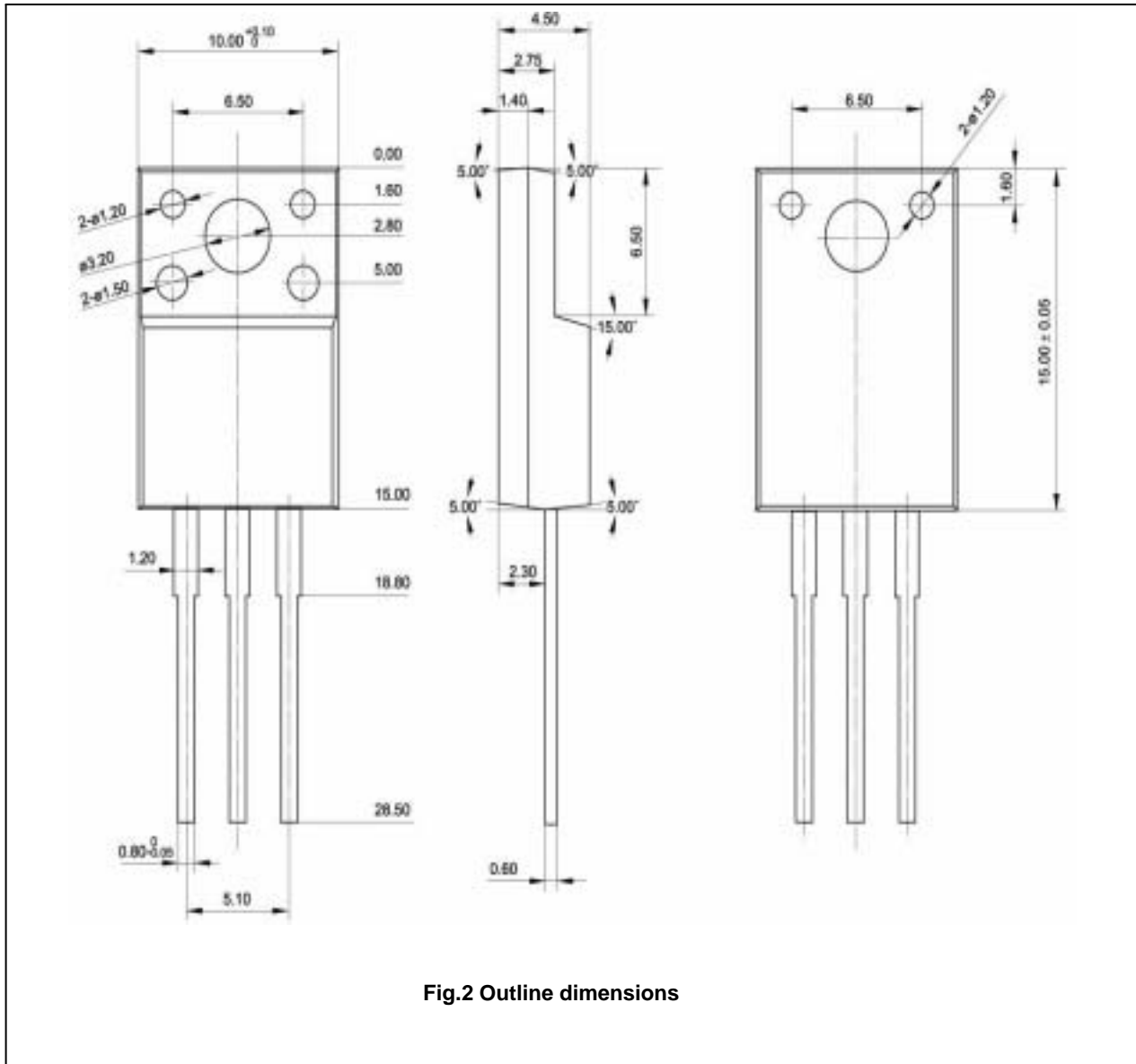


Fig.2 Outline dimensions

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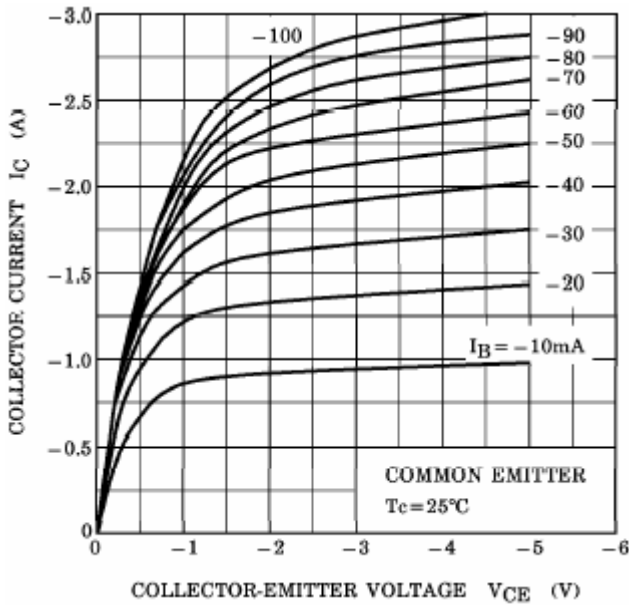


Fig.3 Static Characteristic

