

Silicon NPN Power Transistors

2SC3679

DESCRIPTION

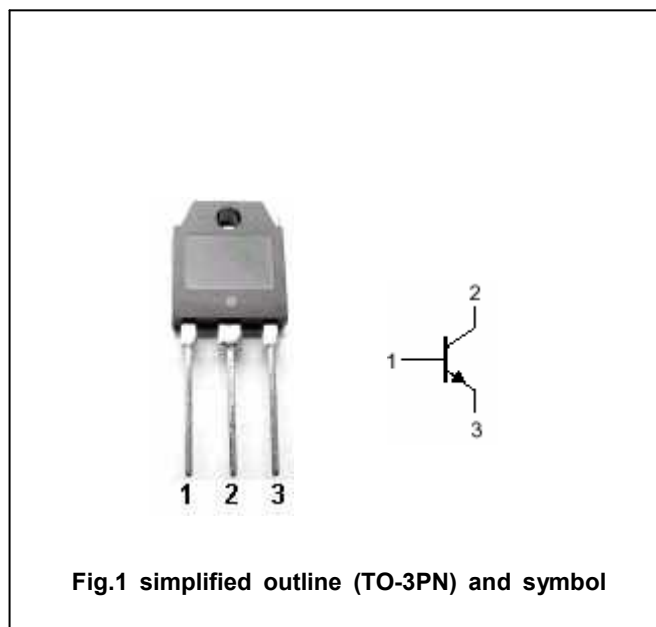
- With TO-3PN package
- High voltage switching transistor

APPLICATIONS

- For switching regulator and general purpose applications

PINNING

PIN	DESCRIPTION
1	Base
2	Collector;connected to mounting base
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	7	V
I_C	Collector current (DC)		5	A
I_{CM}	Collector current -peak		10	A
I_B	Base current (DC)		2.5	A
P_C	Collector power dissipation	$T_C=25^\circ\text{C}$	100	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℃ 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_{CEsat}	Collector-emitter saturation voltage	$I_C=2A ; I_B=0.4A$			0.5	V
V_{BEsat}	Base-emitter saturation voltage	$I_C=2A ; I_B=0.4A$			1.2	V
I_{CBO}	Collector cut-off current	$V_{CB}=800V ; I_E=0$			0.1	mA
I_{EBO}	Emitter cut-off current	$V_{EB}=7V ; I_C=0$			0.1	mA
h_{FE}	DC current gain	$I_C=2A ; V_{CE}=4V$	10		30	
f_T	Transition frequency	$I_C=0.5A ; V_{CE}=12V$		6		MHz
C_{OB}	Collector output capacitance	$f=1MHz ; V_{CB}=10V$		75		pF

Switching times

t_{on}	Turn-on time	$I_C=2.0A$ $I_{B1}=0.3A, I_{B2}=-1A$ $V_{CC}=250V, R_L=125\Omega$			1.0	μs
t_s	Storage time				5.0	μs
t_f	Fall time				1.0	μs

