Shantou Huashan Electronic Devices Co.,Ltd.

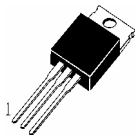
PNP SILICON TRANSISTOR

HP42C

APPLICATIONS

Medium Power Linear Switching Application.

TO-220



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（T_c=25℃）·····65W

P_C——Collector Dissipation（T_A=25℃）····· 2W

V_{CBO}——Collector-Base Voltage·····-100V

V_{CEO}——Collector-Emitter Voltage·····-100V

V_{EBO}——Emitter-Base Voltage·····-5V

I_C——Collector Current·····-6A

I_B——Base Current·····-2A

ELECTRICAL CHARACTERISTICS（T_a=25℃）

Symbol	Characteristics	Min	Typ	Max	Unit	Test Conditions
BV_{CEO}	Collector-Emitter Breakdown Voltage	-100			V	I_C=-30mA, I_B=0
I_{CEO}	Collector Cut-off Current			-0.7	mA	V_{CE}=-60V, I_B=0
I_{EBO}	Emitter Cut-off Current			-1	mA	V_{EB}=-5V, I_C=0
I_{CES}	Collector Cut-off Current			-400	μA	V_{CE}=-100V, V_{EB}=0
H_{FE}（1）	DC Current Gain	30				V_{CE}=-4V, I_C=-0.3A
H_{FE}（2）	DC Current Gain	15		75		V_{CE}=-4V, I_C=-3A
$V_{CE(sat)}$	Collector- Emitter Saturation Voltage			-1.5	V	I_C=-6A, I_B=-600mA
$V_{BE(on)}$	Base-Emitter On Voltage			-2.0	V	V_{CE}=-4V, I_C=-6A
f_T	Current Gain-Bandwidth Product	3.0			MHz	V_{CE}=-10V, I_C=-500mA, f=1MHz

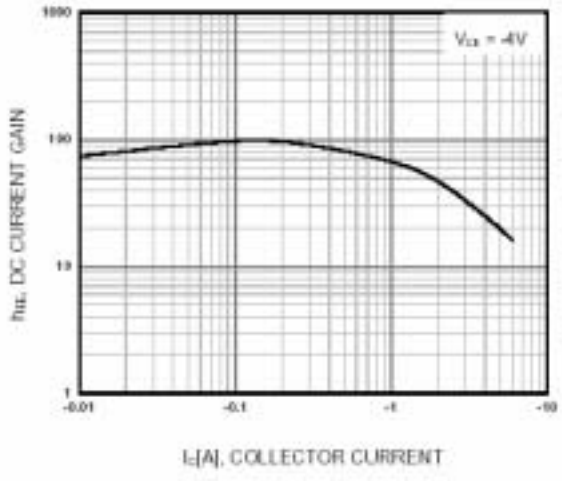


Figure 1. DC current Gain

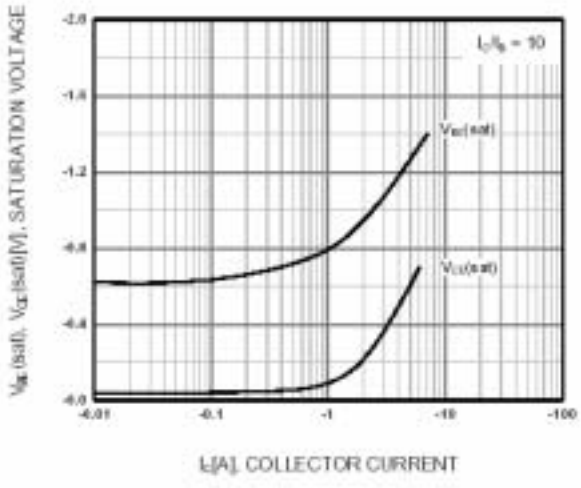


Figure 2. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

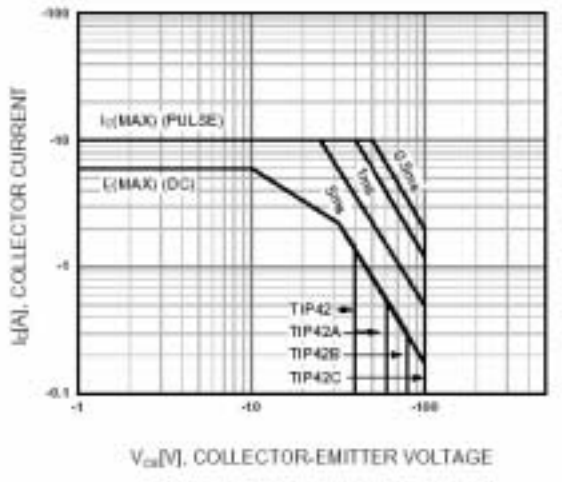


Figure 3. Safe Operating Area

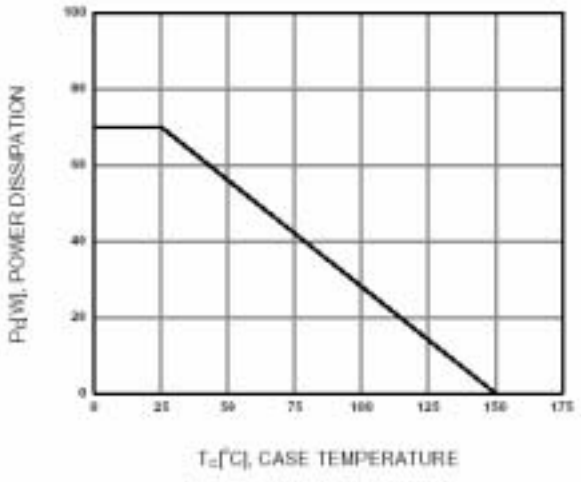


Figure 4. Power derating