

Silicon NPN Power Transistors

2SC3866

DESCRIPTION

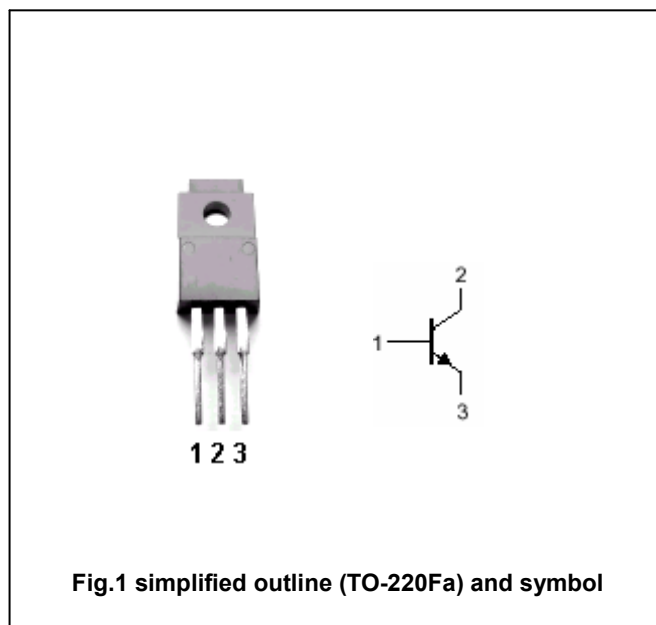
- With TO-220Fa package
- High speed switching
- High voltage
- High reliability

APPLICATIONS

- Switching regulators
- Ultrasonic generators
- High frequency inverters
- General purpose power amplifiers

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	900	V
V_{CEO}	Collector-emitter voltage	Open base	800	V
V_{EBO}	Emitter-base voltage	Open collector	10	V
I_C	Collector current		3	A
I_B	Base current		1	A
P_C	Collector power dissipation	$T_C=25^\circ\text{C}$	40	W
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-55~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-C}$	Thermal resistance junction case	3.0	$^\circ\text{C}/\text{W}$

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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	$I_C=10mA$, $I_B=0$	800			V
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C=1mA$, $I_E=0$	900			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=1mA$, $I_C=0$	10			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	$V_{CB}=900V$; $I_E=0$			1.0	mA
I_{EBO}	Emitter cut-off current	$V_{EB}=10V$; $I_C=0$			1.0	mA
h_{FE}	DC current gain	$I_C=1A$; $V_{CE}=5V$	10			

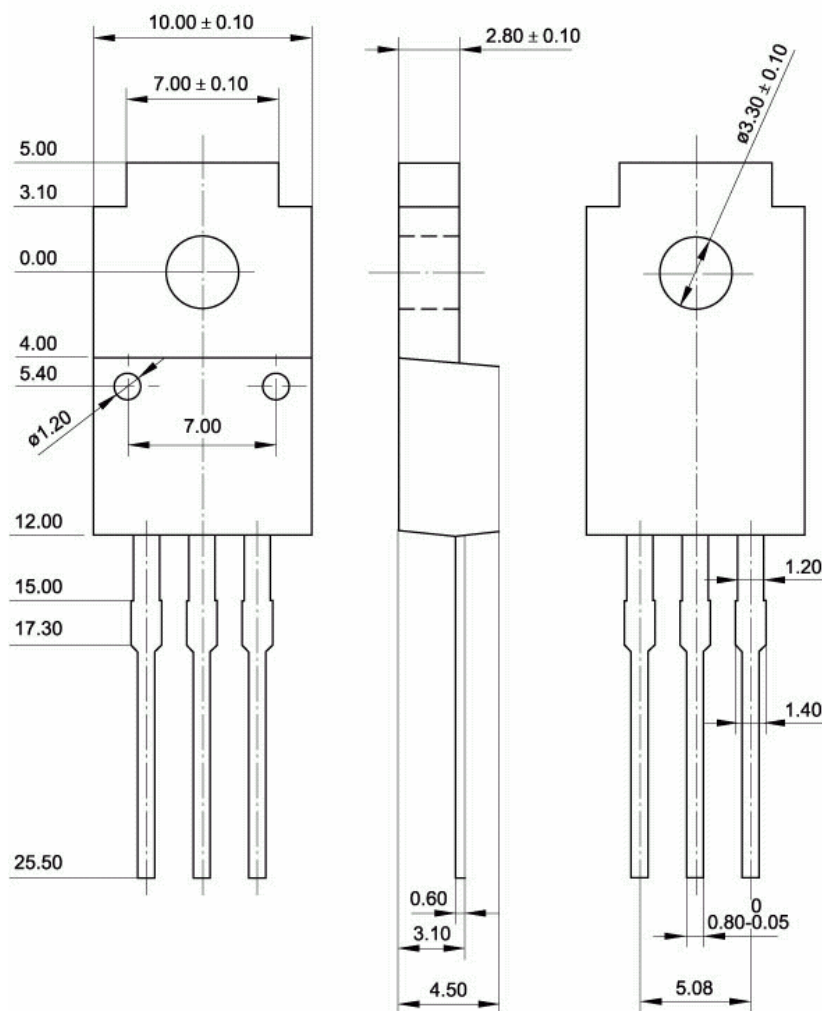
Switching times

t_{on}	Turn-on time	$I_C=2A$; $I_{B1}=0.4A$ $I_{B2}=-0.8A$; $R_L=150\Omega$ $P_w=20\mu s$, Duty $\leq 2\%$			1.0	μs
t_s	Storage time				4.0	μs
t_f	Fall time				0.8	μs

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PACKAGE OUTLINE

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

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