

Silicon NPN Power Transistors

BD809

DESCRIPTION

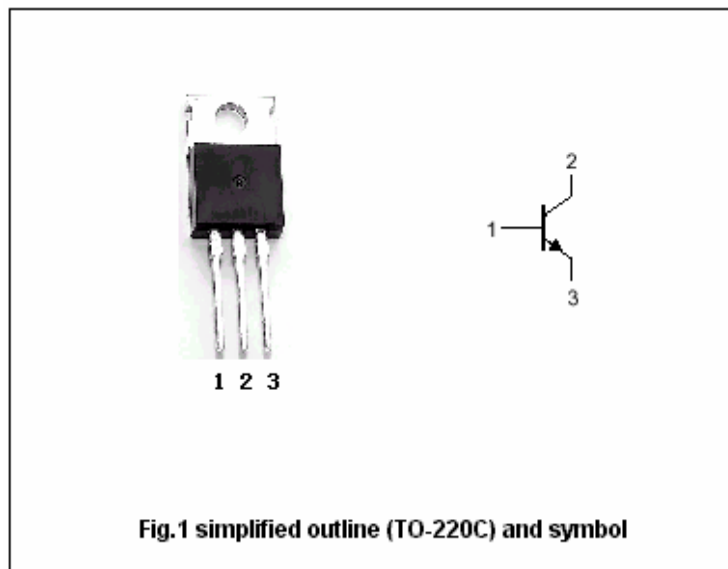
With TO-220C package
 Complement to type BD810
 DC current gain
 : $h_{FE} = 30$ (Min) @ $I_C = 2.0$ Adc

APPLICATIONS

Designed for use in high power audio amplifiers utilizing complementary or quasi complementary circuits.

PINNING

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

Absolute maximum ratings ($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	80	V
V_{CEO}	Collector-emitter voltage	Open base	80	V
V_{EBO}	Emitter-base voltage	Open collector	5	V
I_C	Collector current		10	A
I_B	Base current		6	A
P_D	Total power dissipation	$T_C=25^\circ\text{C}$	90	W
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-55~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal resistance junction to case	1.39	$^\circ\text{C}/\text{W}$

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CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	$I_C=0.1\text{A}; I_B=0$	80			V
V_{CEsat}	Collector-emitter saturation voltage	$I_C=3\text{A}; I_B=0.3\text{A}$			1.1	V
V_{BE}	Base-emitter voltage	$I_C=4\text{A}; V_{CE}=2\text{V}$			1.6	V
I_{CBO}	Collector cut-off current	$V_{CB}=80\text{V}; I_E=0$			1.0	mA
I_{EBO}	Emitter cut-off current	$V_{EB}=5\text{V}; I_C=0$			2.0	mA
h_{FE-1}	DC current gain	$I_C=2\text{A}; V_{CE}=2\text{V}$	30			
h_{FE-2}	DC current gain	$I_C=4\text{A}; V_{CE}=2\text{V}$	15			
f_T	Transition frequency	$I_C=1\text{A}; V_{CE}=10\text{V}; f=1.0\text{MHz}$	1.5			MHz

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PACKAGE OUTLINE

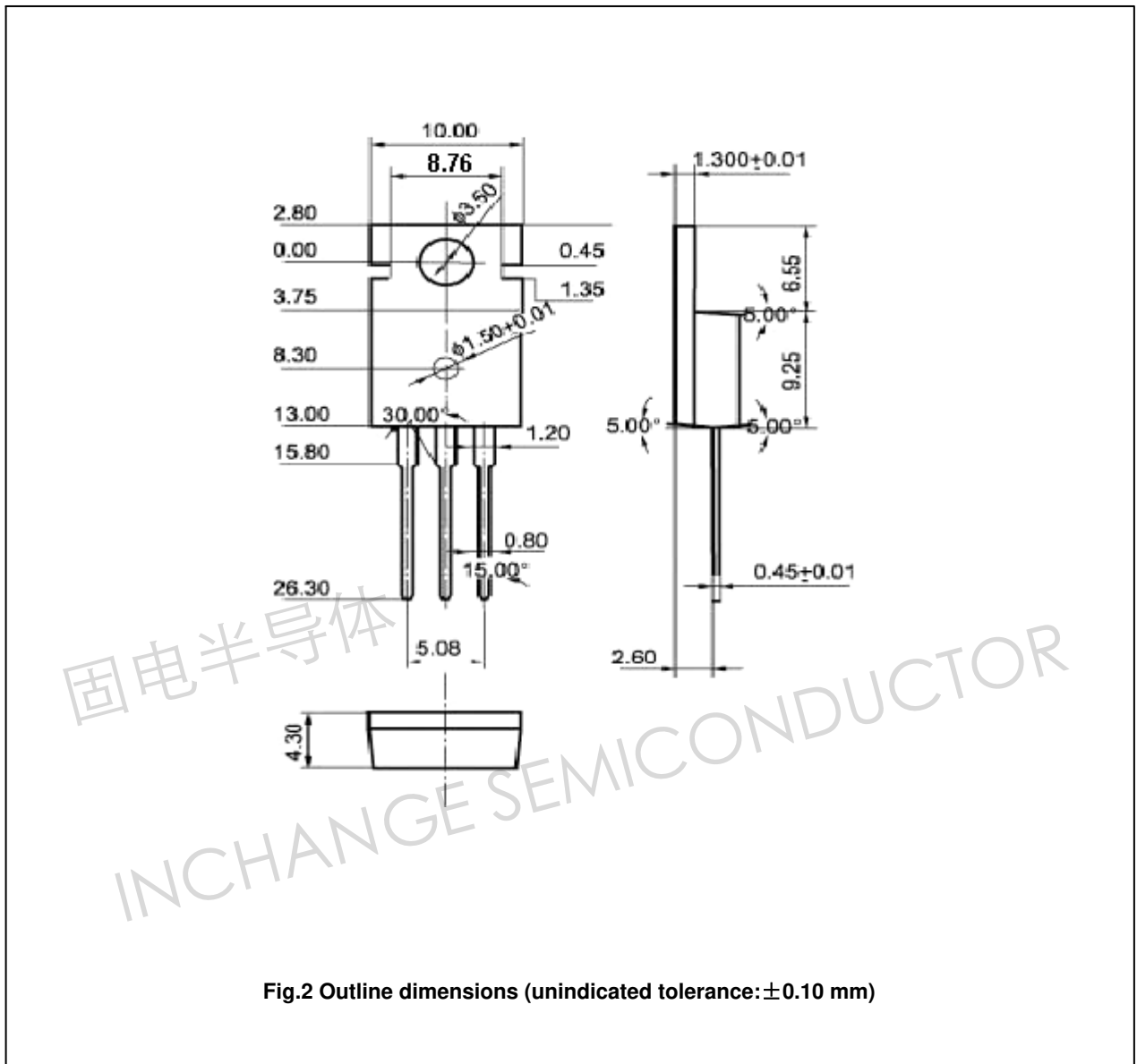


Fig.2 Outline dimensions (unindicated tolerance: ±0.10 mm)