

Silicon NPN Power Transistors

2SC2979

DESCRIPTION

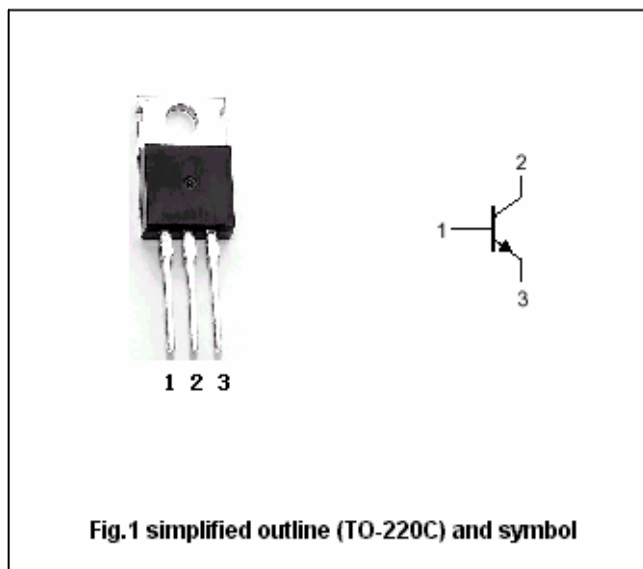
- With TO-220C package
- High V_{CBO}
- Fast switching speed.

APPLICATIONS

- For high voltage ,high speed and high power switching 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		3	A
I_{CM}	Collector current-peak		6	A
I_B	Base current		1.5	A
P_C	Collector dissipation	$T_C=25^\circ\text{C}$	40	W
T_j	Junction temperature		150	$^\circ\text{C}$
T_{stg}	Storage temperature		-55~150	$^\circ\text{C}$

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CHARACTERISTICS

Tj=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CEO(SUS)}$	Collector-emitter sustaining voltage	$I_C=0.2A$; $R_{BE}=\infty$, $L=100mH$	800			V
$V_{(BR)EBO}$	Base-emitter breakdown voltage	$I_E=10mA$; $I_C=0$	7			V
V_{CEsat}	Collector-emitter saturation voltage	$I_C=0.75A$; $I_B=0.15A$			1.0	V
V_{BEsat}	Base-emitter saturation voltage	$I_C=0.75A$; $I_B=0.15A$			1.5	V
I_{CBO}	Collector cut-off current	$V_{CB}=750V$; $I_E=0$			100	μA
I_{CEO}	Collector cut-off current	$V_{CE}=650V$; $R_{BE}=\infty$			100	μA
h_{FE-1}	DC current gain	$I_C=0.3A$; $V_{CE}=5V$	15			
h_{FE-2}	DC current gain	$I_C=1.5A$; $V_{CE}=5V$	7			

Switching times

t_{on}	Turn-on time	$V_{CC}\approx 250V$; $I_C=1.5A$ $I_{B1}=0.3A$; $I_{B2}=-0.75A$			1.0	μs
t_{stg}	Storage time				3.0	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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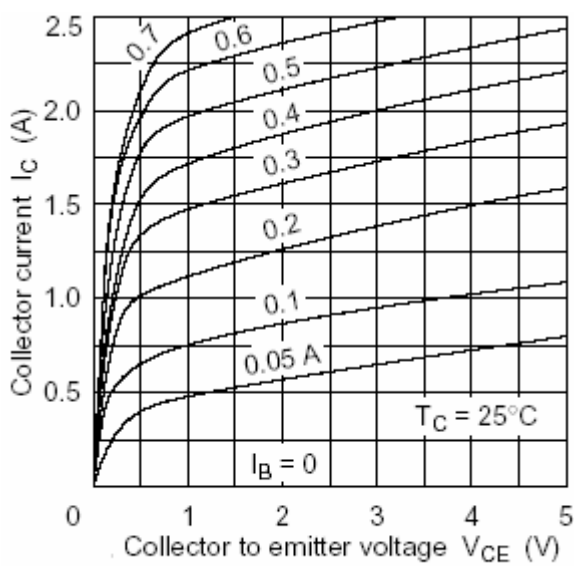


