

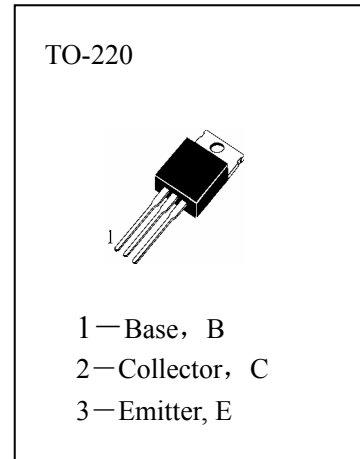
HP147TS

APPLICATIONS

High DC Current Gain

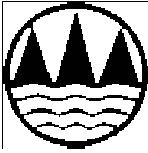
ABSOLUTE MAXIMUM RATINGS (T_a=25°C)

T _{stg}	Storage Temperature	-55~150°C
T _j	Junction Temperature	150°C
P _C	Collector Dissipation (T _c =25°C)	70W
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 _B	Base Current	-0.5A



ELECTRICAL CHARACTERISTICS (T_a=25°C)

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			-2	mA	V _{CE} =-50V, I _B =0
I _{CBO}	Collector Cutoff Current			-1	mA	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				V _{CE} =-4V, I _C =-0.5A
H _{FE} (2)		1000				V _{CE} =-4V, I _C =-3A
V _{CE(sat1)}	Collector- Emitter Saturation Voltage			-2	V	I _C =-5A, I _B =-10mA
V _{CE(sat2)}				-3	V	I _C =-10A, I _B =-40mA
V _{BE(sat)}	Base- Emitter Saturation Voltage			-3.5	V	I _C =-10A, I _B =-40mA
V _{BE(on)}	Base- Emitter On Voltage			-3	V	V _{CE} =-4V, I _C =-10A,
t _D	Deiay time		0.15		uS	V _{CC} =-30V, I _C =-5A I _{B1} =-20mA I _{B2} =20mA
t _R	Rise Time		0.55		uS	
t _S	Storage Time		2.5		uS	
t _F	Fall Time		2.5		uS	



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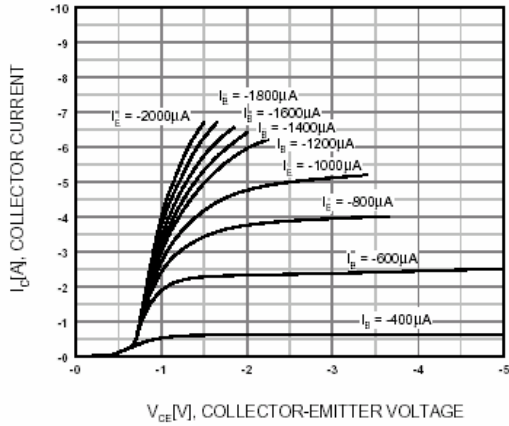


Figure 1. Static Characteristic

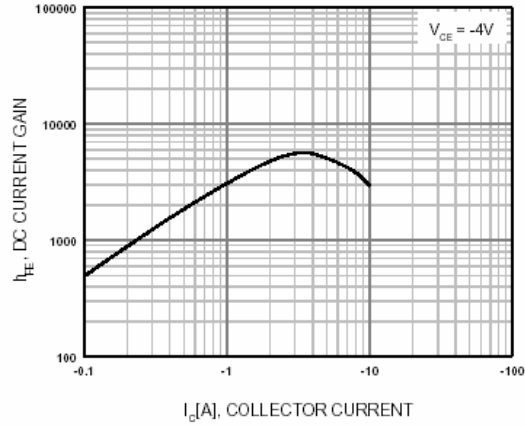


Figure 2. DC current Gain

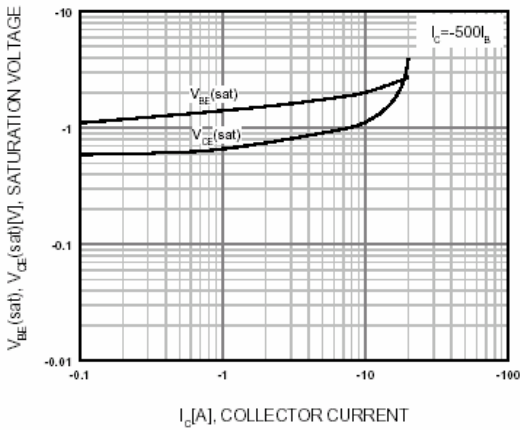


Figure 3. Collector-Emitter Saturation Voltage
Base-Emitter Saturation Voltage

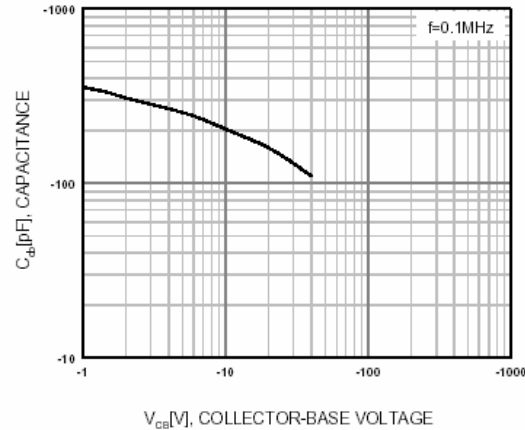


Figure 4. Collector Output Capacitance

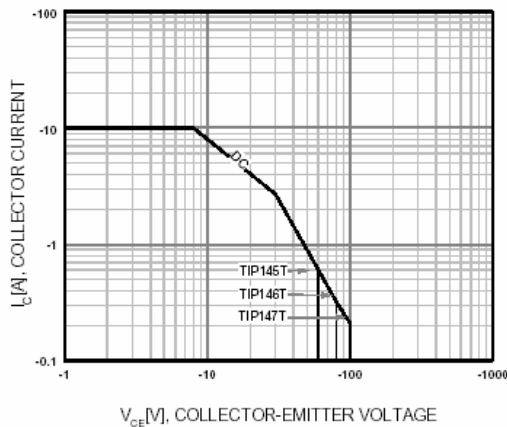


Figure 5. Safe Operating Area

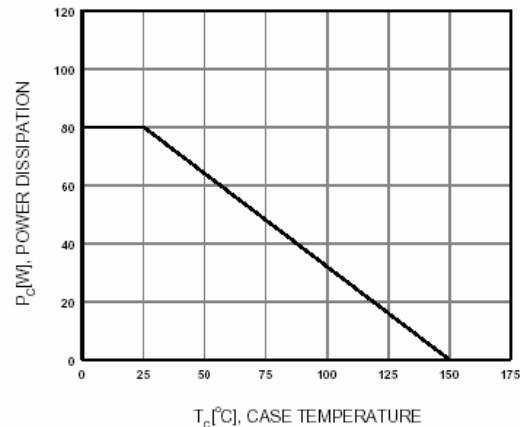


Figure 6. Power Derating