

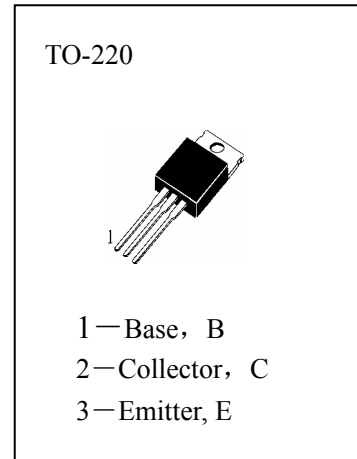
# HP147T

## APPLICATIONS

High DC Current Gain

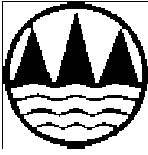
## ABSOLUTE MAXIMUM RATINGS (T<sub>a</sub>=25°C)

T <sub>stg</sub>	Storage Temperature	-55~150°C
T <sub>j</sub>	Junction Temperature	150°C
P <sub>C</sub>	Collector Dissipation (T <sub>c</sub> =25°C)	80W
V <sub>CBO</sub>	Collector-Base Voltage	-100V
V <sub>CEO</sub>	Collector-Emitter Voltage	-100V
V <sub>EBO</sub>	Emitter-Base Voltage	-5V
I <sub>C</sub>	Collector Current (DC)	-10A
I <sub>B</sub>	Base Current	-0.5A



## ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C)

Symbol	Characteristics	Min	Typ	Max	Unit	Test Conditions
BV <sub>CEO(SUS)</sub>	Collector-Emitter Sustaining Voltage	-100			V	I <sub>C</sub> =-30mA, I <sub>B</sub> =0
I <sub>CEO</sub>	Collector Cutoff Current			-2	mA	V <sub>CE</sub> =-50V, I <sub>B</sub> =0
I <sub>CBO</sub>	Collector Cutoff Current			-1	mA	V <sub>CB</sub> =-100V, I <sub>E</sub> =0
I <sub>EBO</sub>	Emitter-Base Cutoff Current			-2	mA	V <sub>EB</sub> =-5V, I <sub>C</sub> =0
H <sub>FE</sub> (1)	DC Current Gain	1000				V <sub>CE</sub> =-4V, I <sub>C</sub> =-5A
H <sub>FE</sub> (2)		500				V <sub>CE</sub> =-4V, I <sub>C</sub> =-10A
V <sub>CE(sat1)</sub>	Collector- Emitter Saturation Voltage			-2	V	I <sub>C</sub> =-5A, I <sub>B</sub> =-10mA
V <sub>CE(sat2)</sub>				-3	V	I <sub>C</sub> =-10A, I <sub>B</sub> =-40mA
V <sub>BE(sat)</sub>	Base- Emitter Saturation Voltage			-3.5	V	I <sub>C</sub> =-10A, I <sub>B</sub> =-40mA
V <sub>BE(on)</sub>	Base- Emitter On Voltage			-3	V	V <sub>CE</sub> =-4V, I <sub>C</sub> =-10A,
t <sub>D</sub>	Deiay time		0.15		uS	V <sub>CC</sub> =-30V, I <sub>C</sub> =-5A I <sub>B1</sub> =-20mA I <sub>B2</sub> =20mA
t <sub>R</sub>	Rise Time		0.55		uS	
t <sub>S</sub>	Storage Time		2.5		uS	
t <sub>F</sub>	Fall Time		2.5		uS	



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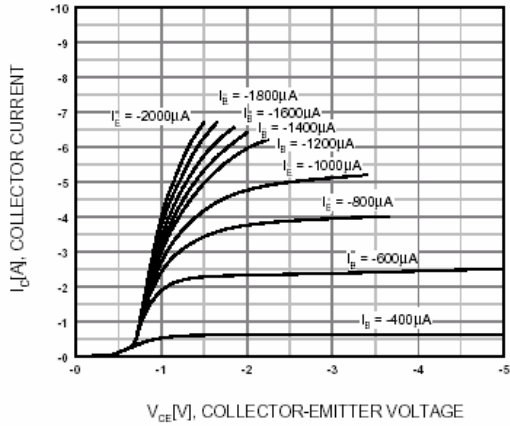


