

Silicon NPN Power Transistors

2SD2060

DESCRIPTION

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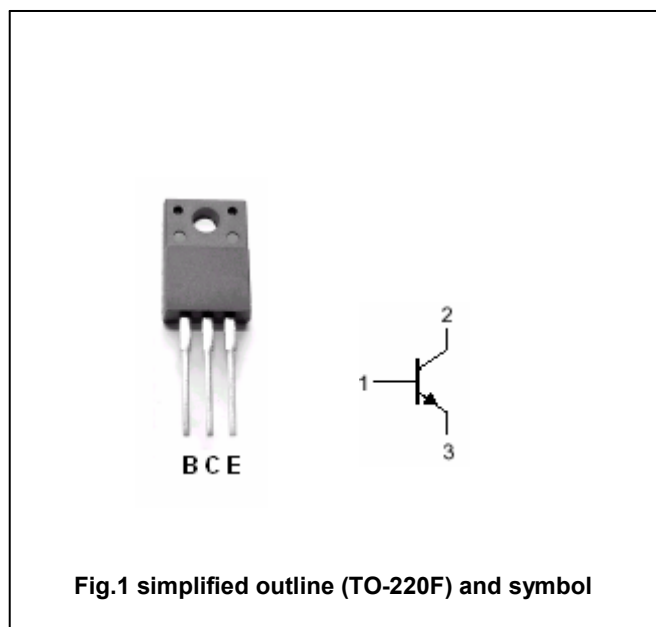
- With TO-220F package
- Complement to type 2SB1368
- Low collector saturation voltage:
 $V_{CE(SAT)}=1.7V(\text{Max})$ at $I_C=3A, I_B=0.3A$
- Collector power dissipation:
 $P_C=25W(T_C=25^\circ\text{C})$

APPLICATIONS

- With 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	80	V
V_{EBO}	Emitter-base voltage	Open collector	5	V
I_C	Collector current		4	A
I_B	Base current		0.4	A
P_C	Collector dissipation	$T_a=25^\circ\text{C}$	2.0	W
		$T_C=25^\circ\text{C}$	25	
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

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SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=50mA ; I_B=0$	80			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=10mA ; I_C=0$	5			V
V_{CEsat}	Collector-emitter saturation voltage	$I_C=3A ; I_B=0.3A$		0.45	1.5	V
V_{BE}	Base-emitter on voltage	$I_C=3A ; V_{CE}=5V$		1.0	1.5	V
I_{CBO}	Collector cut-off current	$V_{CB}=80V ; I_E=0$			30	μA
I_{EBO}	Emitter cut-off current	$V_{EB}=5V ; I_C=0$			100	μA
h_{FE-1}	DC current gain	$I_C=0.5A ; V_{CE}=5V$	40		240	
h_{FE-2}	DC current gain	$I_C=3A ; V_{CE}=5V$	15	50		
f_T	Transition frequency	$I_C=0.5A ; V_{CE}=5V$		8.0		MHz
C_{OB}	Collector output capacitance	$f=1MHz ; V_{CB}=10V$		90		pF

