Shantou Huashan Electronic Devices Co.,Ltd.

NPN DARLINGTON TRANSISTOR

HBDW93C

APPLICATIONS

Power Linear And Switching Applicatione.

ABSOLUTE MAXIMUM RATINGS（T_a=25℃）

T_{stg}——Storage Temperature…… -65~150℃

T_j——Junction Temperature…… 150℃

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

V_{CBO}——Collector-Base Voltage……100V

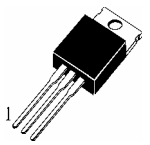
V_{CEO}——Collector-Emitter Voltage…… 100V

I_C——Collector Current（DC）…… 12A

I_C——Collector Current（Pulse）……15A

I_B——Base Current……0.2A

TO-220



1－Base，B
2－Collector，C
3－Emitter, E

ELECTRICAL CHARACTERISTICS（T_a=25℃）

Symbol	Characteristics	Min	Typ	Max	Unit	Test Conditions
$BV_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	100			V	I_C=100mA, I_B=0
I_{CEO}	Collector Cut-off Current			1	mA	V_{CE}=100V, I_B=0
I_{EBO}	Emitter-Base Cutoff Current			2	mA	V_{EB}=5V, I_C=0
I_{CBO}	Collector Cut-off Current			100	μA	V_{CB}=100V, I_E=0
H_{FE}（1）	DC Current Gain	1000				V_{CE}=3V, I_C=3A
H_{FE}（2）		750		20000		V_{CE}=3V, I_C=5A
H_{FE}（3）		100				V_{CE}=3V, I_C=10A
$V_{CE(sat1)}$	Collector- Emitter Saturation Voltage			2	V	I_C=5A, I_B=20mA
$V_{CE(sat2)}$	Collector- Emitter Saturation Voltage			3	V	I_C=10A, I_B=100mA
$V_{BE(sat1)}$	Base-Emitter Saturation Voltage			2.5	V	I_C=5A,I_B=20mA
$V_{BE(sat2)}$	Base-Emitter Saturation Voltage			4	V	I_C=10A,I_B=100mA

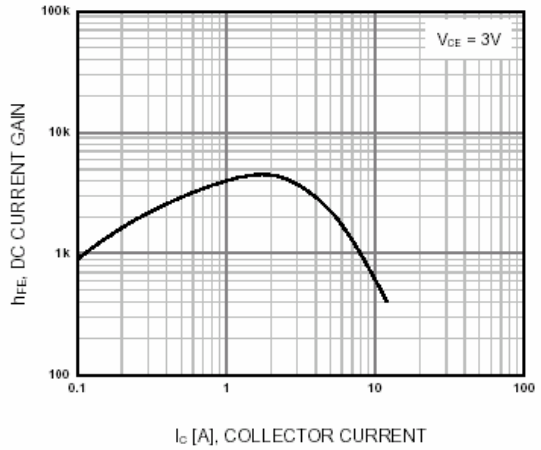


Figure 1. DC Current Gain

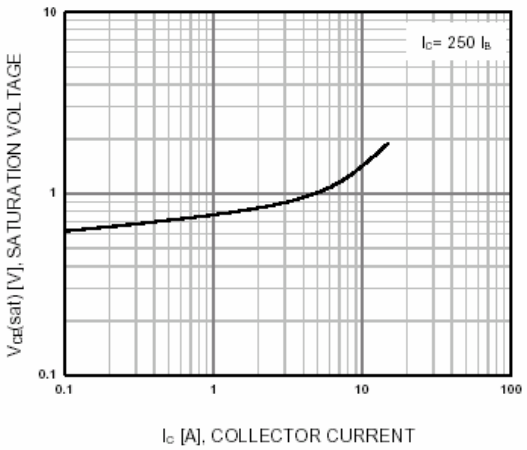


Figure 2. Collector-Emitter Saturation Voltage

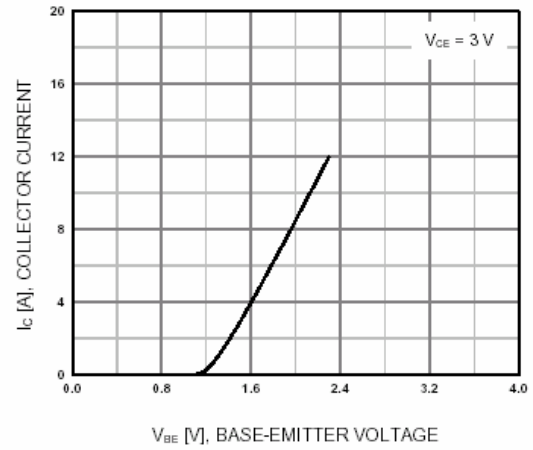


Figure 3. Base-Emitter On Voltage

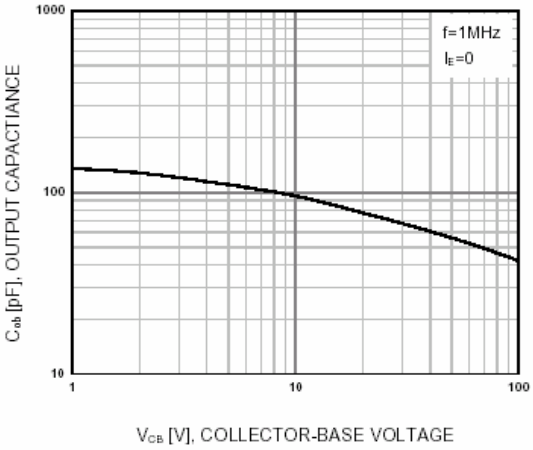


Figure 4. Collector Output Capacitance

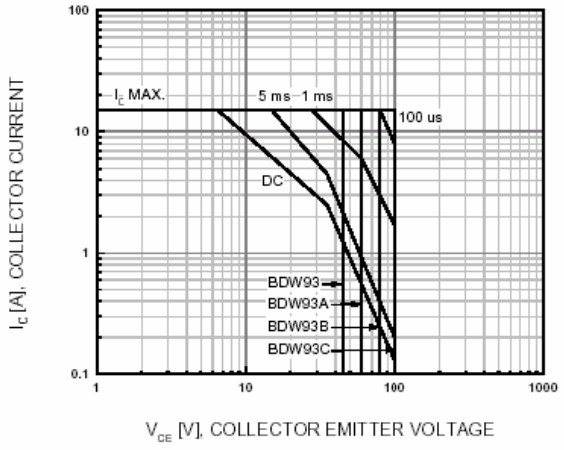


Figure 5. Safe Operating Area

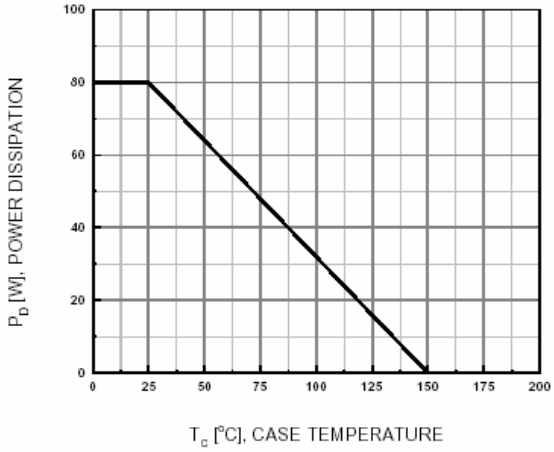


Figure 6. Power Derating