

Silicon NPN Power Transistors

2SC3866

DESCRIPTION

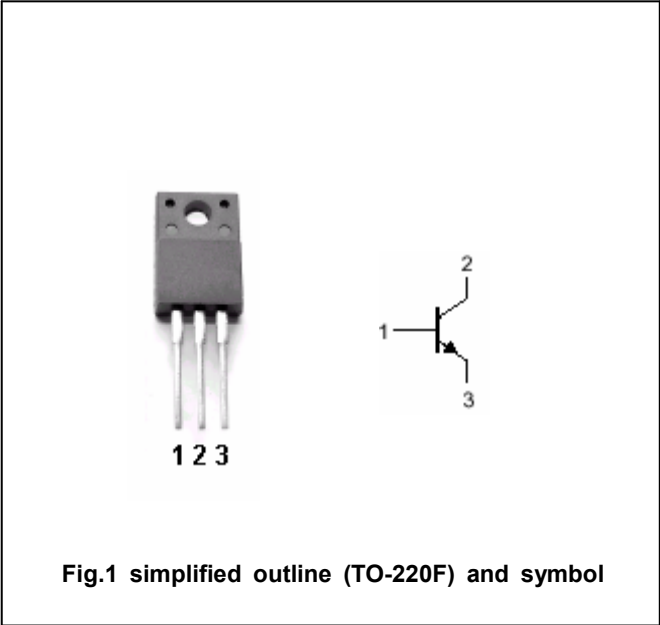
- With TO-220F package
- High speed switching
- High voltage
- High reliability

APPLICATIONS

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

PINNING

PIN	DESCRIPTION
1	Base
2	Collector
3	Emitter



Absolute maximum ratings (Ta=25℃)

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℃	40	W
T _j	Junction temperature		150	℃
T _{stg}	Storage temperature		-55~150	℃

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R _{th j-c}	Thermal resistance junction case	3.0	℃/W