◆ h_{FE-1} Classifications

R	O	Y
40-80	70-140	120-240

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PACKAGE OUTLINE

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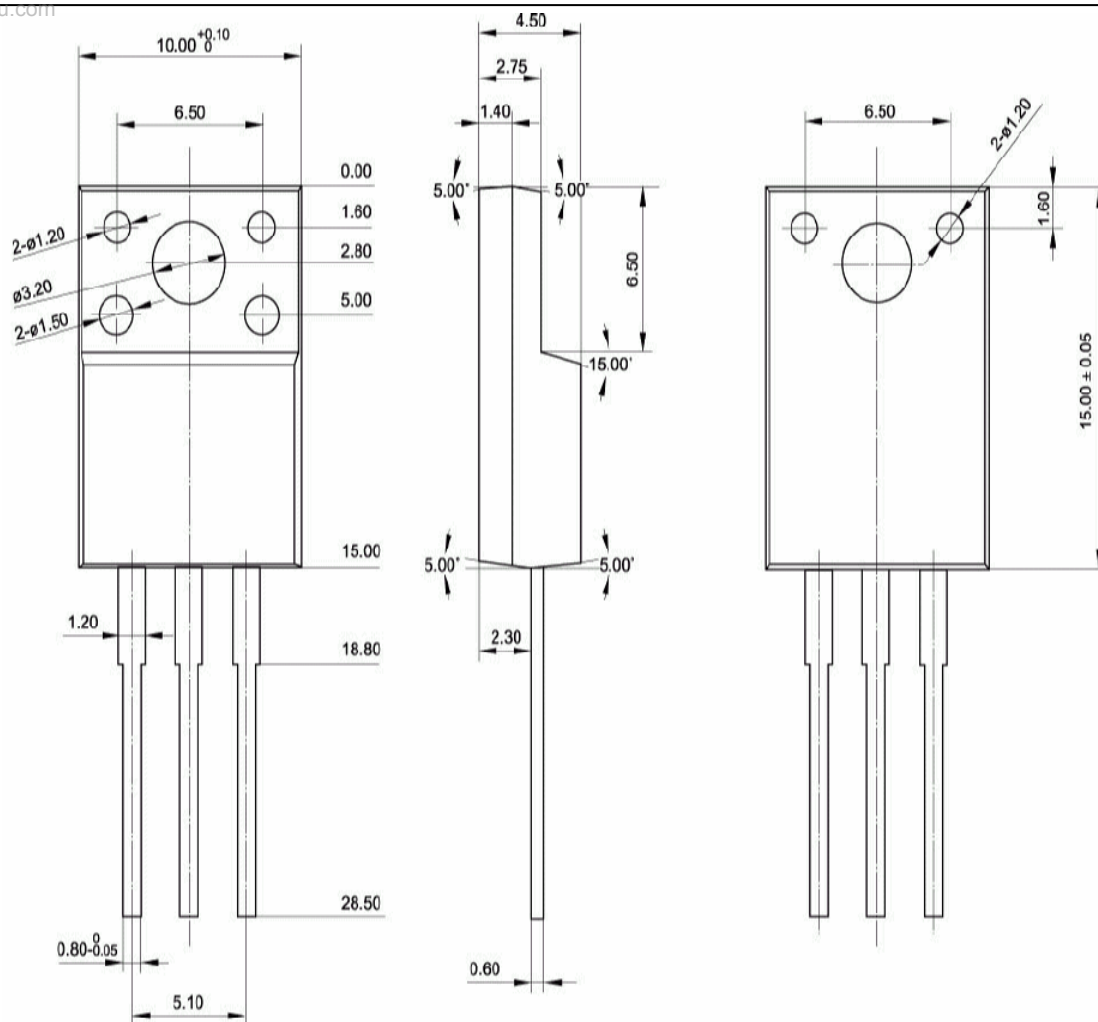


Fig.2 Outline dimensions

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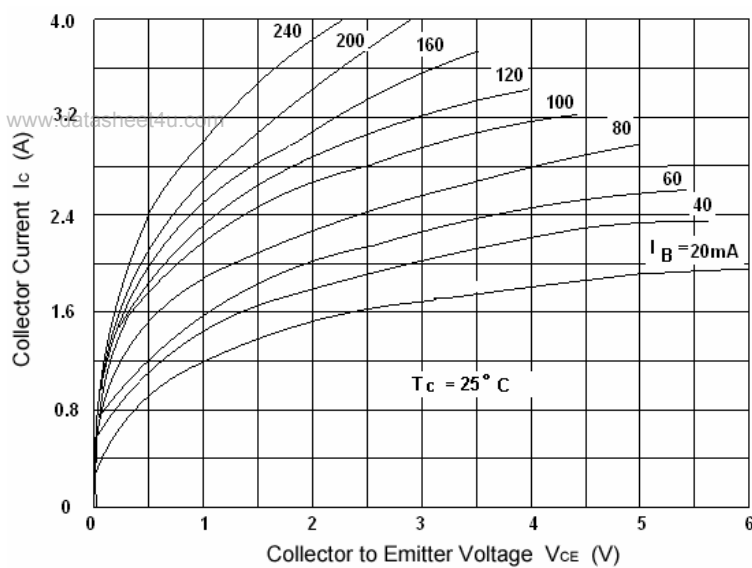