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PACKAGE OUTLINE

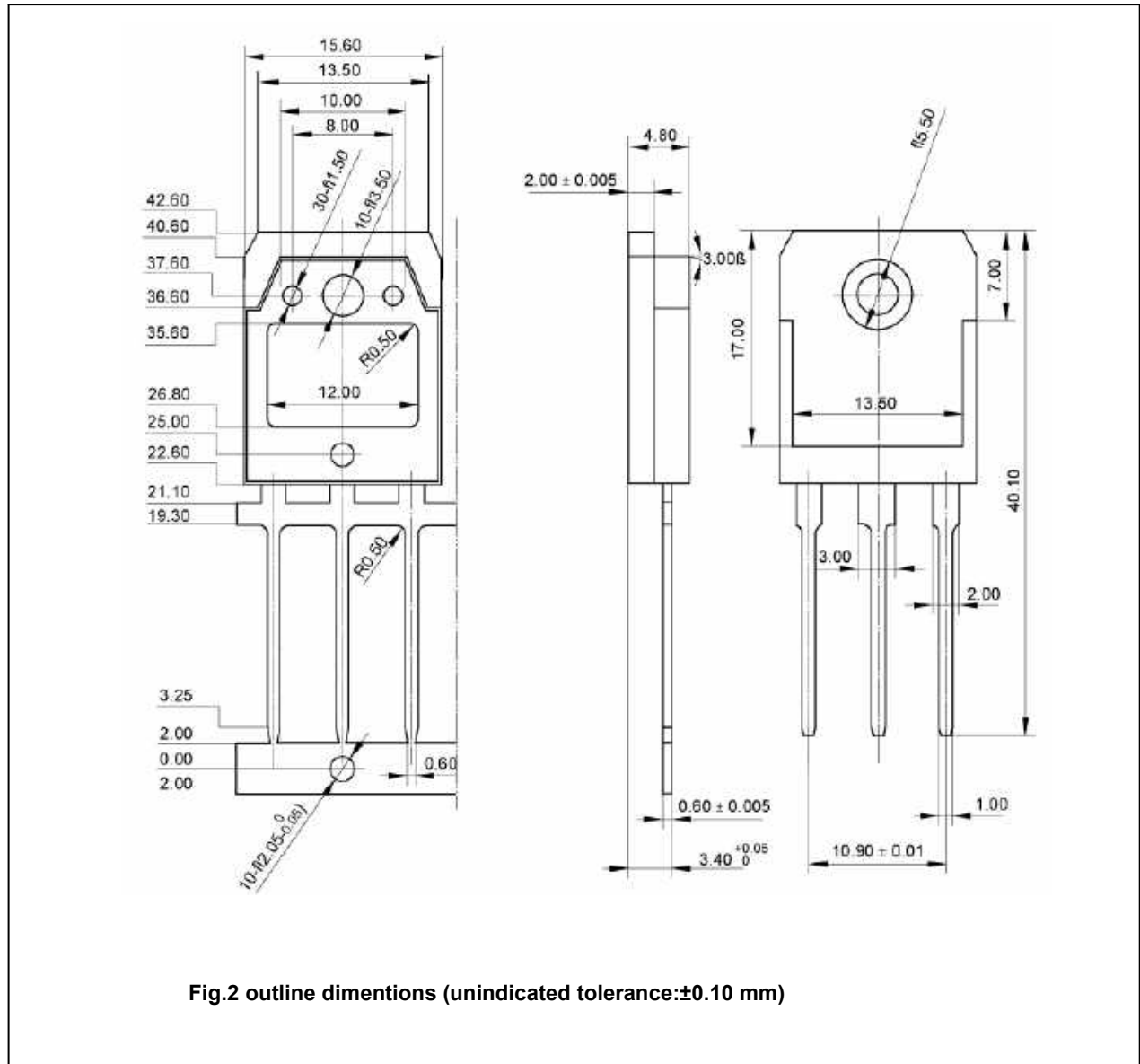


Fig.2 outline dimensions (unindicated tolerance:±0.10 mm)

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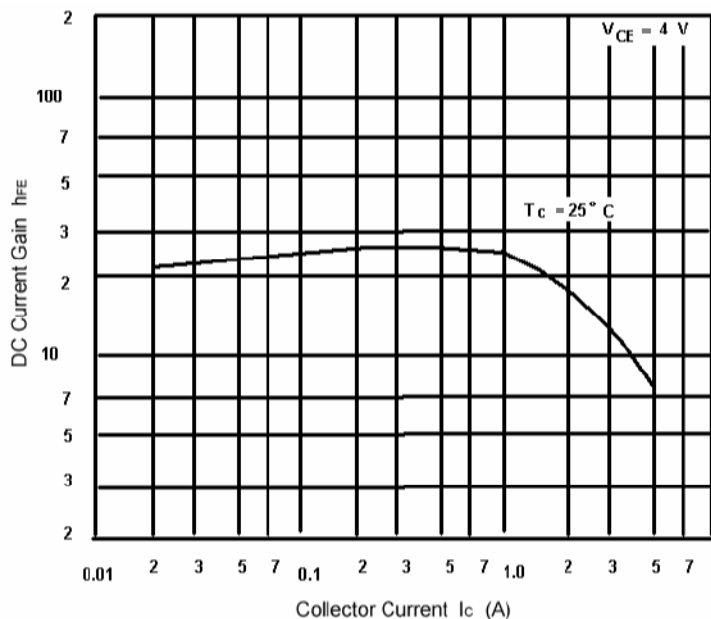


