Shantou Huashan Electronic Devices Co.,Ltd.

PNP SILICON TRANSISTOR

# HP42C

## APPLICATIONS

Medium Power Linear Switching Application.

## 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

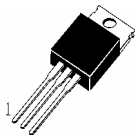
$V_{CEO}$——Collector-Emitter Voltage·····-100V

$V_{EBO}$——Emitter-Base Voltage·····-5V

$I_C$——Collector Current·····-6A

$I_B$——Base Current·····-2A

TO-220



1—Base，B
2—Collector，C
3— Emitter，E

## 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 |

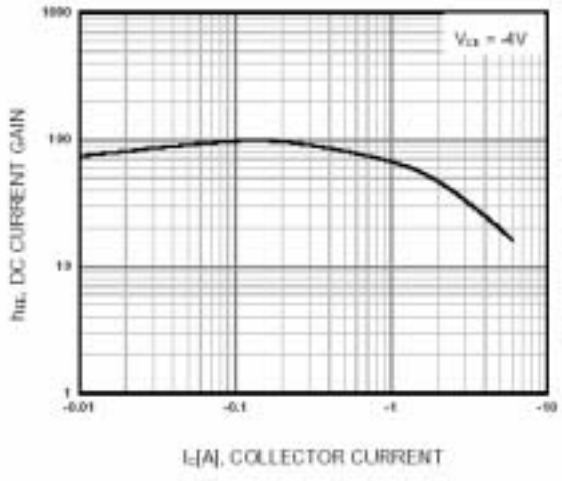



Figure 1. DC current Gain

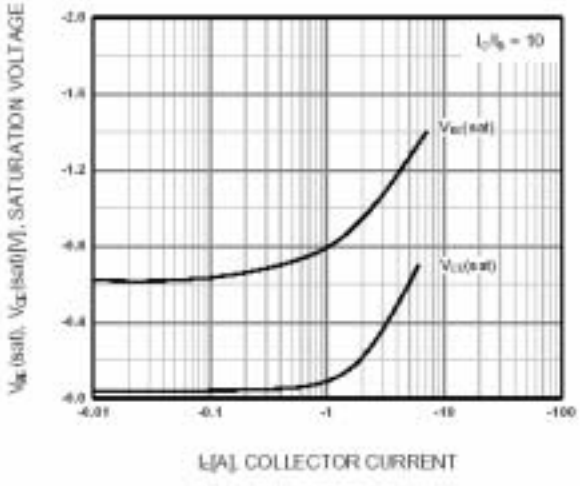



Figure 2. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

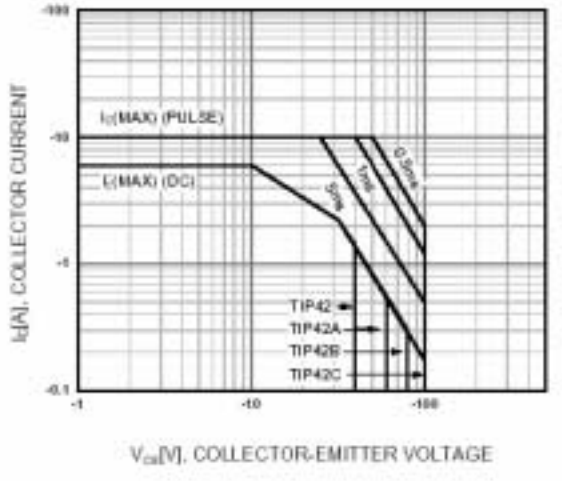



Figure 3. Safe Operating Area

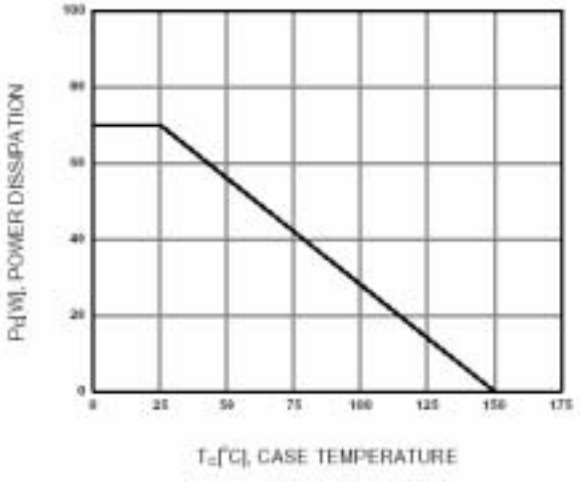



Figure 4. Power derating