

Silicon NPN Darlington Power Transistors

2SD2386

DESCRIPTION

- With TO-3P(I) package
- Complement to type 2SB1557
- High breakdown voltage: $V_{CEO}=140V(\text{Min})$

APPLICATIONS

- Power amplifier applications

PINNING

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

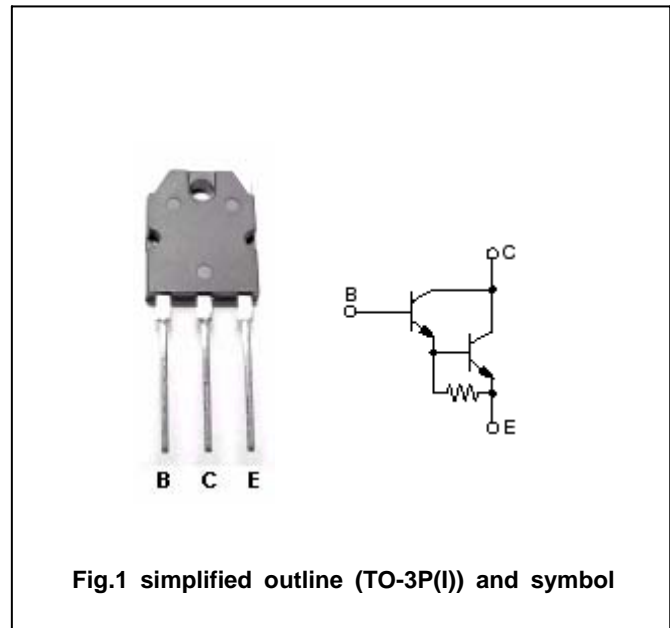


Fig.1 simplified outline (TO-3P(I)) and symbol

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	140	V
V_{CEO}	Collector-emitter voltage	Open base	140	V
V_{EBO}	Emitter-base voltage	Open collector	5	V
I_C	Collector current		7	A
I_B	Base current		0.1	A
P_C	Collector power dissipation	$T_C=25^{\circ}\text{C}$	70	W
T_j	Junction temperature		150	$^{\circ}\text{C}$
T_{stg}	Storage temperature		-55~150	$^{\circ}\text{C}$

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CHARACTERISTICS

T_j=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-emitter breakdown voltage	I _C =50mA ; I _B =0	140			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =6A ; I _B =6mA			2.5	V
V _{BE}	Base-emitter voltage	I _C =6A ; V _{CE} =5V			3.0	V
I _{CBO}	Collector cut-off current	V _{CB} =140V I _E =0			5.0	μ A
I _{EBO}	Emitter cut-off current	V _{EB} =5V ; I _C =0			5.0	μ A
h _{FE-1}	DC current gain	I _C =6A ; V _{CE} =5V	5000		30000	
h _{FE-2}	DC current gain	I _C =10A ; V _{CE} =5V	2000			
C _{ob}	Collector output capacitance	I _E =0 ; V _{CB} =10V;f=1MHz		90		pF
f _T	Transition frequency	I _C =1A ; V _{CE} =5V		30		MHz

◆ h_{FE-1} Classifications

A	B	C
5000-12000	9000-18000	15000-30000

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PACKAGE OUTLINE

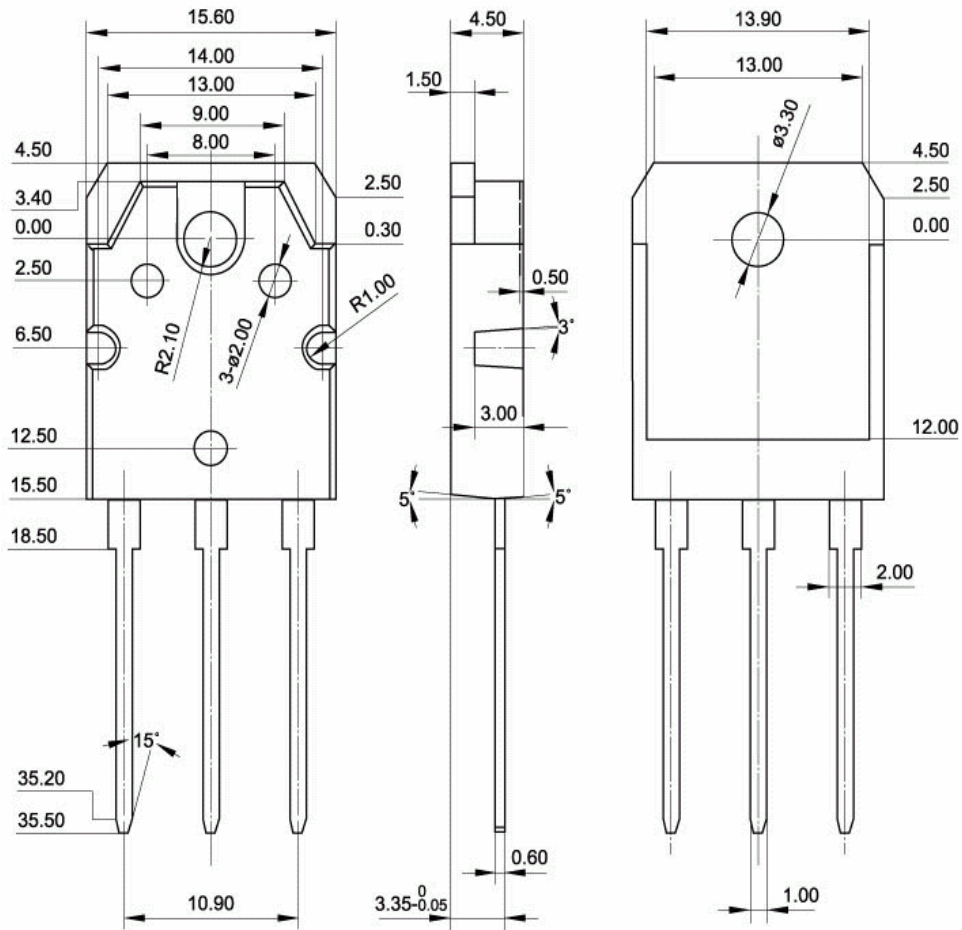


Fig.2 outline dimensions (unindicated tolerance: ±0.1mm)