

Silicon NPN Power Transistors

2SC3969

DESCRIPTION

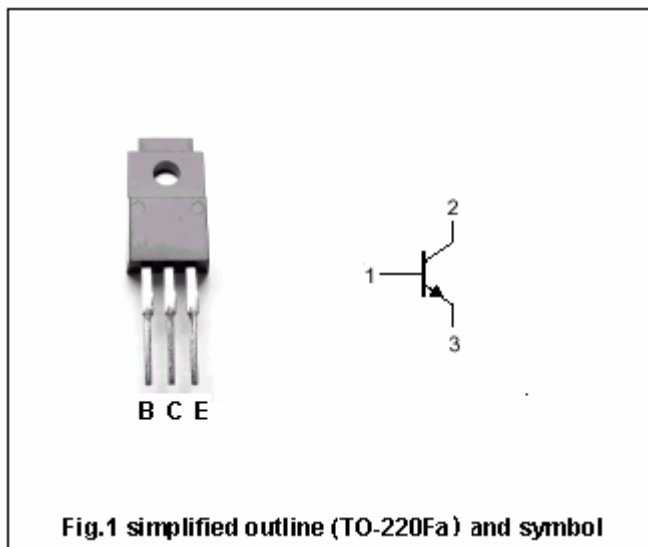
- With TO-220Fa package
- Low collector saturation voltage
- High breakdown voltage
- Fast switching speed

APPLICATIONS

- For high voltage switching applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter



Absolute maximum ratings (Tc=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V _{CBO}	Collector-base voltage	Open emitter	400	V
V _{CEO}	Collector-emitter voltage	Open base	400	V
V _{EBO}	Emitter-base voltage	Open collector	7	V
I _C	Collector current -DC		2	A
I _{CM}	Collector current-Peak		4	A
P _C	Collector power dissipation	T _a =25°C	2	W
		T _C =25°C	20	
T _j	Junction temperature		150	°C
T _{stg}	Storage temperature		-55~150	°C

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CHARACTERISTICS

T_j=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CEO(SUS)}	Collector-emitter sustaining voltage	I _C =1.0A ; I _{B1} =0.1A, L=1mH	400			V
V _{(BR)CEO}	Collector-emitter breakdown voltage	I _C =1mA ; I _B =0	400			V
V _{(BR)CBO}	Collector-base breakdown voltage	I _C =50μA ; I _E =0	400			V
V _{(BR)EBO}	Emitter-base breakdown voltage	I _E =50μA ; I _C =0	7			V
V _{CEsat}	Collector-emitter saturation voltage	I _C =1A; I _B =0.2A			1.0	V
V _{BEsat}	Base-emitter saturation voltage	I _C =1A; I _B =0.2A			1.5	V
I _{CBO}	Collector cut-off current	V _{CB} =400V; I _E =0			10	μA
I _{EBO}	Emitter cut-off current	V _{EB} =7V; I _C =0			10	μA
h _{FE}	DC current gain	I _C =0.1A ; V _{CE} =5V	25		50	
f _T	Transition frequency	I _E =-0.1A ; V _{CE} =10V; f=5MHz		10		MHz
C _{OB}	Collector outoput capacitance	I _E =0; f=1MHz ; V _{CB} =10V		30		pF

Switching times

t _{on}	Turn-on time	V _{CC} ≈200V , I _C =0.8A I _{B1} =-I _{B2} =0.08A; R _L =250Ω			1.0	μs
t _s	Storage time				2.5	μs
t _f	Fall time				1.0	μs

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PACKAGE OUTLINE

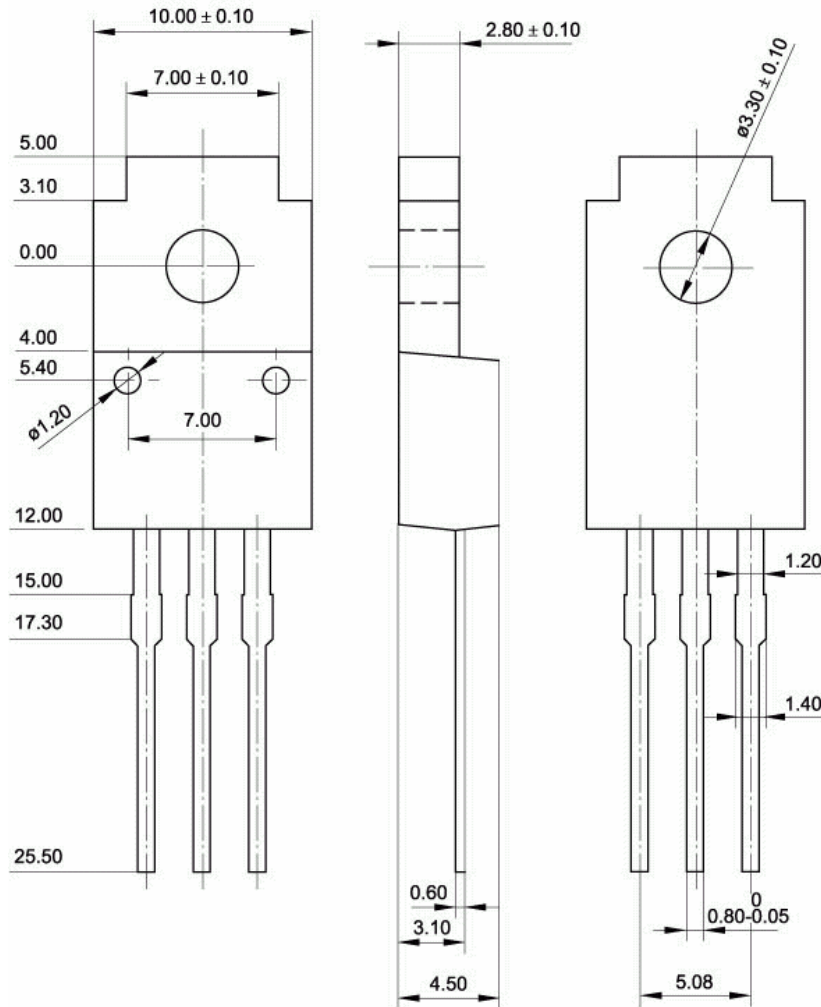


Fig.2 Outline dimensions (unindicated tolerance:±0.15mm)