Fig.3 Static Characteristic

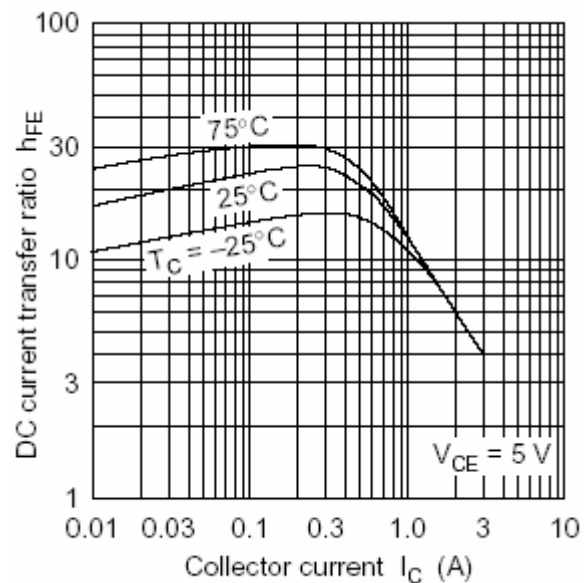


Fig.4 DC current Gain

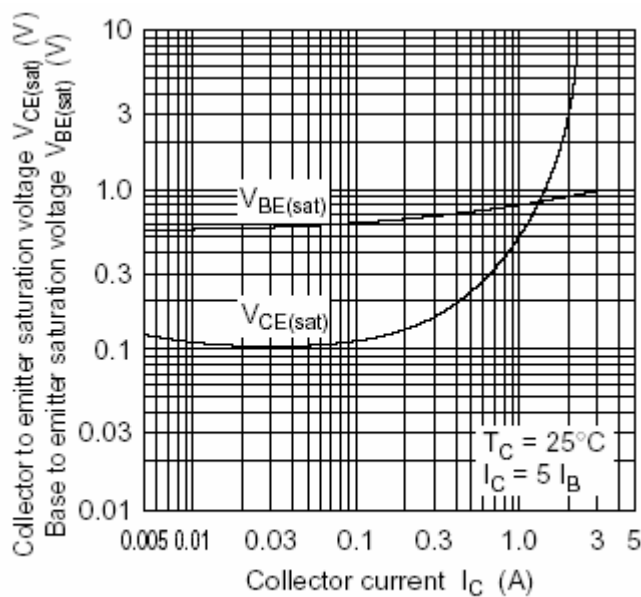
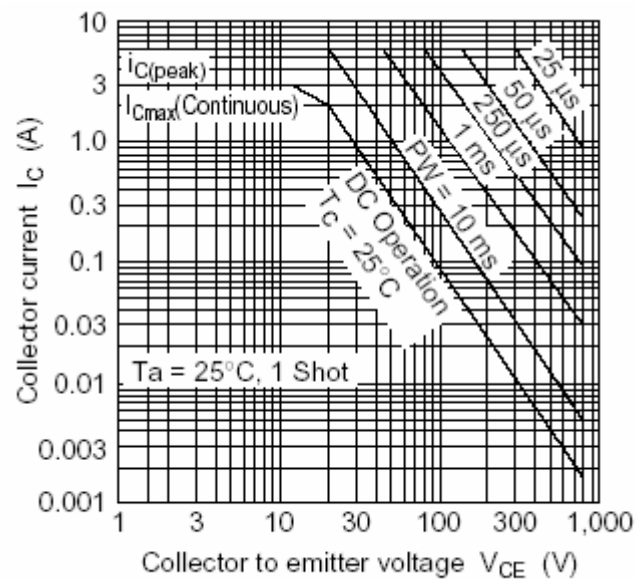
Fig.5 Base-Emitter Saturation Voltage
Collector-Emmitter Saturation Voltage

Fig.6 Safe Operating Area