Fig.3 Static Characteristic

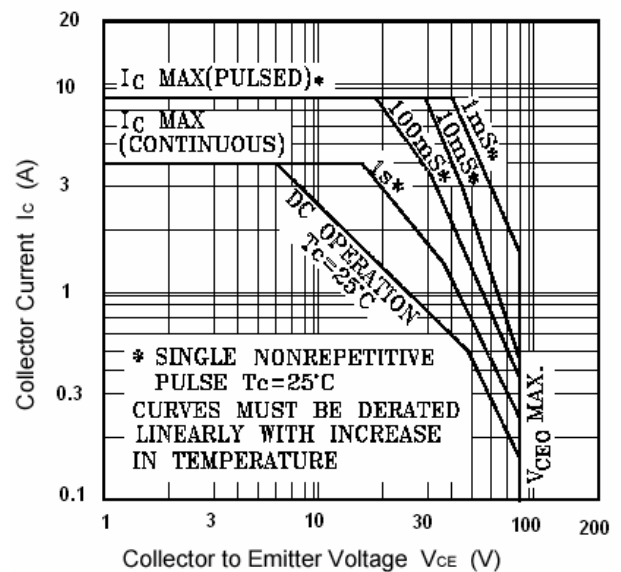


Fig.4 Safe Operating Area

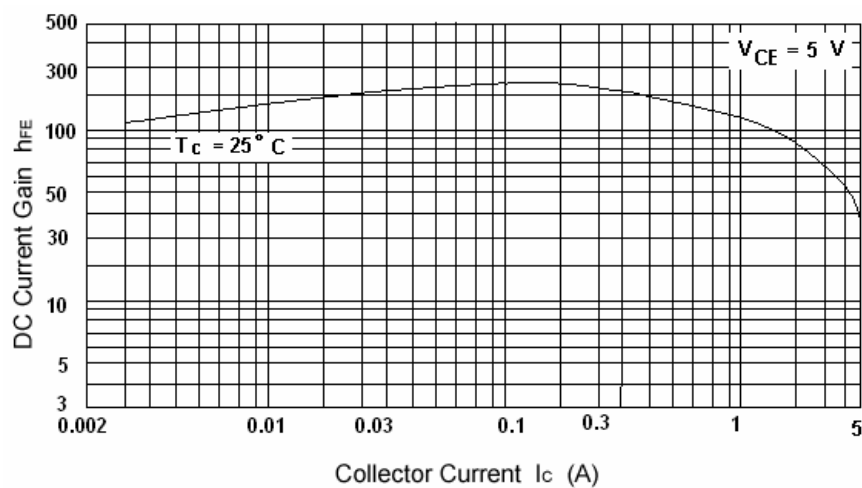


Fig.5 DC current Gain

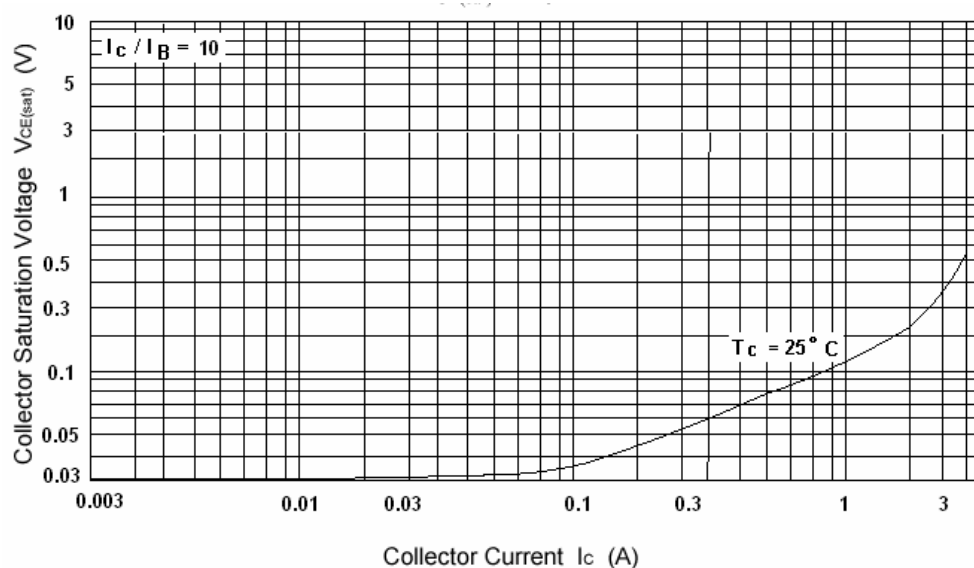


Fig.6 Base-Emitter Saturation Voltage