

Shantou Huashan Electronic Devices Co.,Ltd.

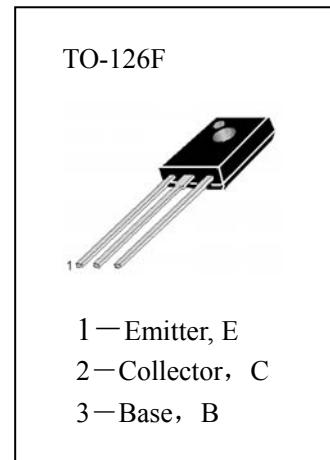
NPN SILICON TRANSISTOR
HBD681

■ APPLICATIONS

Medium Power Linear switching.

■ ABSOLUTE MAXIMUM RATINGS ($T_a=25^\circ\text{C}$)

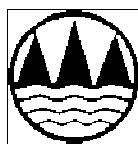
T_{stg} —Storage Temperature	.....	-65~150°C
T_j —Junction Temperature	.....	150°C
P_c —Collector Dissipation ($T_c=25^\circ\text{C}$)	.....	40W
V_{CBO} —Collector-Base Voltage	.....	100V
V_{CEO} —Collector-Emitter Voltage	.....	100V
V_{EBO} —Emitter-Base Voltage	.....	5V
I_c —Collector Current (Pulse)	.....	6A
I_c —Collector Current (DC)	.....	4A
I_B —Base Current	.....	100mA



■ 电参数 (ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$))

Symbol	Characteristics	Min	Typ	Max	Unit	Test Conditions
I_{CBO}	Collector Cut-off Current			200	$\mu\text{ A}$	$V_{CB}=100\text{V}, I_E=0$
I_{EBO}	Emitter Cut-off Current			2	mA	$V_{EB}=5\text{V}, I_C=0$
I_{CES}	Collector Cut-off Current			500	$\mu\text{ A}$	$V_{CE}=100\text{V}, V_{EB}=0$
* HFE	DC Current Gain	750				$V_{CE}=3\text{V}, I_C=1.5\text{mA}$
* $V_{CE(sat)}$	Collector- Emitter Saturation Voltage			2. 5	V	$I_C=1.5\text{A}, I_B=30\text{mA}$
$V_{BE(on)}$	Base-Emitter On Voltage			2. 5	V	$V_{CE}=3\text{V}, I_C=1.5\text{A}$
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	100				$I_C=50\text{mA}, I_B=0$

* Pulse Test: $PW=300\mu\text{s}, \text{Duty Cycle}=1.5\%$ Pulsed



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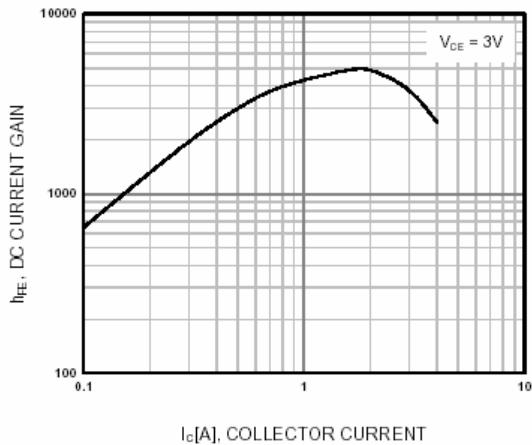


Figure 1. DC current Gain

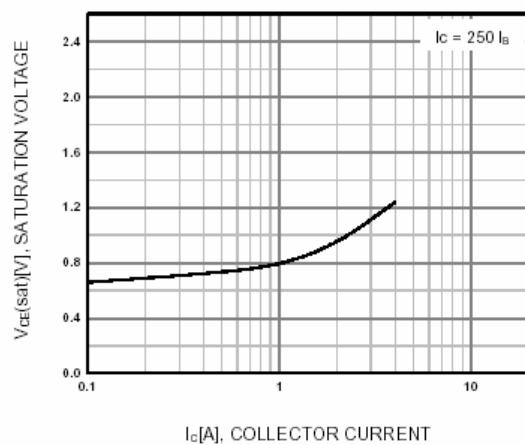


Figure 2. Collector-Emitter Saturation Voltage

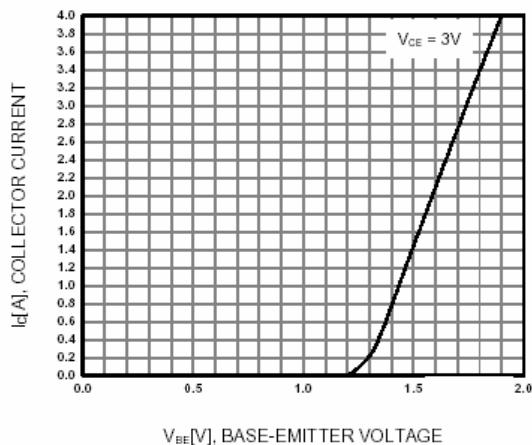


Figure 3. Base-Emitter On Voltage

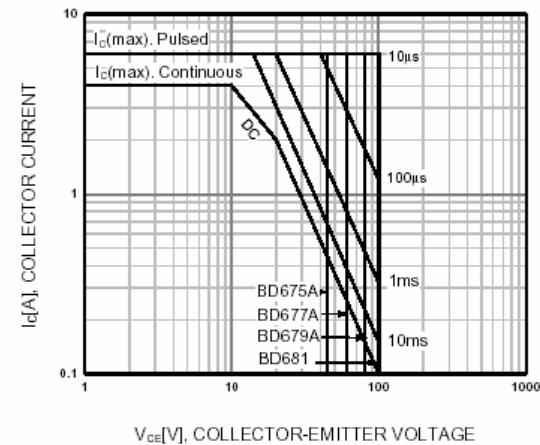


Figure 4. Safe Operating Area

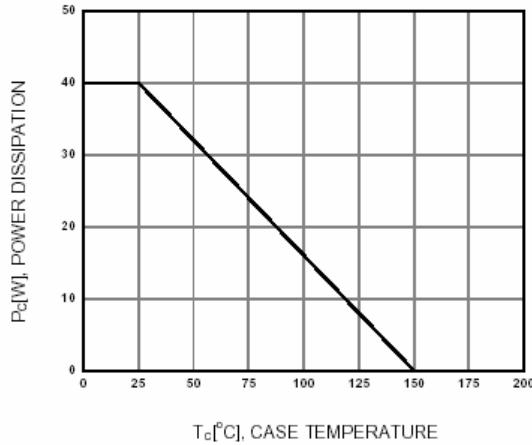


Figure 5. Power Derating