Shantou Huashan Electronic Devices Co.,Ltd.

NPN DARLINGTON TRANSISTOR

HP102

APPLICATIONS

High Voltage switching.Motor driving.

ABSOLUTE MAXIMUM RATINGS（T_a=25℃）

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

T_j——Junction Temperature…… 150℃

P_C——Collector Dissipation（T_c=25℃）…… 80W

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

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

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

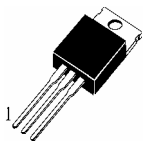
V_{EBO}——Emitter-Base Voltage…… 5V

I_C——Collector Current（DC）…… 8A

I_C——Collector Current（Pulse）……15A

I_B——Base Current（DC）……1A

TO-220



1－Base，B
2－Collector，C
3－Emitter, E

ELECTRICAL CHARACTERISTICS（T_a=25℃）

Symbol	Characteristics	Min	Typ	Max	Unit	Test Conditions
$BV_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	100			V	I_C=30mA, I_B=0
I_{CEO}	Collector Cutoff Current			50	μA	V_{CE}=50V, I_B=0
I_{CBO}	Collector Cutoff Current			50	μA	V_{CB}=100V, I_E=0
I_{EBO}	Emitter-Base Cutoff Current			2	mA	V_{EB}=5V, I_C=0
H_{FE}（1）	DC Current Gain	1000		20000		V_{CE}=4V, I_C=3A
H_{FE}（2）		200				V_{CE}=4V, I_C=8A
$V_{CE(sat1)}$	Collector- Emitter Saturation Voltage			2	V	I_C=3A, I_B=6mA
$V_{CE(sat2)}$				2.5	V	I_C=8A, I_B=80mA
$V_{BE(on)}$	Base- Emitter On Voltage			2.8	V	V_{CE}=4V,I_C=8A,
Cob	Output Capacitance			200	pF	V_{CB}=10V, I_E=0，f=0.1MHz

HP102

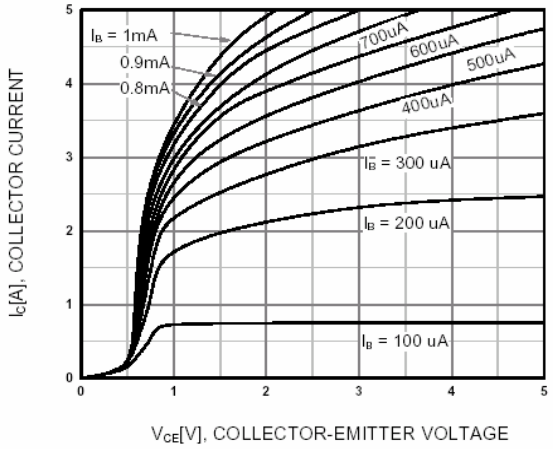


Figure 1. Static Characteristic

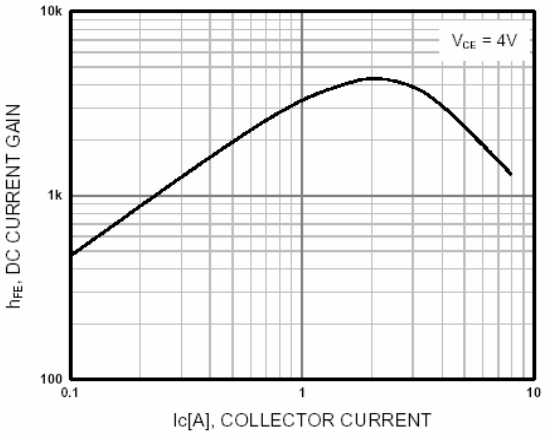


Figure 2. DC current Gain

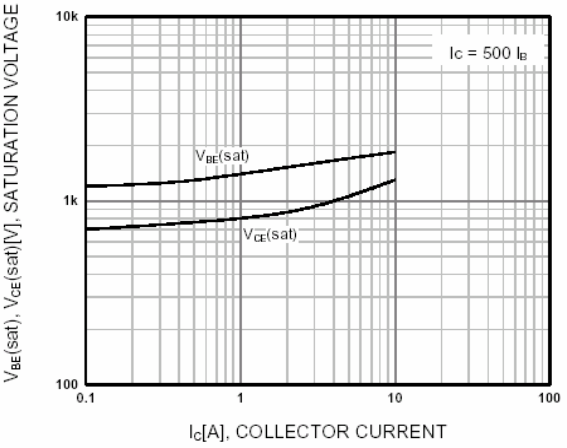


Figure 3. Collector-Emitter Saturation Voltage
Base-Emitter Saturation Voltage

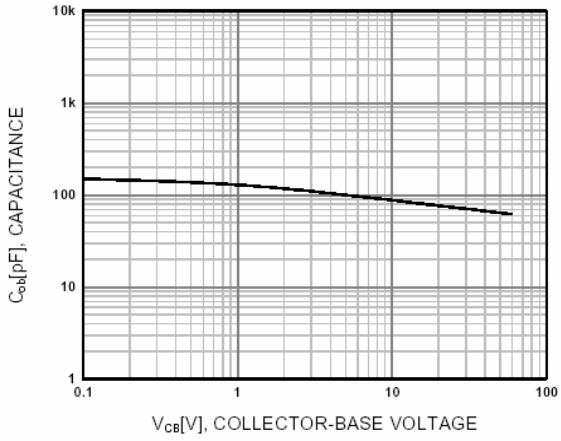


Figure 4. Collector Output Capacitance