

## Silicon NPN Power Transistors

2SD1897

## DESCRIPTION

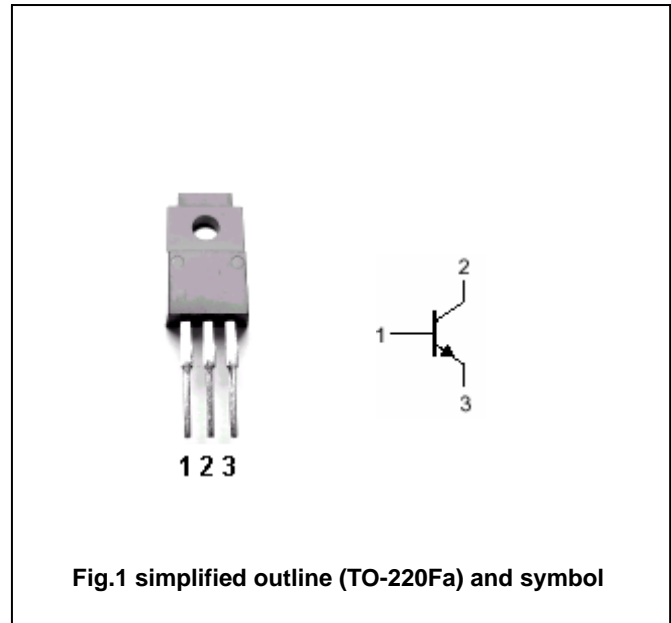
- With TO-220Fa package
- Low collector saturation voltage
- High power dissipation:  $P_C=30W@T_C=25^\circ C$

## 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	$^\circ C$

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## CHARACTERISTICS

T<sub>j</sub>=25°C unless otherwise specified

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

◆ h<sub>FE</sub> Classifications

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

PACKAGE OUTLINE

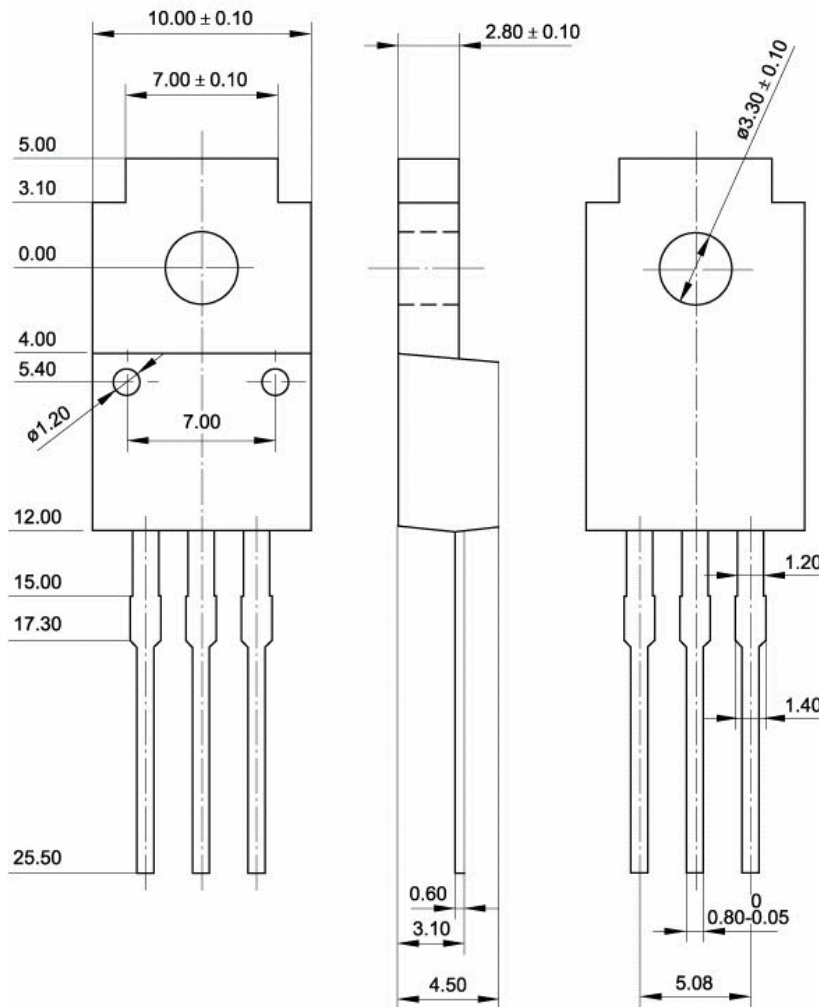


Fig.2 Outline dimensions (unindicated tolerance:  $\pm 0.15$  mm)