

**Silicon NPN Power Transistors**

**NS50N**

**DESCRIPTION**

- With TO-220C package
- Complement to type NS50P

**APPLICATIONS**

- For medium power linear amplifier applications

**PINNING**

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

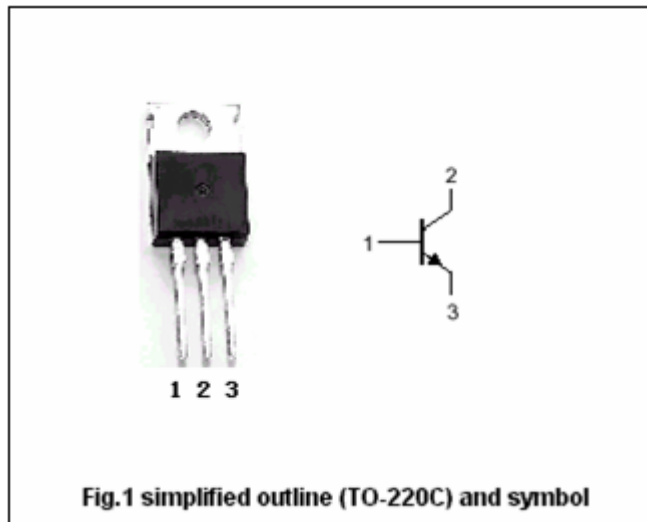


Fig.1 simplified outline (TO-220C) and symbol

**ABSOLUTE MAXIMUM RATINGS(T<sub>C</sub>=25°C)**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	Open emitter	60	V
V <sub>CEO</sub>	Collector-emitter voltage	Open base	60	V
V <sub>EBO</sub>	Emitter-base voltage	Open collector	5	V
I <sub>C</sub>	Collector current (DC)		6	A
I <sub>CM</sub>	Collector current-Pulse		10	A
I <sub>B</sub>	Base current		2	A
P <sub>C</sub>	Collector power dissipation	T <sub>C</sub> =25°C	65	W
		T <sub>a</sub> =25°C	2	
T <sub>j</sub>	Junction temperature		150	°C
T <sub>stg</sub>	Storage temperature		-65~150	°C

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## NS50N

## CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CEO(SUS)</sub>	Collector-emitter sustaining voltage	I <sub>C</sub> =30mA; I <sub>B</sub> =0	60			V
V <sub>CE(sat)</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =6A; I <sub>B</sub> =0.6A			1.5	V
V <sub>BE</sub>	Base-emitter on voltage	I <sub>C</sub> =6A; V <sub>CE</sub> =4V			2.0	V
I <sub>CES</sub>	Collector cut-off current	V <sub>CE</sub> =60V; V <sub>EB</sub> =0			0.4	mA
I <sub>CEO</sub>	Collector cut-off current	V <sub>CE</sub> =30V; I <sub>B</sub> =0			0.7	mA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =5V; I <sub>C</sub> =0			1.0	mA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =0.3A; V <sub>CE</sub> =4V	50		160	
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =3A; V <sub>CE</sub> =4V	15			
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =0.5A; V <sub>CE</sub> =10V	3			MHz

◆ h<sub>FE-1</sub> Classifications

A	B
50-100	80-160

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PACKAGE OUTLINE

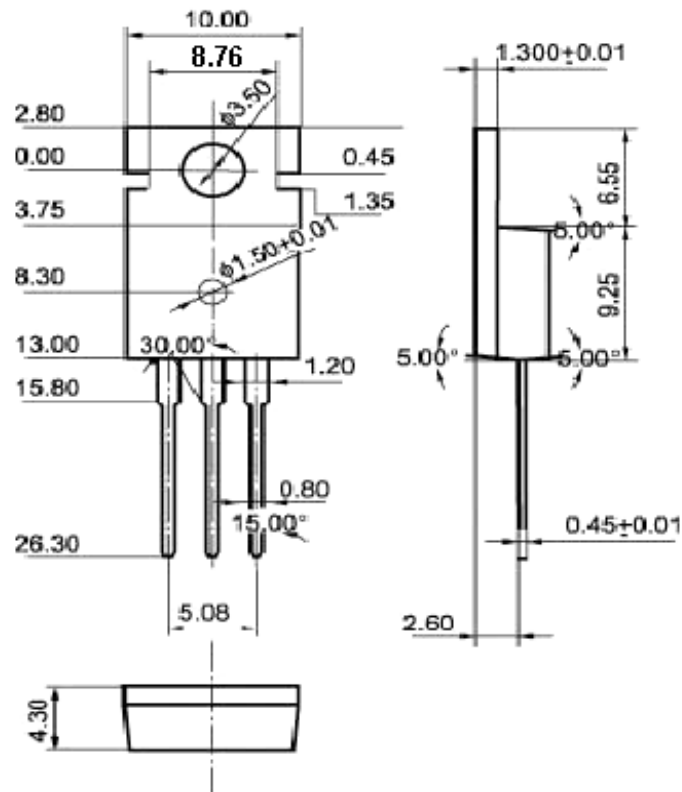


Fig.2 Outline dimensions