

Silicon PNP Power Transistors

BD204

DESCRIPTION

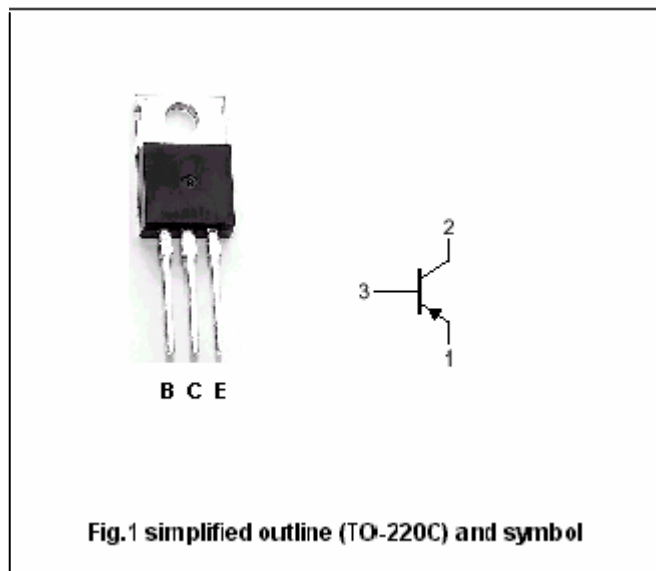
- With TO-220C package
- Low saturation voltage
- Complement to type BD203
- Wide area of safe operation

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_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

 $T_j=25^\circ\text{C}$ 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

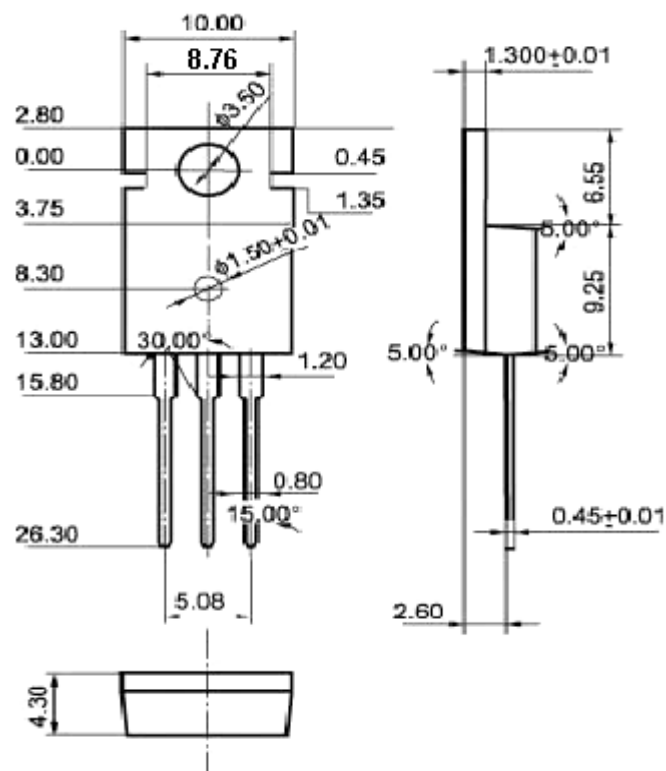


Fig.2 Outline dimensions (unindicated tolerance:±0.10 mm)