

Silicon NPN Power Transistors

2SC3852**DESCRIPTION**

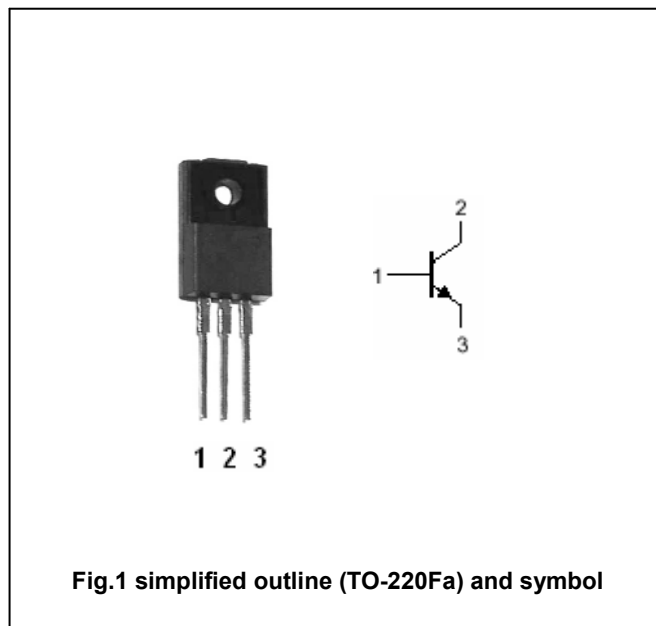
- With TO-220Fa package
- Low collector saturation voltage
- High h_{FE}

APPLICATIONS

- Driver for solenoid and motor, series regulator and general purpose applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter

**Absolute maximum ratings ($T_a=25^\circ\text{C}$)**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	Open emitter	80	V
V_{CEO}	Collector-emitter voltage	Open base	60	V
V_{EBO}	Emitter-base voltage	Open collector	6	V
I_C	Collector current		3	A
I_B	Base current		1	A
P_T	Total power dissipation	$T_C=25^\circ\text{C}$	25	W
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-55~150	$^\circ\text{C}$

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CHARACTERISTICS

Tj=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=25mA ; I_B=0$	60			V
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C=2A ; I_B=50mA$			0.5	V
I_{CBO}	Collector cut-off current	$V_{CB}=80V ; I_E=0$			10	μA
I_{EBO}	Emitter cut-off current	$V_{EB}=6V ; I_C=0$			100	μA
h_{FE}	DC current gain	$I_C=0.5A ; V_{CE}=4V$	200			
f_T	Transition frequency	$I_C=0.2A ; V_{CE}=12V$		15		MHz
C_{OB}	Collector output capacitance	$f=1MHz ; V_{CB}=10V$		50		pF

Switching times

t_{on}	Turn-on time	$I_C=1.0A$ $I_{B1}=15mA, I_{B2}=-30mA$ $V_{CC}=20V, R_L=20\Omega$		0.8		μs
t_s	Storage time			3.0		μs
t_f	Fall time			1.2		μs

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PACKAGE OUTLINE

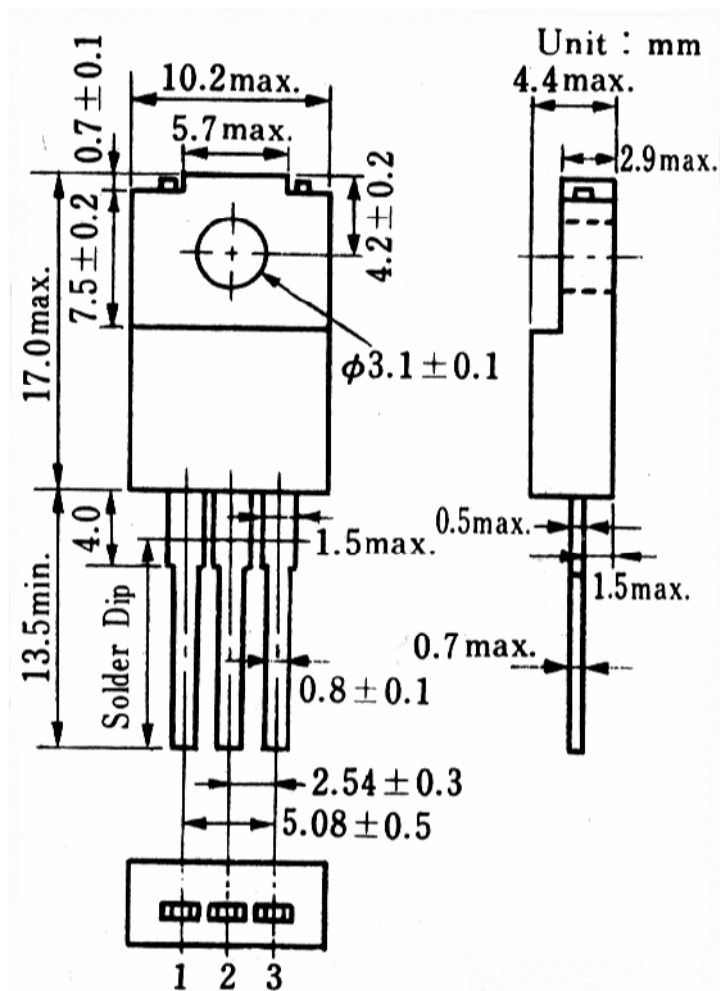


Fig.2 outline dimensions