

Silicon NPN Darlington Power Transistors

2SD1895

DESCRIPTION

- With TO-3PFa package
- High DC current gain
- Low collector saturation voltage
- Complement to type 2SB1255

APPLICATIONS

- Power amplification
- Optimum for 90W high-fidelity output applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

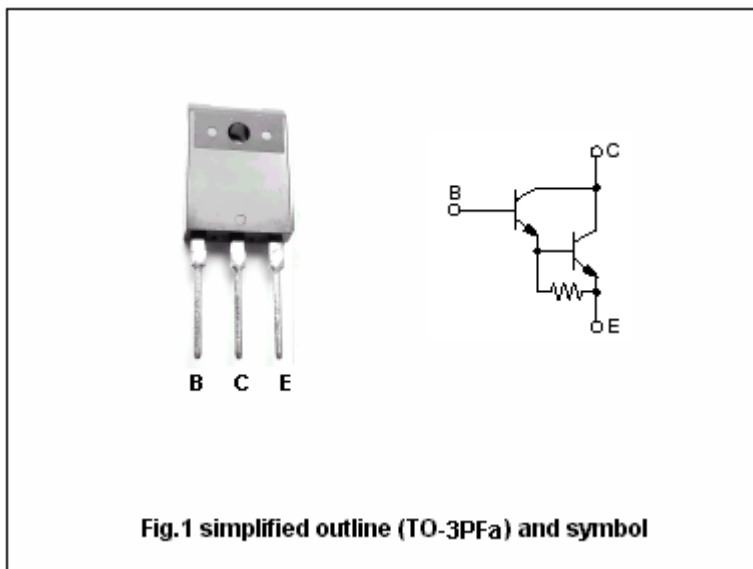


Fig.1 simplified outline (TO-3PFa) and symbol

Absolute maximum ratings(Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	Open emitter	160	V
V _{CEO}	Collector-emitter voltage	Open base	140	V
V _{EBO}	Emitter-base voltage	Open collector	5	V
I _C	Collector current		15	A
I _{CP}	Collector current-peak		8	A
P _C	Collector power dissipation	T _C =25°C	100	W
			3	
T _j	Junction temperature		150	°C
T _{stg}	Storage temperature		-55~150	°C

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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	$I_C=30\text{mA}; I_B=0$	140			V
V_{CEsat}	Collector-emitter saturation voltage	$I_C=7\text{A}; I_B=7\text{mA}$			2.5	V
V_{BEsat}	Base-emitter saturation voltage	$I_C=7\text{A}; I_B=7\text{mA}$			3.0	V
I_{CBO}	Collector cut-off current	$V_{CB}=160\text{V}; I_E=0$			100	μA
I_{CEO}	Collector cut-off current	$V_{CE}=140\text{V}; I_B=0$			100	μA
I_{EBO}	Emitter cut-off current	$V_{EB}=5\text{V}; I_C=0$			100	μA
h_{FE-1}	DC current gain	$I_C=1\text{A}; V_{CE}=5\text{V}$	2000			
h_{FE-2}	DC current gain	$I_C=7\text{A}; V_{CE}=5\text{V}$	5000		30000	
f_T	Transition frequency	$I_C=0.5\text{A}; V_{CE}=10\text{V}; f=1\text{MHz}$		20		MHz

Switching times

t_{on}	Turn-on time	$I_C=7\text{A}; V_{CC}=50\text{V}$ $I_{B1}=-I_{B2}=7\text{mA}$		2.0		μs
t_{stg}	Storage time			6.0		μs
t_f	Fall time			1.2		μs

◆ h_{FE-2} classifications

Q	P
5000-15000	8000-30000

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PACKAGE OUTLINE

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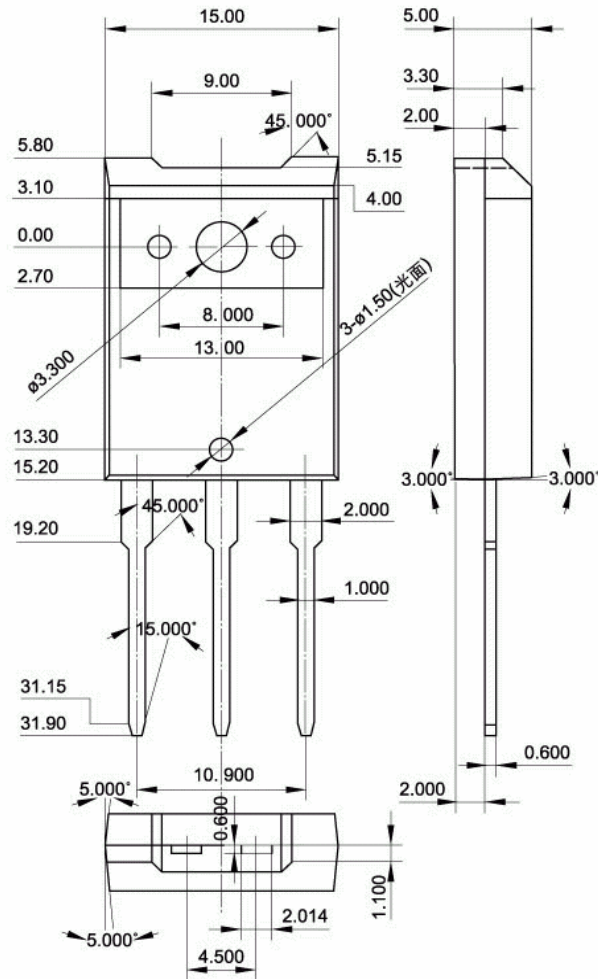


Fig.2 Outline dimensions (unindicated tolerance:±0.30mm)