



Shantou Huashan Electronic Devices Co.,Ltd.

PNP SILICON TRANSISTOR

HP32CF

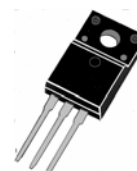
APPLICATIONS

Medium Power Linear switching Applications.

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

T_{stg}	Storage Temperature	-55~150 $^{\circ}\text{C}$
T_j	Junction Temperature	150 $^{\circ}\text{C}$
P_C	Collector Dissipation ($T_c=25^{\circ}\text{C}$)	30W
P_C	Collector Dissipation ($T_a=25^{\circ}\text{C}$)	2W
V_{CBO}	Collector-Base Voltage	-100V
V_{CEO}	Collector-Emitter Voltage	-100V
V_{EBO}	Emitter-Base Voltage	-5V
I_C	Collector Current (DC)	-3A
I_C	Collector Current (Pulse)	-5A
I_b	Base Current	-1A

TO-220F



- 1—Base, B
- 2—Collector, C
- 3—Emitter, E

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

Symbol	Characteristics	Min	Typ	Max	Unit	Test Conditions
BV_{CEO}	Collector-Emitter Breakdown Voltage	-100			V	$I_C=-30\text{mA}$, $I_B=0$
$H_{\text{FE}}(1)$	*DC Current Gain	25				$V_{\text{CE}}=-4\text{V}$, $I_C=-1\text{A}$
$H_{\text{FE}}(2)$	*DC Current Gain	10	50			$V_{\text{CE}}=-4\text{V}$, $I_C=-3\text{A}$
$V_{\text{CE(sat)}}$	*Collector- Emitter Saturation Voltage			-1.2	V	$I_C=-3\text{A}$, $I_B=-375\text{mA}$
$V_{\text{BE(ON)}}$	*Base-Emitter On Voltage			-1.8	V	$V_{\text{CE}}=-4\text{V}$, $I_C=-3\text{A}$
I_{CEO}	Collector Cut-off Current			-0.3	mA	$V_{\text{CB}}=-60\text{V}$, $I_B=0$
I_{CES}	Collector Cut-off Current			-200	μA	$V_{\text{CE}}=-100\text{V}$, $V_{\text{EB}}=0$
I_{EBO}	Emitter Cut-off Current			-1	mA	$V_{\text{EB}}=-5\text{V}$, $I_C=0$
f_T	Current Gain-Bandwidth Product	3.0			MHz	$V_{\text{CE}}=-10\text{V}$, $I_C=-0.5\text{A}$, $f=1\text{MHz}$

*Pulse Test: $PW \leq 300 \mu\text{s}$, Duty cycle $\leq 2\%$

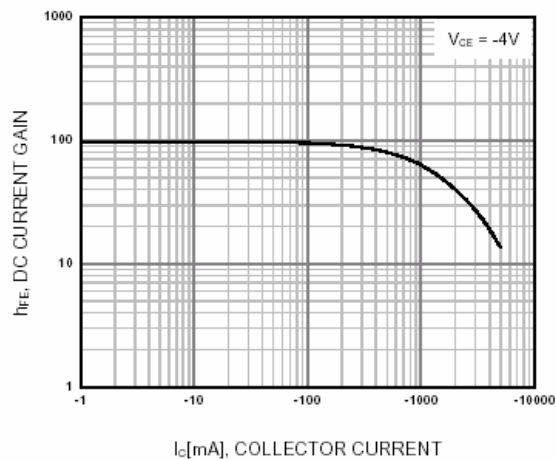


Figure 1. DC current Gain

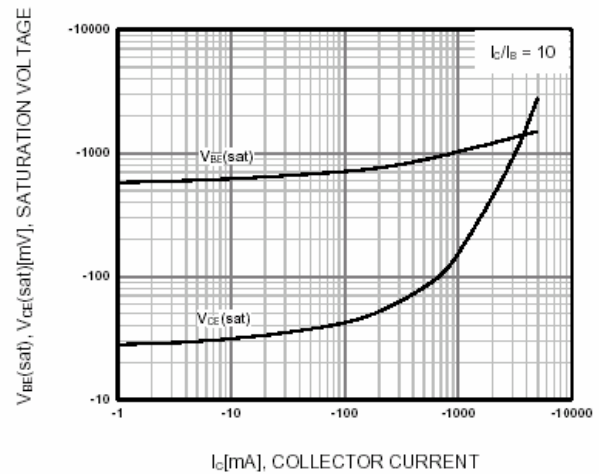


Figure 2. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

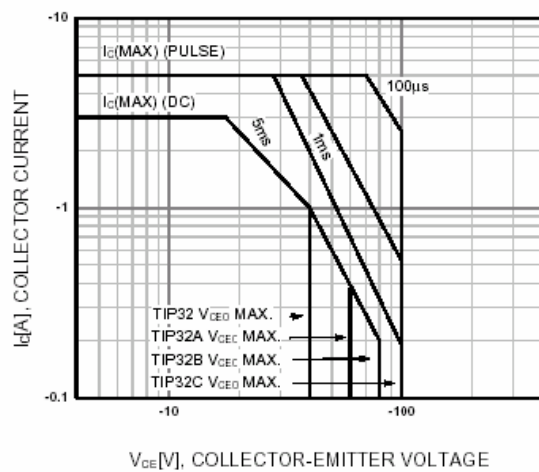


Figure 3. Safe Operating Area

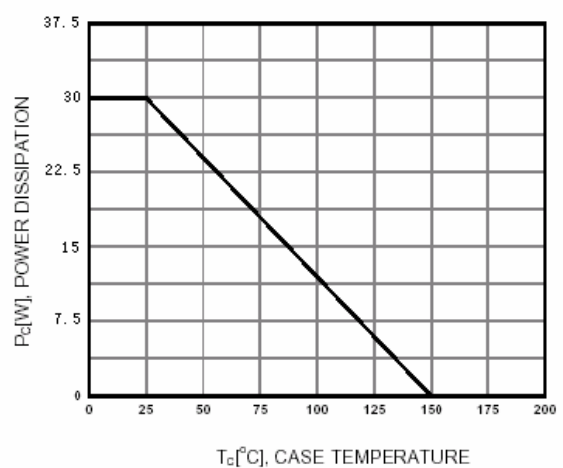


Figure 4. Power Derating