Shantou Huashan Electronic Devices Co.,Ltd.

NPN SILICON TRANSISTOR

HP122W

APPLICATIONS

NPN Epitaxial Darlington Transistor. High DC Current Gain.
Monolithic Construction with Built-In Base-Emitter Shunt Resistors.

ABSOLUTE MAXIMUM RATINGS (T_a=25℃)

T_{stg}——Storage Temperature····· -55~150℃

T_j——Junction Temperature·····150℃

P_C——Collector Dissipation(Tc=25℃)·····65W

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

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

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

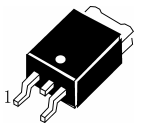
V_{EBO}——Emitter-Base Voltage·····5V

I_C——Collector Current (DC) ·····5A

I_C——Collector Current (Pulse) ·····8A

Ib——Base Current·····120mA

TO-263



1—Base, B
2—Collector, C
3—Emitter, E

ELECTRICAL CHARACTERISTICS (T_a=25℃)

Symbol	Characteristics	Min	Typ	Max	Unit	Test Conditions
BV_{CBO}	Collector-Base Breakdown Voltage	100			V	I_C=1mA, I_E=0
BV_{CEO}	Collector-Emitter Breakdown Voltage	100			V	I_C=5mA, I_B=0
H_{FE}	*DC Current Gain	1000				V_{CE}=3V, I_C=0.5A
$V_{CE(sat1)}$	*Collector- Emitter Saturation Voltage			2.0	V	I_C=3A, I_B=12mA
$V_{CE(sat2)}$	*Collector- Emitter Saturation Voltage			4.0	V	I_C=3A, I_B=20mA
$V_{BE(ON)}$	*Base-Emitter On Voltage			2.5	V	V_{CE}=3V, I_C=3A
I_{CEO}	Collector Cut-off Current			0.5	mA	V_{CB}=50V, I_B=0
I_{CBO}	Collector Cut-off Current			0.2	mA	V_{CB}=100V, I_E=0
I_{EBO}	Emitter Cut-off Current			2.0	mA	V_{EB}=5V, I_C=0
Cob	Output Capacitance			200	pF	V_{CB}=10V, I_E=0, f=0.1MHz

*Pulse Test：PW≤300μs, Duty cycle≤2%

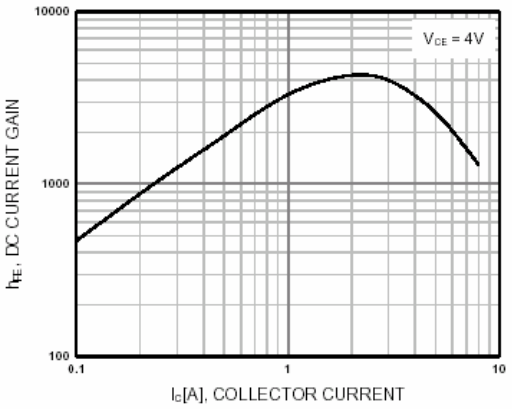


Figure 1. DC current Gain

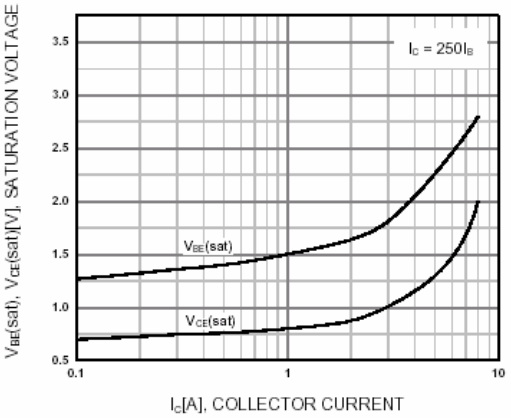


Figure 2. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

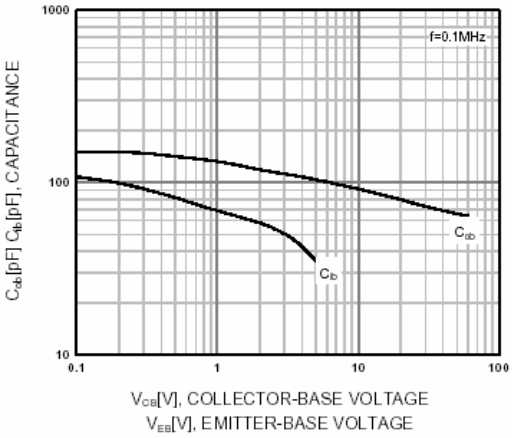


Figure 3. Output and Input Capacitance vs. Reverse Voltage

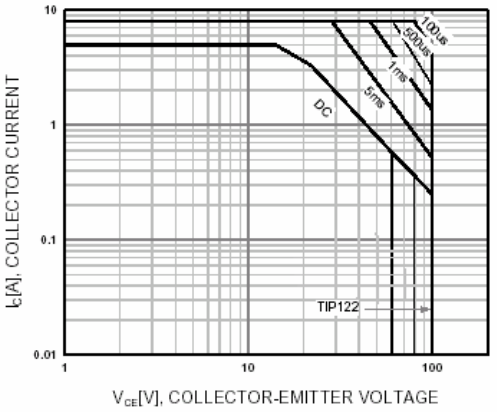


Figure 4. Safe Operating Area

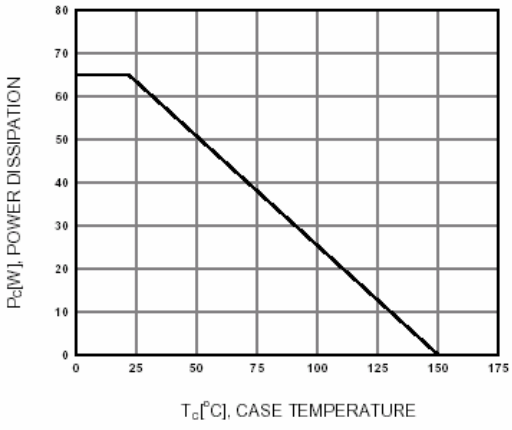


Figure 5. Power Derating