

**Silicon PNP Power Transistors**

**BD204**

**DESCRIPTION**

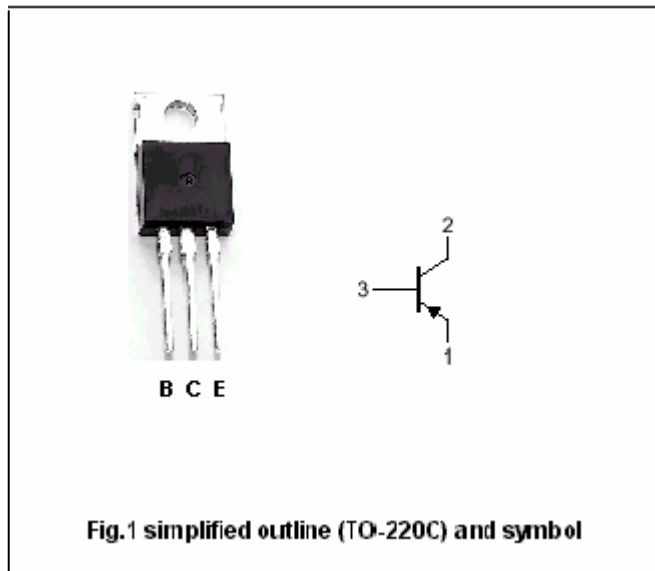
- With TO-220C package
- Low saturation voltage
- Complement to type BD203
- Wide area of safe operation

**APPLICATIONS**

- For medium power switching and amplifier applications

**PINNING**

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



**Absolute maximum ratings (Ta=25 )**

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	-5	V
$I_C$	Collector current (DC)		-8	A
$I_{CM}$	Collector current-Peak		-12	A
$I_{BM}$	Base current-Peak		-3	A
$P_T$	Total power dissipation	$T_C=25$	60	W
$T_j$	Junction temperature		150	
$T_{stg}$	Storage temperature		-65~150	

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-C}$	Thermal resistance junction to case	2.08	/W

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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> =-0.2A ; I <sub>B</sub> =0	-60			V
V <sub>(BR)CBO</sub>	Collector-base breakdown voltage	I <sub>C</sub> =-1mA ; I <sub>E</sub> =0	-60			V
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>E</sub> =-1mA ; I <sub>C</sub> =0	-5			V
V <sub>CEsat-1</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =-3A; I <sub>B</sub> =-0.3A			-1.0	V
V <sub>CEsat-2</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =-6A; I <sub>B</sub> =-0.6A			-1.5	V
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =-6A; I <sub>B</sub> =-0.6A			-2.0	V
I <sub>CEO</sub>	Collector cut-off current	V <sub>CE</sub> =-30V ; I <sub>B</sub> =0;			-0.2	mA
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =-40V ; I <sub>E</sub> =0; T <sub>j</sub> =150			-1.0	mA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =-5V; I <sub>C</sub> =0			-0.5	mA
h <sub>FE</sub>	DC current gain	I <sub>C</sub> =-2A ; V <sub>CE</sub> =-2V	30			
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =-0.3A ; V <sub>CE</sub> =-3V	7.0			MHz
V <sub>BE</sub>	Base-emitter on voltage	I <sub>C</sub> =-3A; V <sub>CE</sub> =-2V			-1.5	V

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PACKAGE OUTLINE

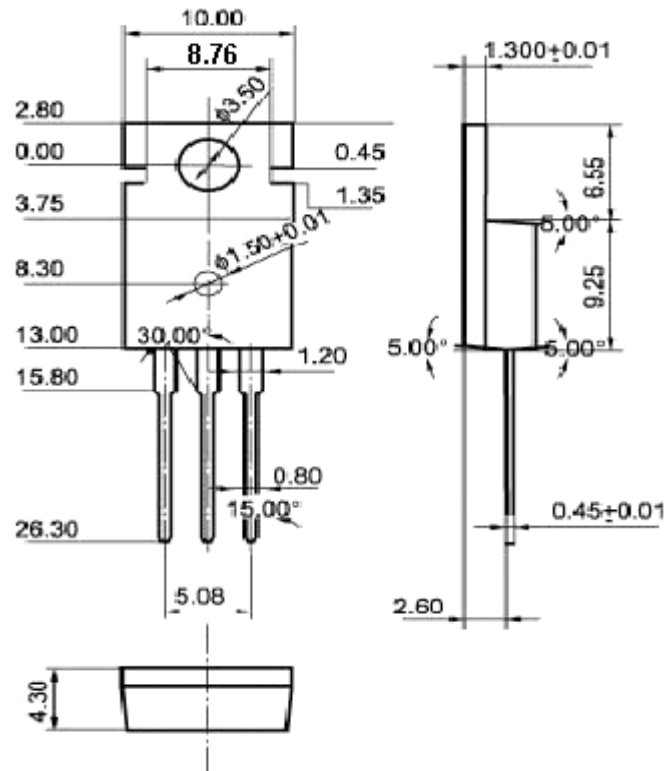


Fig.2 Outline dimensions (unindicated tolerance: ± 0.10 mm)