

Silicon PNP Power Transistors

BD204

DESCRIPTION

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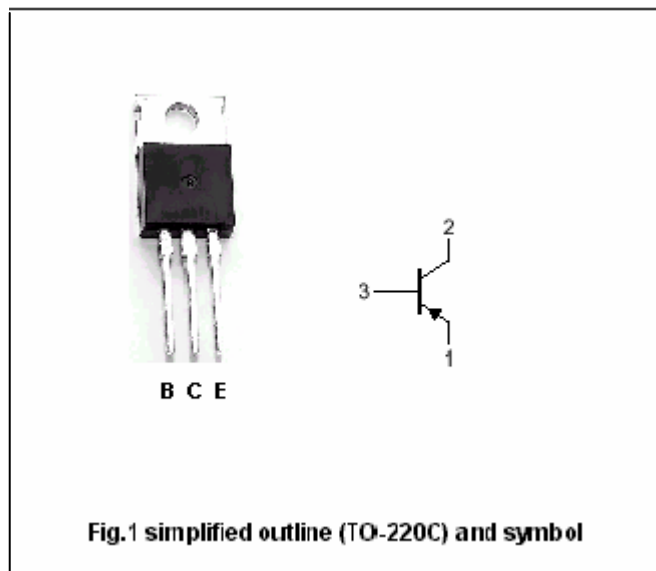
- With TO-220C package
- Low saturation voltage
- Complement to type BD203
- Wide area of safe operation

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_B	Base current		-3	A
P_T	Total power dissipation	$T_C=25^\circ\text{C}$	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

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C = -0.2\text{A}$; $I_B = 0$	-60			V
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C = -1\text{mA}$; $I_E = 0$	-60			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E = -1\text{mA}$; $I_C = 0$	-5			V
$V_{CEsat-1}$	Collector-emitter saturation voltage	$I_C = -3\text{A}$; $I_B = -0.3\text{A}$			-1.0	V
$V_{CEsat-2}$	Collector-emitter saturation voltage	$I_C = -6\text{A}$; $I_B = -0.6\text{A}$			-1.5	V
V_{BEsat}	Base-emitter saturation voltage	$I_C = -6\text{A}$; $I_B = -0.6\text{A}$			-2.0	V
I_{CEO}	Collector cut-off current	$V_{CE} = -30\text{V}$; $I_B = 0$;			-0.2	mA
I_{CBO}	Collector cut-off current	$V_{CB} = -40\text{V}$; $I_E = 0$; $T_j = 150^\circ\text{C}$			-1.0	mA
I_{EBO}	Emitter cut-off current	$V_{EB} = -5\text{V}$; $I_C = 0$			-0.5	mA
h_{FE}	DC current gain	$I_C = -2\text{A}$; $V_{CE} = -2\text{V}$	30			
f_T	Transition frequency	$I_C = -0.3\text{A}$; $V_{CE} = -3\text{V}$	7.0			MHz
V_{BE}	Base-emitter on voltage	$I_C = -3\text{A}$; $V_{CE} = -2\text{V}$			-1.5	V

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PACKAGE OUTLINE

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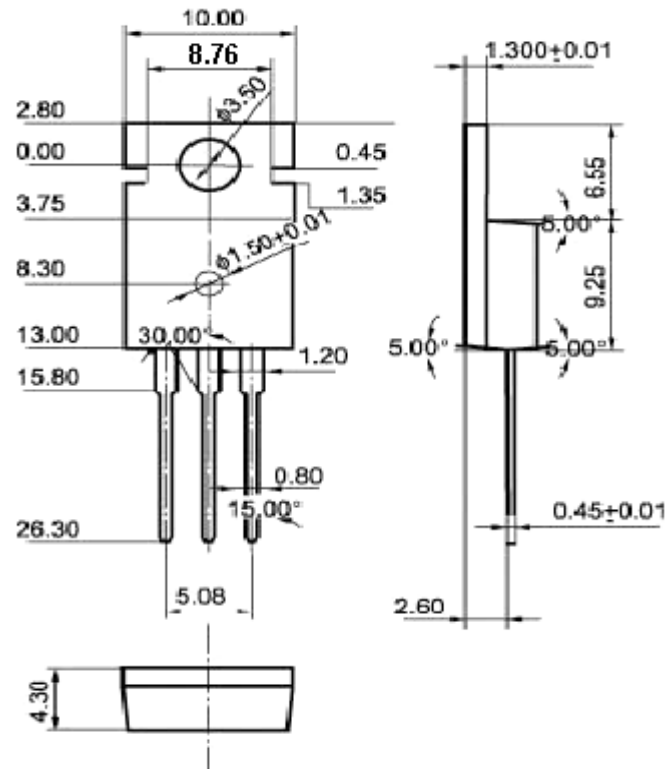


Fig.2 Outline dimensions (unindicated tolerance:±0.10 mm)