

Silicon NPN Power Transistors

BU506DF

DESCRIPTION

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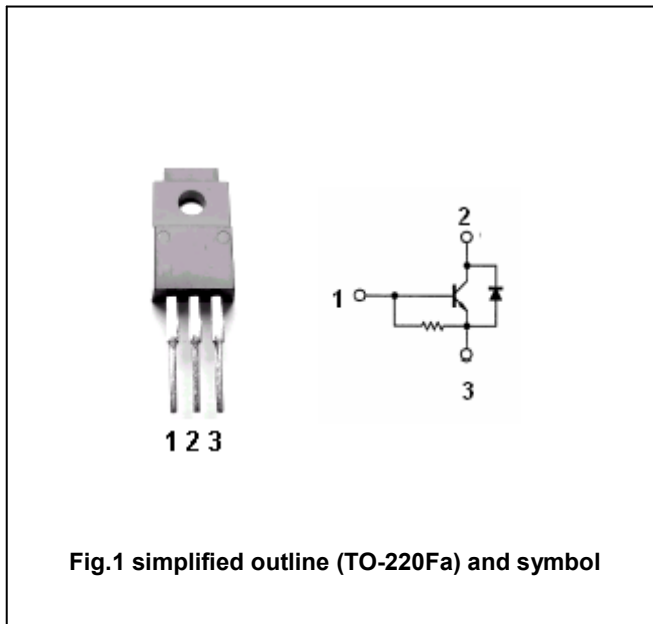
- With TO-220Fa package
- High voltage
- High-speed switching
- Built-in damper diode.

APPLICATIONS

- Horizontal deflection circuits of colour TV receivers.
- Line-operated switch-mode applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter



Absolute maximum ratings(Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	Open emitter	1500	V
V _{CEO}	Collector-emitter voltage	Open base	700	V
V _{EBO}	Emitter-base voltage	Open collector	6	V
I _C	Collector current (DC)		5	A
I _{CM}	Collector current (Pulse)		8	A
I _B	Base current		3	A
I _{BM}	Base current(peak)		5	A
P _T	Total power dissipation	T _C =25°C	20	W
T _j	Junction temperature		150	°C
T _{stg}	Storage temperature		-65-150	°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
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	$I_C=100\text{mA}; I_B=0, L=25\text{mH}$	700			V
V_{CEsat}	Collector-emitter saturation voltage	$I_C=3\text{A}; I_B=1.33\text{A}$			1.0	V
V_{BEsat}	Base-emitter saturation voltage	$I_C=3\text{A}; I_B=1.33\text{A}$			1.3	V
h_{FE-1}	DC current gain	$I_C=0.1\text{A}; V_{CE}=5\text{V}$	6	13	30	
h_{FE-2}	DC current gain	$I_C=3\text{A}; V_{CE}=5\text{V}$	2.25			
I_{CES}	Collector cut-off current	$V_{CE}=\text{rated}; V_{BE}=0$ $T_j=125^\circ\text{C}$			0.5 1.0	mA
I_{EBO}	Emitter cut-off current	$V_{EB}=6\text{V}; I_C=0$			200	mA
V_F	Diode forward voltage	$I_F=3\text{A};$		1.5	2.2	V

Switching times

t_s	Storage time	$I_{CM} = 3\text{A}; I_{B(end)} = 1\text{A}$ $L_B = 12\mu\text{H}$		6.5		μs
t_f	Fall time			0.7		μs

PACKAGE OUTLINE

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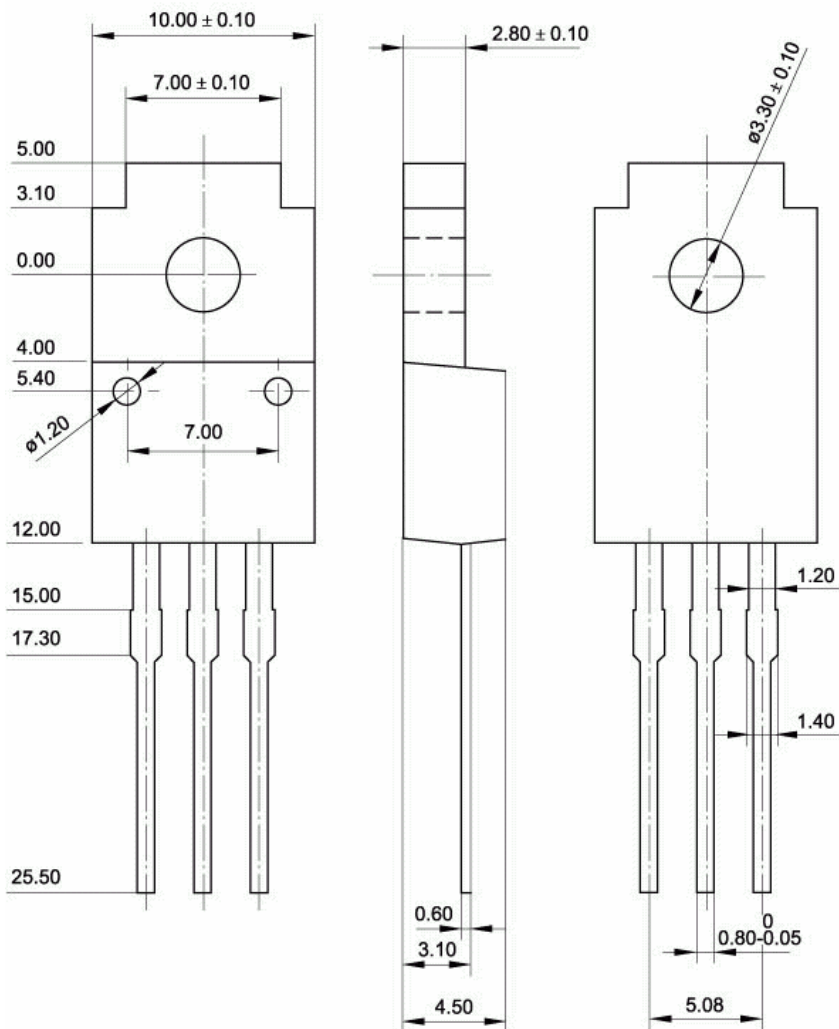


Fig.2 Outline dimensions (unindicated tolerance: ± 0.15 mm)