Shantou Huashan Electronic Devices Co.,Ltd.

PNP SILICON TRANSISTOR

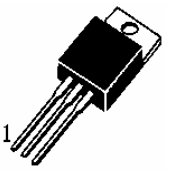
HEP32 Series

(HEP32/HEP32A/HEP32B/HEP32C)

APPLICATIONS

Medium Power Linear switching Applications.

TO-220AB



1—Base, B
2—Collector, C
3—Emitter, E

ABSOLUTE MAXIMUM RATINGS (T_a=25℃)

T_{stg}——Storage Temperature····· -55~150℃
T_j——Junction Temperature·····150℃
P_C——Collector Dissipation (Tc=25℃)·····40W
P_C——Collector Dissipation (Ta=25℃) ·····2W
V_{CBO}——Collector-Base Voltage、V_{CEO}——Collector-Emitter Voltage
HEP32·····-40V
HEP32A·····-60V
HEP32B·····-80V
HEP32C·····-100V
V_{EBO}——Emitter-Base Voltage·····-5V
I_C——Collector Current (DC) ·····-3A
I_C——Collector Current (Pulse) ·····-5A
Ib——Base Current·····-1A

ELECTRICAL CHARACTERISTICS (T_a=25℃)

Symbol	Characteristics		Min	Typ	Max	Unit	Test Conditions
BV_{CEO}	Collector-Emitter Breakdown Voltage	HEP32	-40			V	I_C=-30mA, I_B=0
		HEP32A	-60			V	
		HEP32B	-80			V	
		HEP32C	-100			V	
I_{CEO}	Collector Cut-off Current	HEP31/ HEP32A			-0.3	mA	V_{CB}=-30V, I_B=0
		HEP31B/ HEP32C			-0.3	mA	V_{CB}=-60V, I_B=0
I_{CES}	Collector Cut-off Current	HEP32			-200	μA	V_{CE}=-40V, V_{EB}=0
		HEP32A			-200	μA	V_{CE}=-60V, V_{EB}=0
		HEP32B			-200	μA	V_{CE}=-80V, V_{EB}=0
		HEP32C			-200	μA	V_{CE}=-100V, V_{EB}=0
H_{FE} (1)	*DC Current Gain		25				V_{CE}=-4V, I_C=-1A
H_{FE} (2)			10		50		V_{CE}=-4V, I_C=-3A
$V_{CE(sat)}$	*Collector- Emitter Saturation Voltage				-1.2	V	I_C=-3A, I_B=-375mA
$V_{BE(ON)}$	*Base-Emitter On Voltage				-1.8	V	V_{CE}=-4V, I_C=-3A
I_{EBO}	Emitter Cut-off Current				-1	mA	V_{EB}=-5V, I_C=0
f_T	Current Gain-Bandwidth Product		3.0			MHz	V_{CE}=-10V, I_C=-500mA, f=1MHz

*Pulse Test：PW≤300μs, Duty cycle≤2%

Typical Characteristics

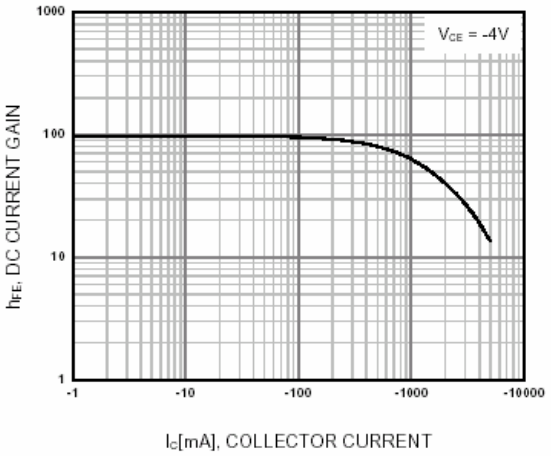


Figure 1. DC current Gain

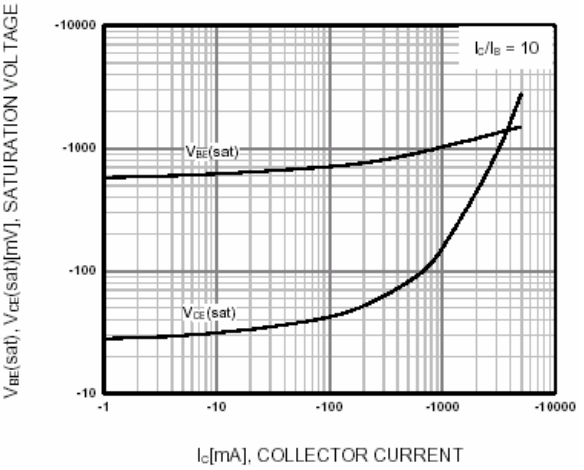


Figure 2. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

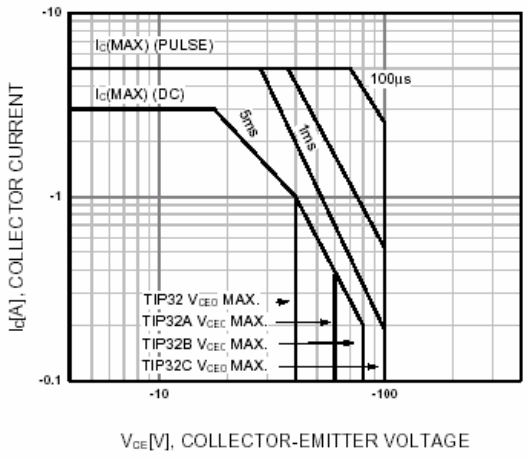


Figure 3. Safe Operating Area

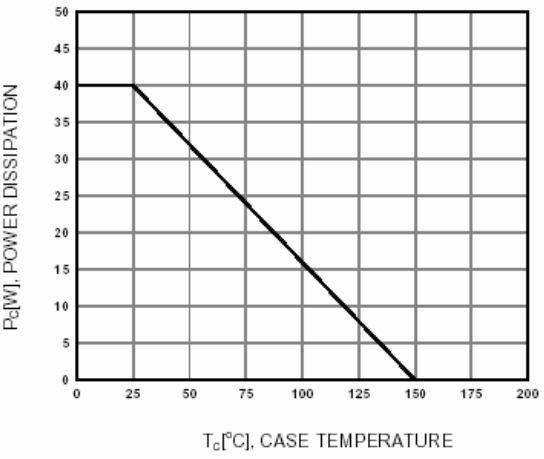


Figure 4. Power Derating