

## Silicon NPN Power Transistors

2SC1881

## DESCRIPTION

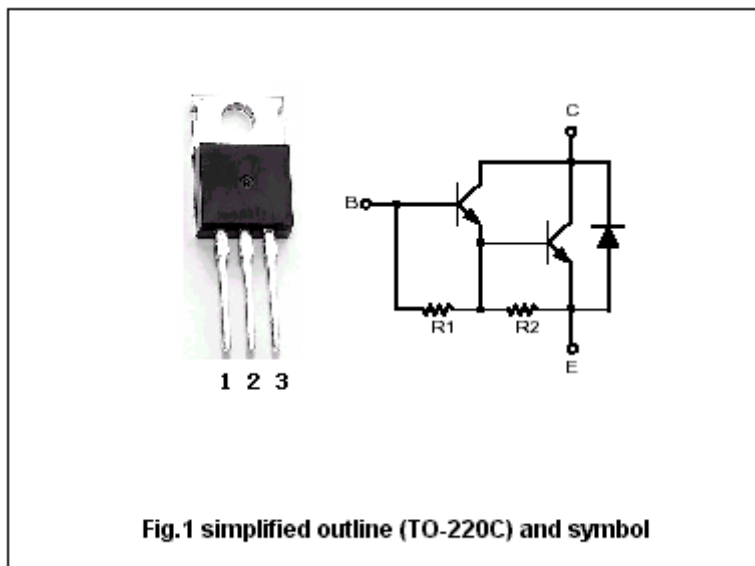
- With TO-220C package
- DARLINGTON
- High DC current gain

## APPLICATIONS

- High gain amplifier power switching

## PINNING

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

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

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-DC		3	A
$I_{CM}$	Collector current-Pulse		6	A
$P_C$	Collector power dissipation	$T_c=25^\circ\text{C}$	30	W
$T_j$	Junction temperature		150	$^\circ\text{C}$
$T_{stg}$	Storage temperature		-55~150	$^\circ\text{C}$

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## CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CE0(SUS)</sub>	Collector-emitter sustaining voltage	I <sub>C</sub> =50mA, R <sub>BE</sub> =∞	60			V
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>E</sub> =50mA, I <sub>C</sub> =0	7			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =2.5A, I <sub>B</sub> =20mA			1.2	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =60V, I <sub>E</sub> =0			0.2	mA
I <sub>CEO</sub>	Collector cut-off current	V <sub>CE</sub> =30V, R <sub>BE</sub> =∞			0.4	mA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =1.5A; V <sub>CE</sub> =1.5V	1000			
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =2.5A; V <sub>CE</sub> =1.5V	500			
t <sub>on</sub>	Turn-on time	V <sub>CC</sub> =11V, I <sub>C</sub> =2A I <sub>B1</sub> =-I <sub>B2</sub> =8mA		1		μs
t <sub>off</sub>	Turn-off time			5		μs

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PACKAGE OUTLINE

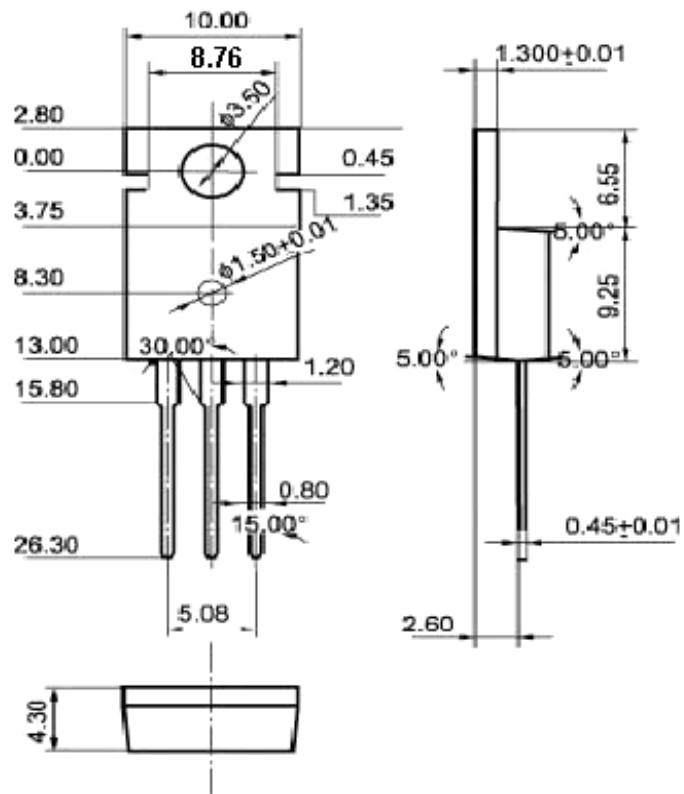


Fig.2 Outline dimensions