Fig.3 DC current Gain

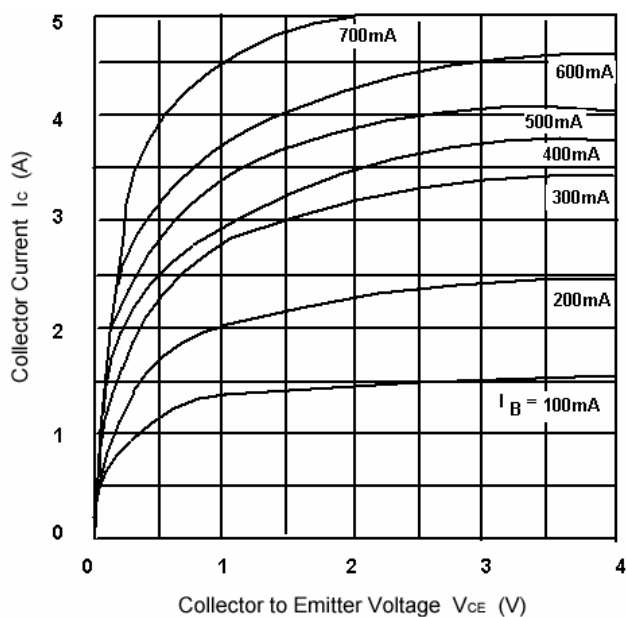


Fig.4 Static Characteristic

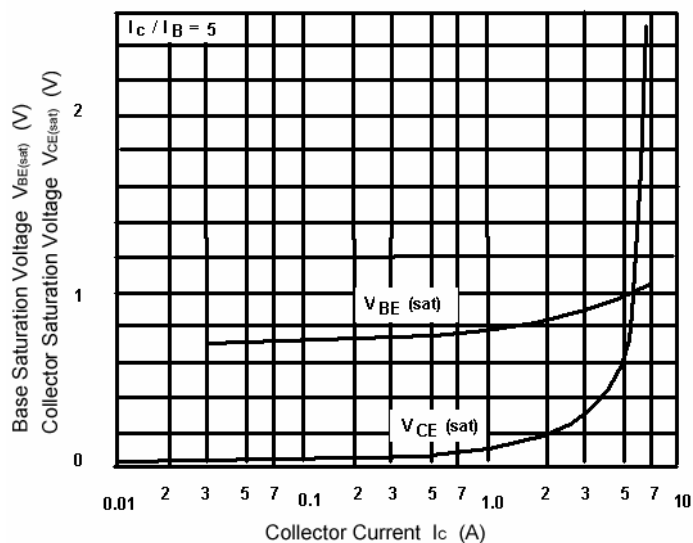
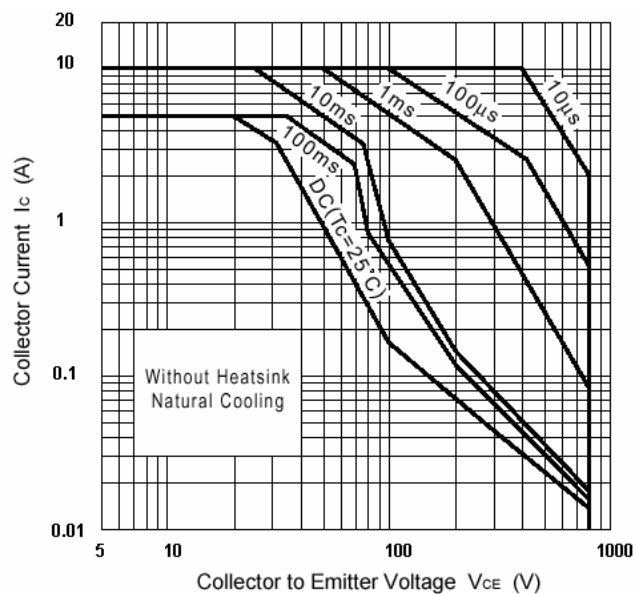
Fig.5 Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

Fig.6 Safe Operating Area