

Silicon NPN Power Transistors

2SD235

DESCRIPTION

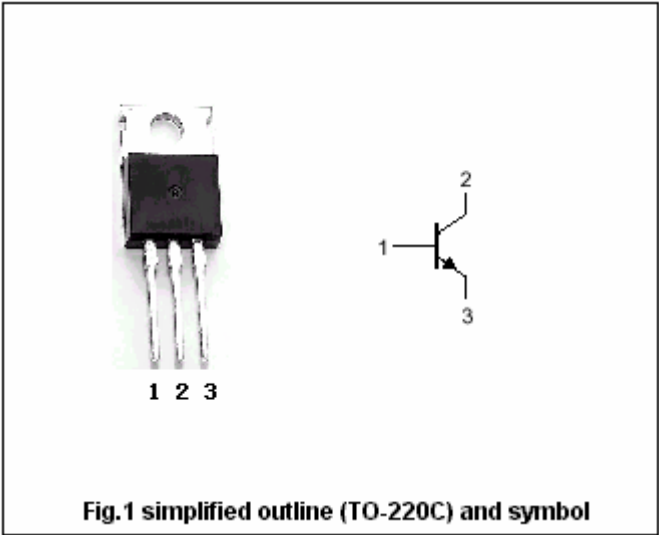
- With TO-220 package
- Complement to type 2SB435

APPLICATIONS

- For low frequency power amplifier and switching applications

PINNING

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



Absolute maximum ratings(Ta=25℃)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	50	V
V_{CEO}	Collector-emitter voltage	Open base	40	V
V_{EBO}	Emitter-base voltage	Open collector	6	V
I_C	Collector current		3	A
P_C	Collector power dissipation		1.5	W
		$T_C=25^{\circ}C$	25	
T_j	Junction temperature		150	℃
T_{stg}	Storage temperature		-55~150	℃

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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	$I_C=5\text{mA}$, $I_B=0$	40			V
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C=1\text{mA}$, $I_E=0$	50			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=1\text{mA}$, $I_C=0$	6			V
V_{CEsat}	Collector-emitter saturation voltage	$I_C=1\text{A}$; $I_B=50\text{mA}$			1.0	V
V_{BEsat}	Base-emitter saturation voltage	$I_C=1\text{A}$; $I_B=50\text{mA}$			1.5	V
I_{CBO}	Collector cut-off current	$V_{CB}=40\text{V}$; $I_E=0$			10	μA
I_{EBO}	Emitter cut-off current	$V_{EB}=4\text{V}$; $I_C=0$			10	μA
h_{FE}	DC current gain	$I_C=0.5\text{A}$; $V_{CE}=1\text{V}$	40		240	
C_{OB}	Output capacitance	$I_E=0$; $V_{CB}=10\text{V}$, $f=1\text{MHz}$		90		pF
f_T	Transition frequency	$I_C=0.5\text{A}$; $V_{CE}=10\text{V}$		3		MHz

◆ h_{FE} Classifications

R	O	Y
40-80	70-140	120-240

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PACKAGE OUTLINE

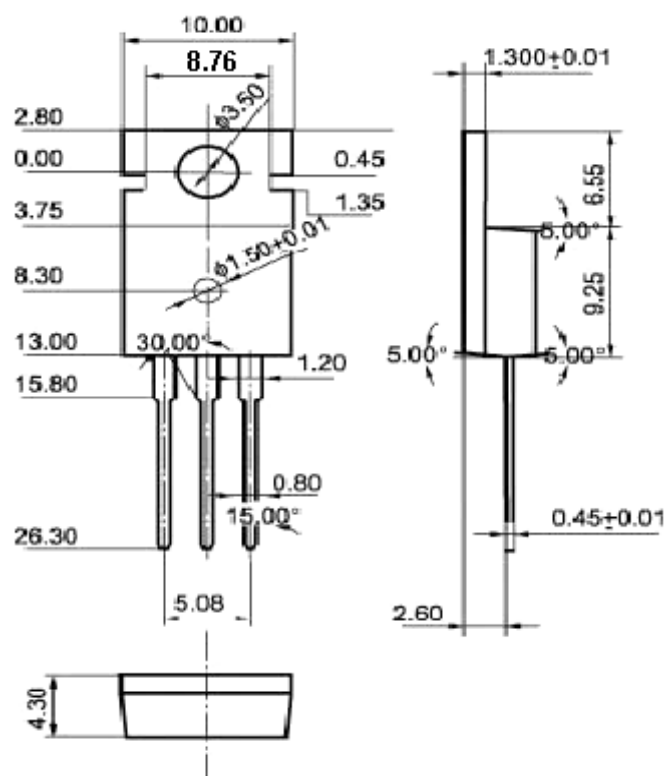


Fig.2 Outline dimensions(unindicated tolerance: ± 0.10 mm)