Figure 1. Static Characteristic

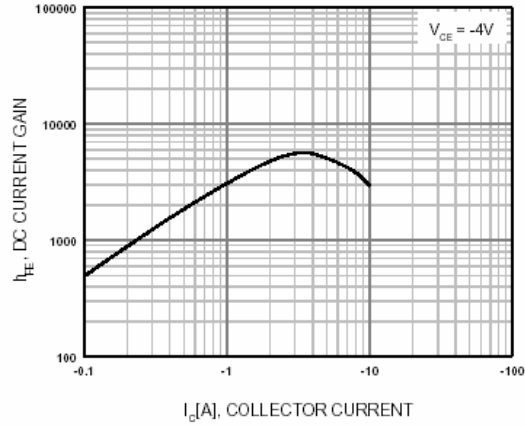


Figure 2. DC current Gain

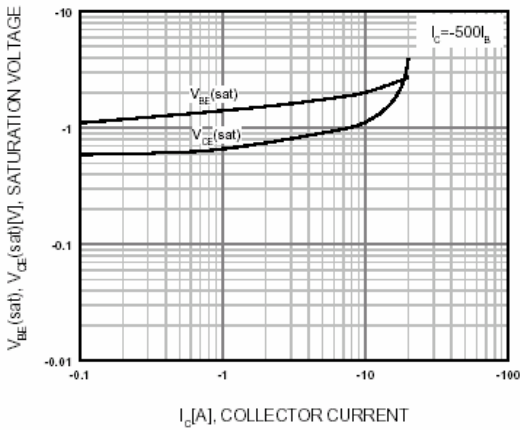


Figure 3. Collector-Emitter Saturation Voltage  
Base-Emitter Saturation Voltage

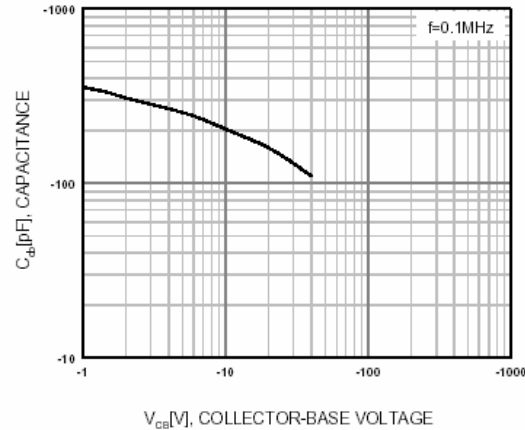


Figure 4. Collector Output Capacitance

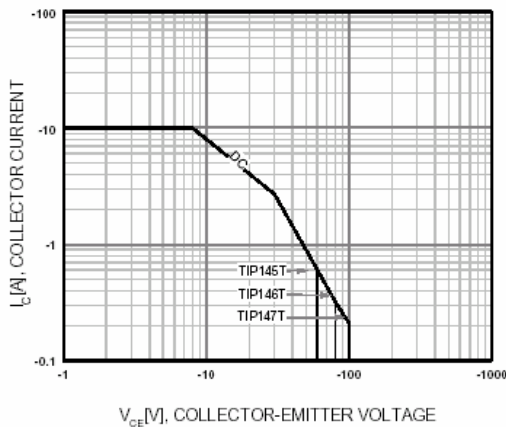


Figure 5. Safe Operating Area

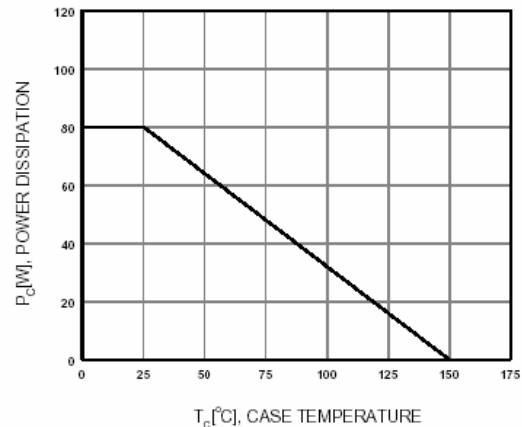


Figure 6. Power Derating