Silicon NPN Power Transistors

2SC3866

CHARACTERISTICS

Tj=25℃ 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			

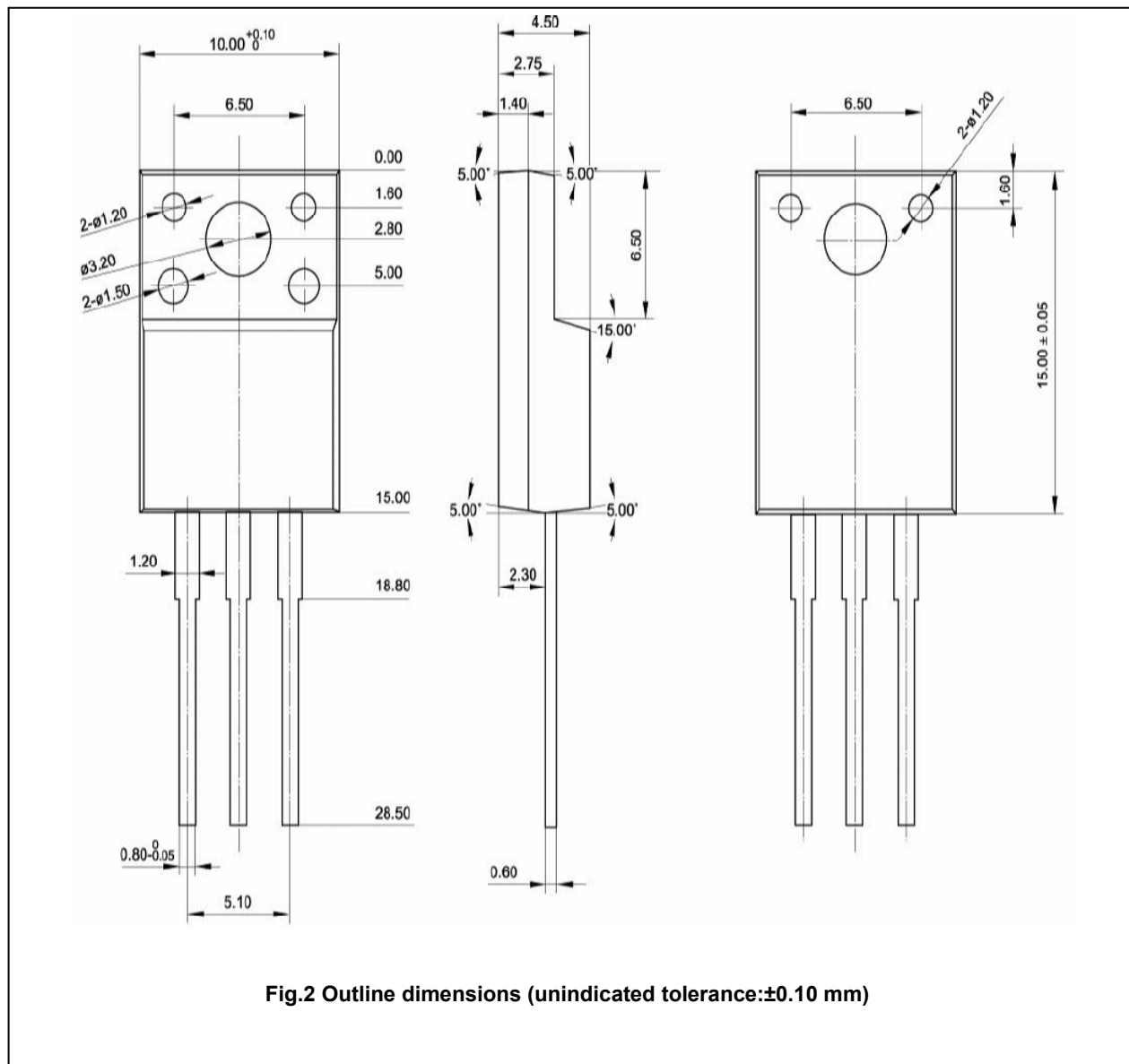
Switching times

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

Silicon NPN Power Transistors

2SC3866

PACKAGE OUTLINE



Silicon NPN Power Transistors

2SC3866

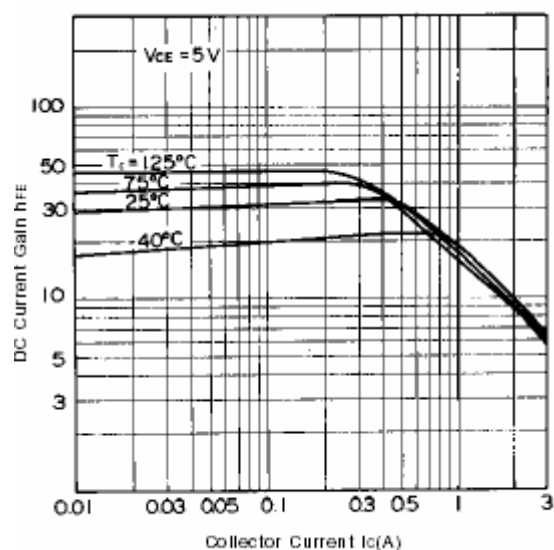


Fig.3 DC current Gain

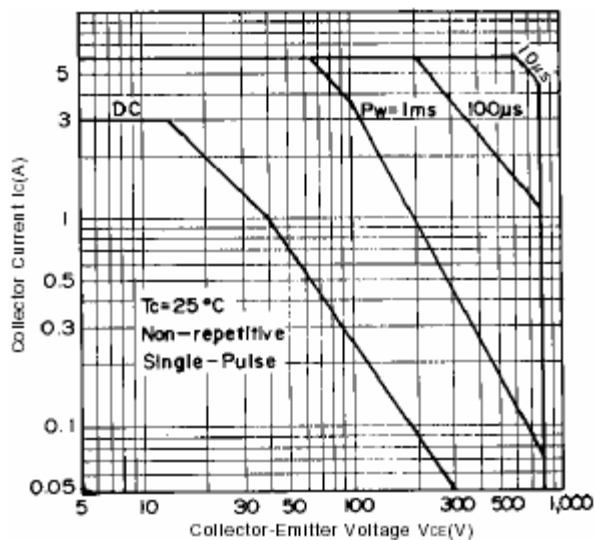
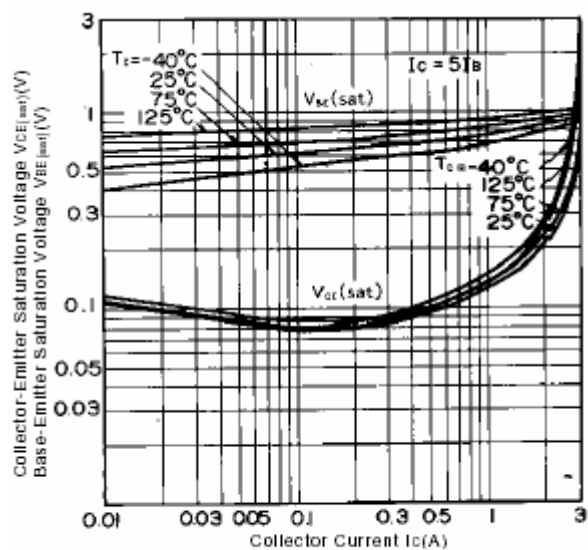


Fig.5 Safe Operating Area