

Silicon NPN Power Transistors

2SC1683

DESCRIPTION

- With TO-220C package
- Complement to type 2SA843
- High breakdown voltage
- Large collector power dissipation

APPLICATIONS

- Audio frequency power amplifier
- Color TV vertical deflection output

PINNING

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

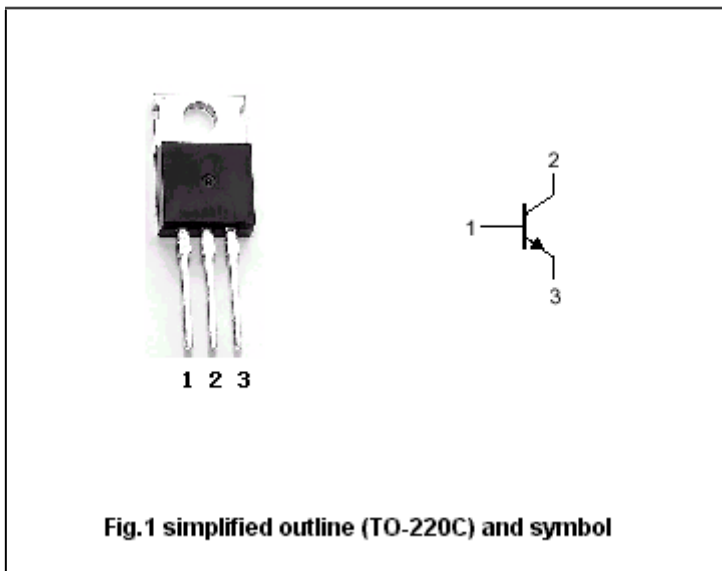


Fig.1 simplified outline (TO-220C) and symbol

Absolute maximum ratings(Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	200	V
$V_{CEO}$	Collector-emitter voltage	Open base	150	V
$V_{EBO}$	Emitter-base voltage	Open collector	5	V
$I_C$	Collector current		500	mA
$I_{CM}$	Collector current-peak		2	A
$P_T$	Total power dissipation	$T_C=25^\circ C$	20	W
$T_j$	Junction temperature		150	$^\circ C$
$T_{stg}$	Storage temperature		-50~150	$^\circ C$

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## CHARACTERISTICS

 $T_j=25^\circ\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=5\text{mA}$ ; $I_B=0$	150			V
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C=0.5\text{mA}$ ; $I_E=0$	200			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=0.5\text{mA}$ ; $I_C=0$	5			V
$V_{CEsat}$	Collector-emitter saturation voltage	$I_C=500\text{mA}$ ; $I_B=50\text{mA}$			1.0	V
$V_{BE}$	Base-emitter on voltage	$I_C=400\text{mA}$ ; $V_{CE}=10\text{V}$			1.0	V
$I_{CBO}$	Collector cut-off current	$V_{CB}=200\text{V}$ ; $I_E=0$			50	$\mu\text{A}$
$I_{EBO}$	Emitter cut-off current	$V_{EB}=4\text{V}$ ; $I_C=0$			50	$\mu\text{A}$
$h_{FE}$	DC current gain	$I_C=400\text{mA}$ ; $V_{CE}=10\text{V}$	60		200	

◆  $h_{FE}$  Classifications

P	Q
60-140	85-200

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PACKAGE OUTLINE

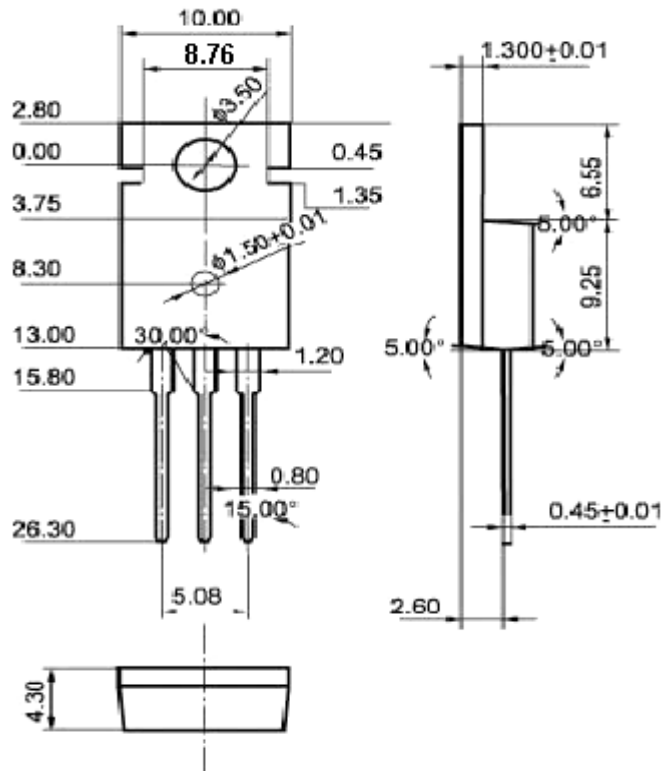


Fig.2 Outline dimensions (unindicated tolerance: ±0.10 mm)