

Silicon NPN Power Transistors

2SC3170

DESCRIPTION

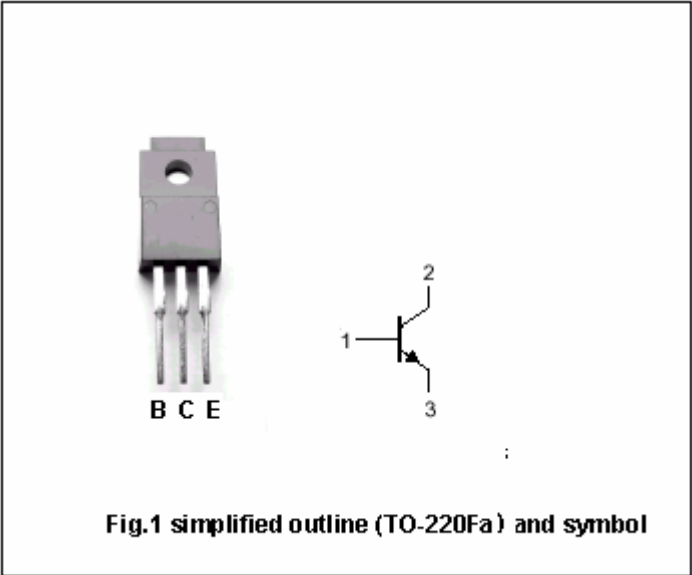
- With TO-220Fa package
- Low collector saturation voltage
- High breakdown voltage

APPLICATIONS

- For high speed switching 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	500	V
V _{CEO}	Collector-emitter voltage	Open base	400	V
V _{EBO}	Emitter-base voltage	Open collector	7	V
I _C	Collector current		7	A
I _{CM}	Collector current-peak		15	A
P _C	Collector power dissipation	T _a =25°C	2	W
		T _C =25°C	40	
T _j	Junction temperature		150	°C
T _{stg}	Storage temperature		-55~150	°C

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CHARACTERISTICS

Tj=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CE(SUS)}$	Collector-emitter sustaining voltage	$I_C=0.2A$, $L=25mH$	400			V
V_{CEsat}	Collector-emitter saturation voltage	$I_C=3A$; $I_B=0.6A$			1.0	V
V_{BEsat}	Base-emitter saturation voltage	$I_C=3A$; $I_B=0.6A$			1.5	V
I_{CBO}	Collector cut-off current	$V_{CB}=500V$; $I_E=0$			100	μA
I_{EBO}	Emitter cut-off current	$V_{EB}=5V$; $I_C=0$			100	μA
h_{FE-1}	DC current gain	$I_C=0.1A$; $V_{CE}=5V$	15			
h_{FE-2}	DC current gain	$I_C=3A$; $V_{CE}=5V$	8			
f_T	Transition frequency	$I_C=0.5A$; $V_{CE}=10V$		8		MHz

Switching times

t_{on}	Turn-on time	$I_C=3A$; $I_{B1}=-I_{B2}=0.6A$ $V_{CC}=100V$			1.0	μs
t_{stg}	Storage time				3.0	μs
t_f	Fall time				1.0	μs

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PACKAGE OUTLINE

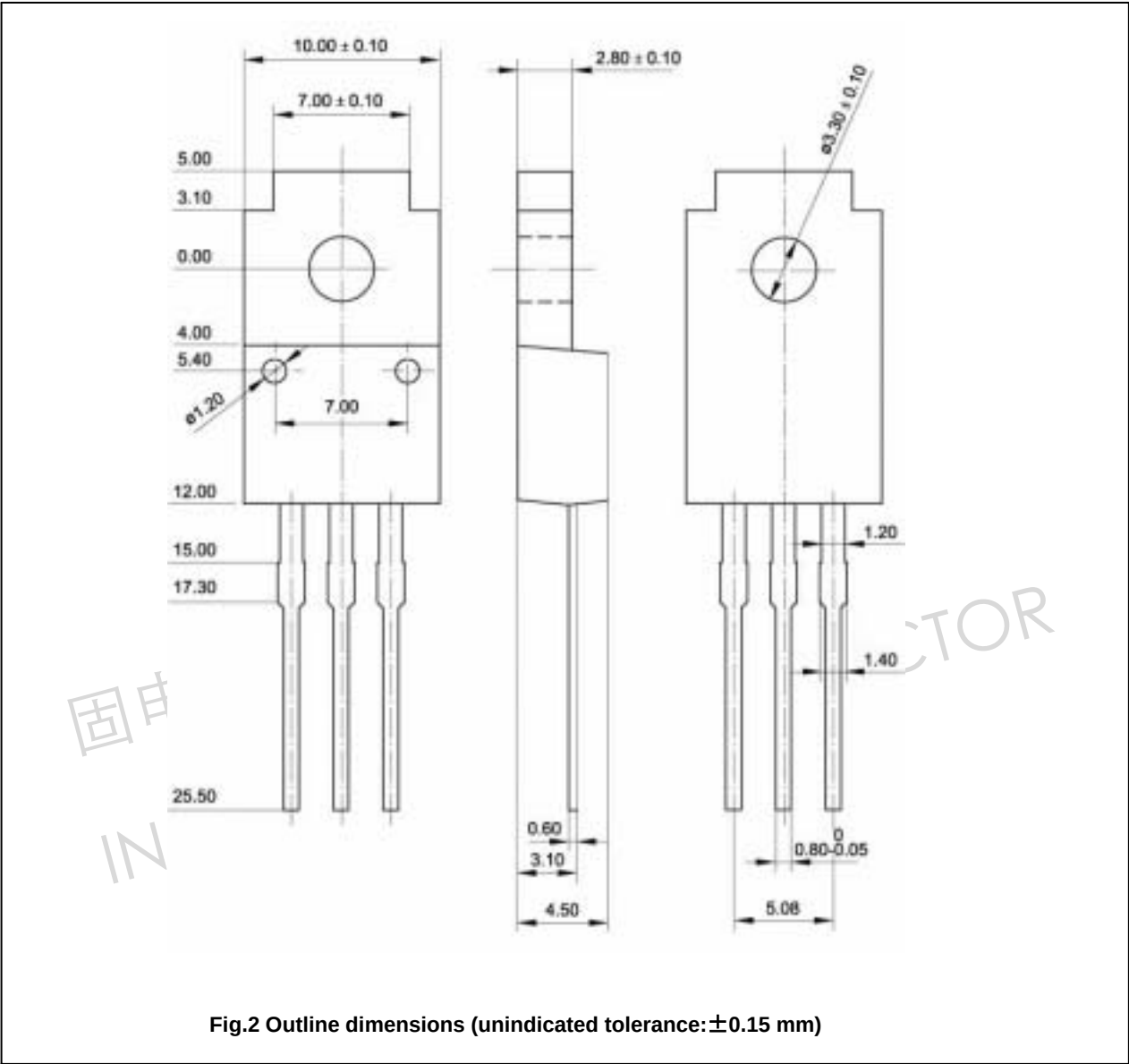


Fig.2 Outline dimensions (unindicated tolerance:±0.15 mm)