

Inchange Semiconductor

Product Specification

Silicon NPN Power Transistors

2SD1897

DESCRIPTION

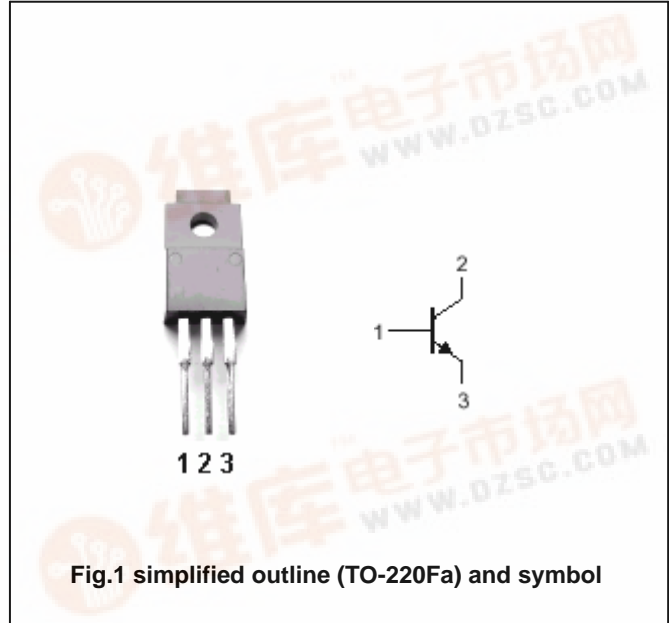
- With TO-220Fa package
- Low collector saturation voltage
- High power dissipation: $P_C=30W@T_C=25^{\circ}C$

APPLICATIONS

- For low frequency power amplifier, power driver and DC-DC converter applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter



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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	100	V
V_{CEO}	Collector-emitter voltage	Open base	100	V
V_{EBO}	Emitter-base voltage	Open collector	5	V
I_C	Collector current		5	A
I_{CM}	Collector current-Peak		10	A
P_C	Collector power dissipation	$T_C=25^{\circ}C$	30	W
		$T_a=25^{\circ}C$	2	
T_j	Junction temperature		150	$^{\circ}C$
T_{stg}	Storage temperature		-55~150	$^{\circ}C$

Silicon NPN Power Transistors

2SD1897

CHARACTERISTICS

T_j=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-emitter breakdown voltage	I _C =1mA, I _B =0	100			V
V _{(BR)CBO}	Collector-base breakdown voltage	I _C =50 μA, I _E =0	100			V
V _{(BR)EBO}	Emitter-base breakdown voltage	I _E =50 μA, I _C =0	5			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =3A; I _B =0.3A			1.0	V
V _{BEsat}	Base-emitter saturation voltage	I _C =3A; I _B =0.3A			1.5	V
I _{CBO}	Collector cut-off current	V _{CB} =100V, I _E =0			10	μA
I _{EBO}	Emitter cut-off current	V _{EB} =5V, I _C =0			10	μA
h _{FE}	DC current gain	I _C =1A; V _{CE} =5V	60		320	
f _T	Transition frequency	I _E =-0.5A; V _{CE} =5V; f=5MHz		8		MHz
C _{ob}	Output capacitance	I _E =0; V _{CB} =10V, f=1MHz		100		pF

◆ h_{FE} Classifications

D	E	F
60-120	100-200	160-320

Silicon NPN Power Transistors

2SD1897

PACKAGE OUTLINE

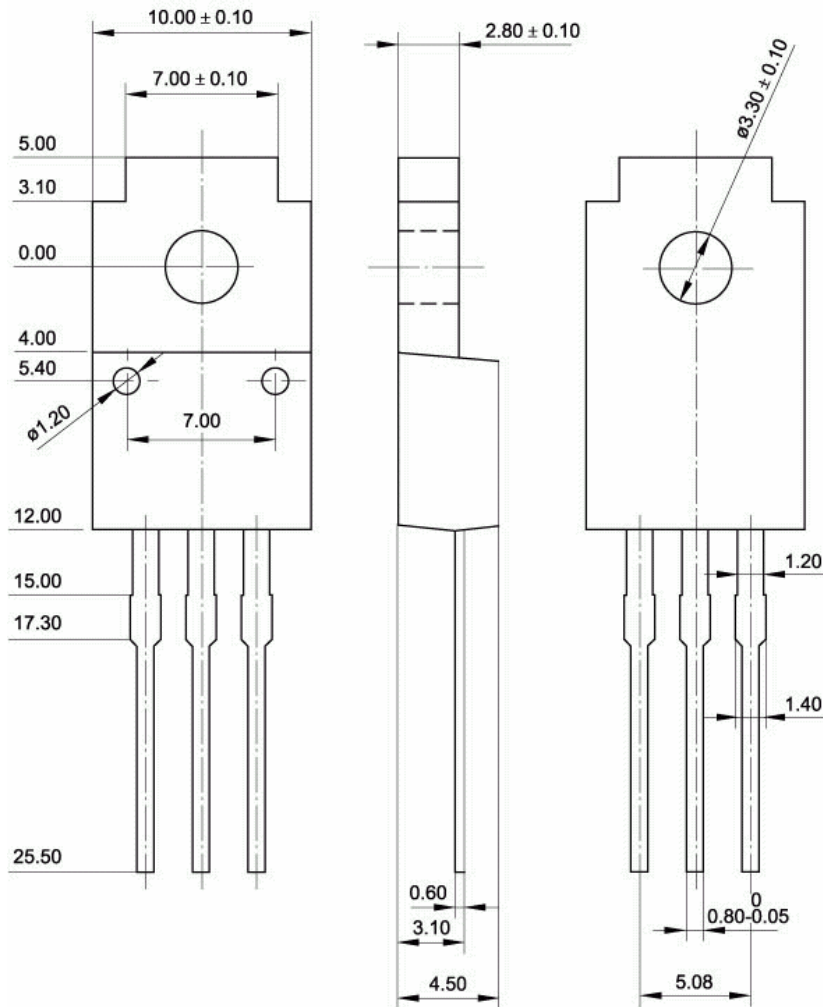


Fig.2 Outline dimensions (unindicated tolerance: ± 0.15 mm)