

Silicon NPN Power Transistors

2SC3870

DESCRIPTION

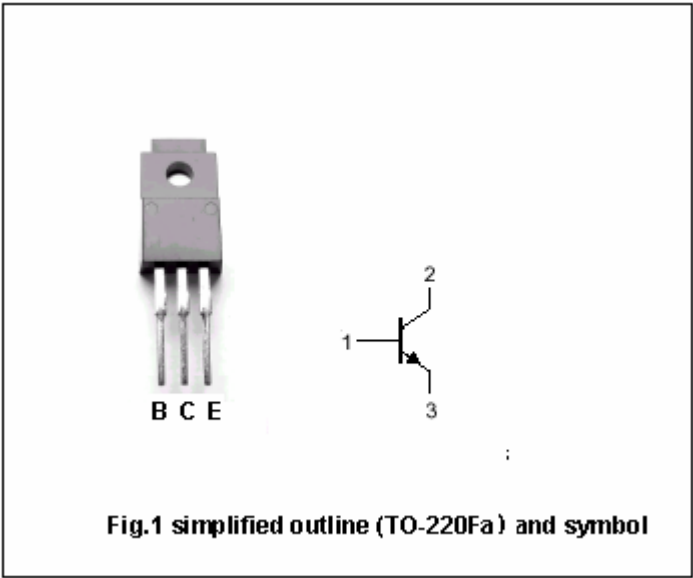
- With TO-220Fa package
- High breakdown voltage
- Wide area of safe operation

APPLICATIONS

- For high speed switching applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter



Absolute maximum ratings(Ta=25)

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 (DC)		7	A
I _{CM}	Collector current (pulse)		15	A
I _B	Base current (DC)		3	A
P _C	Collector power dissipation	T _a =25	2	W
		T _C =25	40	
T _j	Junction temperature		150	
T _{stg}	Storage temperature		-55~150	

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CHARACTERISTICS

Tj=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CE(SUS)}$	Collector-emitter sustaining voltage	$I_C=10mA$; $I_B=0$	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	$I_C=0.5A$; $V_{CE}=10V$		30		MHz
Switching times						
t_{on}	Turn-on time	$I_C=3A$; $I_B=0.6A$; $I_{B2}=-1.2A$ $V_{CC}=150V$			0.7	μs
t_s	Storage time				2.0	μs
t_f	Fall time				0.3	μs

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PACKAGE OUTLINE

