

Silicon NPN Power Transistors

NS50B

DESCRIPTION

- With TO-220C package
- Complement to type NS50A

APPLICATIONS

- For medium power linear switching applications

PINNING

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

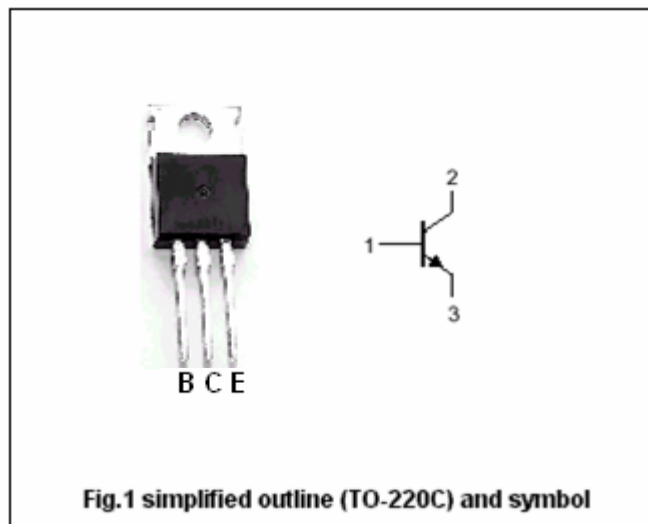


Fig.1 simplified outline (TO-220C) and symbol

ABSOLUTE MAXIMUM RATINGS($T_C=25^\circ\text{C}$)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	100	V
V_{CEO}	Collector-emitter voltage	Open base	60	V
V_{EBO}	Emitter-base voltage	Open collector	5	V
I_C	Collector current (DC)		6	A
I_{CM}	Collector current-Pulse		10	A
P_C	Collector power dissipation	$T_C=25^\circ\text{C}$	65	W
		$T_a=25^\circ\text{C}$	2	
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-65~150	$^\circ\text{C}$

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CHARACTERISTICS

T_j=25°C unless otherwise specified

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SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-emitter sustaining voltage	I _C =30mA; I _B =0	60			V
V _{CE(sat)}	Collector-emitter saturation voltage	I _C =4A; I _B =0.4A			1.0	V
V _{BE(sat)}	Base-emitter saturation voltage	I _C =4A; I _B =0.4A			1.5	V
I _{CBO}	Collector cut-off current	V _{CB} =100V; I _E =0			10	μA
I _{CEO}	Collector cut-off current	V _{CE} =60V; I _B =0			0.1	mA
I _{EBO}	Emitter cut-off current	V _{EB} =6V; I _C =0			10	μA
h _{FE}	DC current gain	I _C =1A; V _{CE} =5V	100		160	
f _T	Transition frequency	I _C =0.5A; V _{CE} =10V	3			MHz

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PACKAGE OUTLINE

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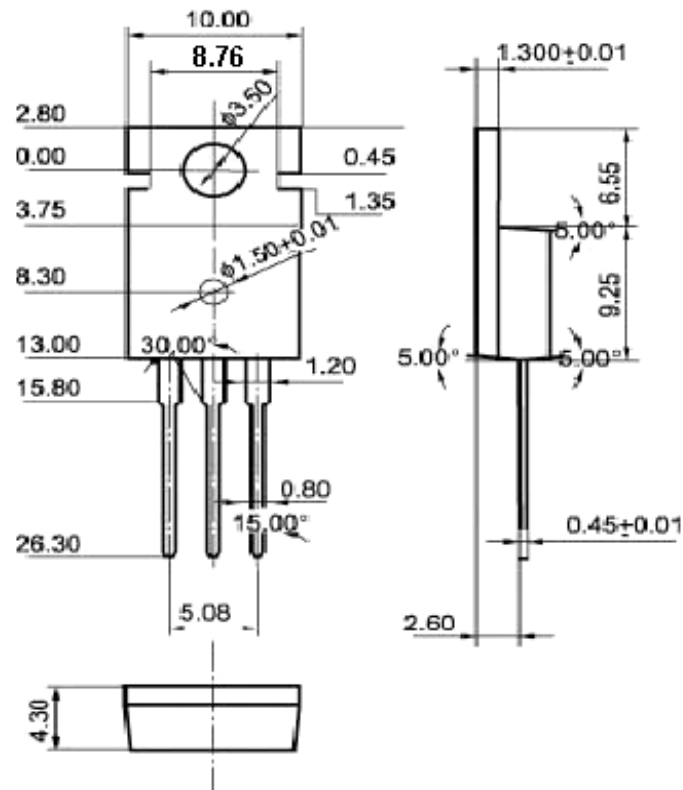


Fig.2 Outline dimensions