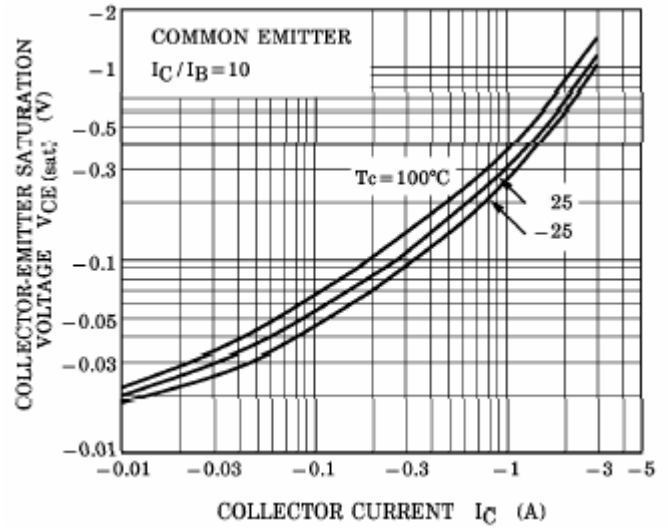


Fig.4 Collector-Emitter Saturation Voltage

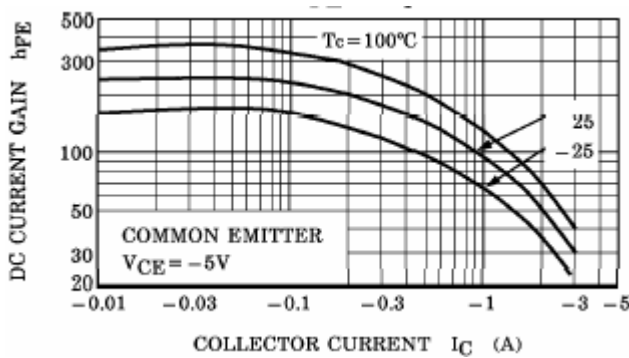


Fig.5 DC current Gain

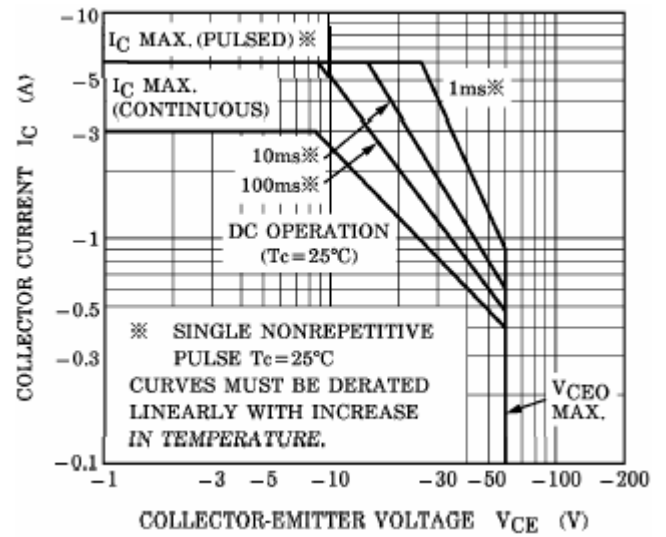


Fig.6 Safe Operating Area