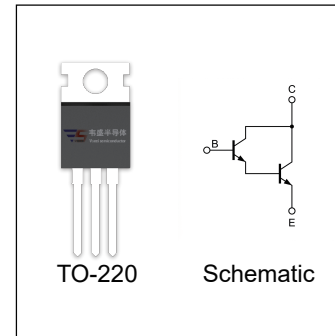


TIP147 Darlington Transistor (PNP)

FEATURES

- Monolithic Darlington Configuration
- Integrated Antiparallel Collector-Emitter Diode



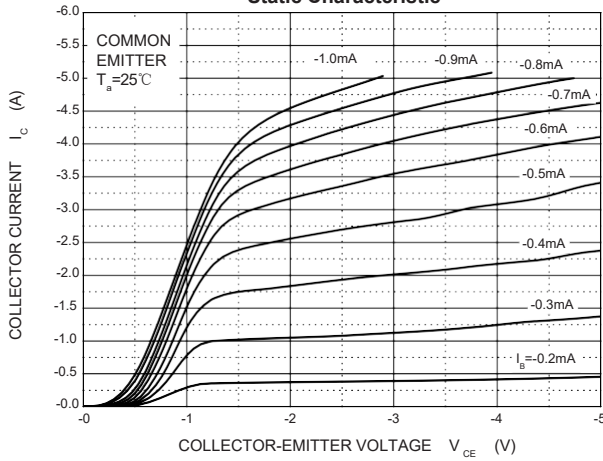
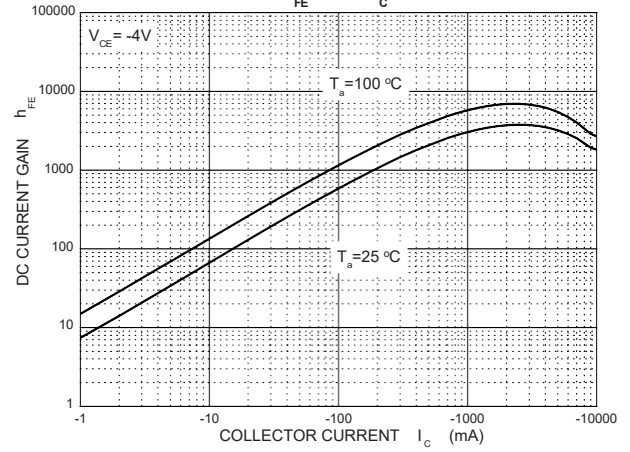
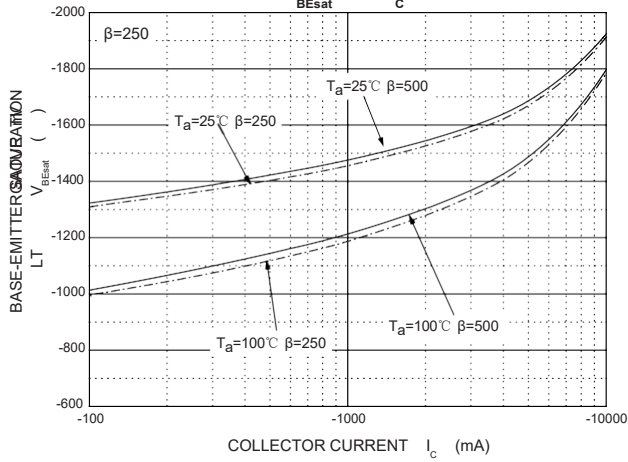
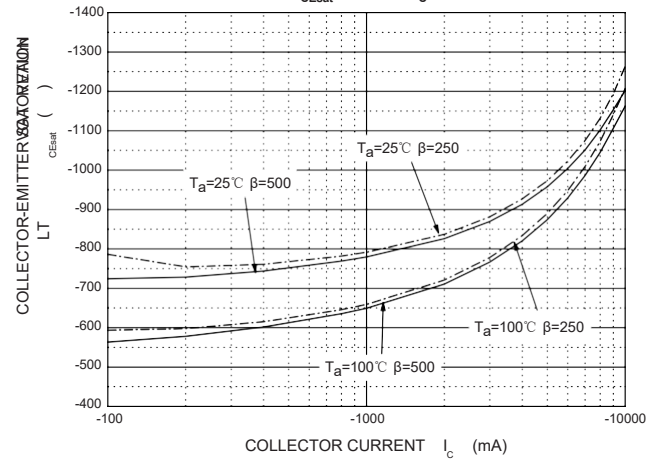
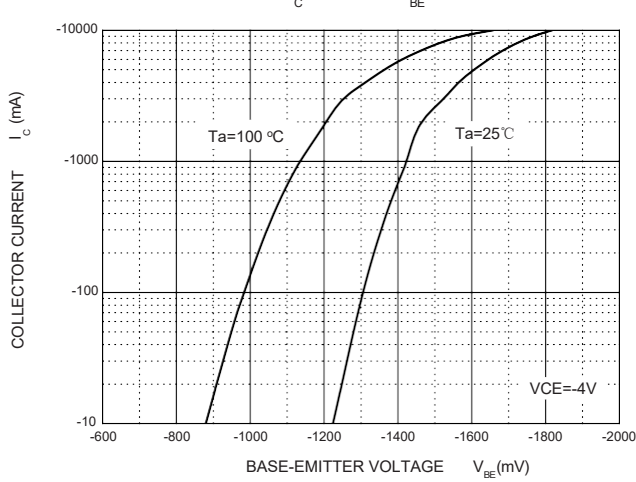
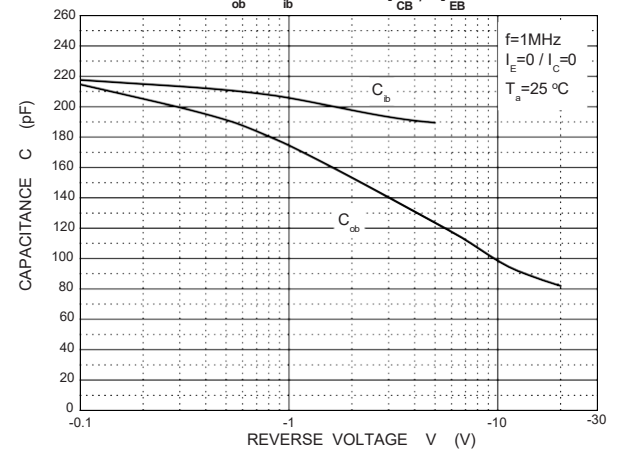
MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-100	V
V_{CEO}	Collector-Emitter Voltage	-100	V
V_{EBO}	Emitter-Base Voltage	-5	V
I_C	Collector Current	-10	A
P_C	Collector Power Dissipation	2	W
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	62.5	$^{\circ}\text{C/W}$
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	$^{\circ}\text{C}$

ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-1mA, I_E=0$	-100			V
Collector-emitter sustaining voltage	$V_{CEO(sus)}^*$	$I_C=-30mA, I_B=0$	-100			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-10mA, I_C=0$	-5			V
Collector cut-off current	I_{CBO}	$V_{CB}=-100V, I_E=0$			-1	mA
Collector cut-off current	I_{CEO}	$V_{CE}=-50V, I_C=0$			-2	mA
Emitter cut-off current	I_{EBO}	$V_{EB}=-5V, I_C=0$			-2	mA
DC current gain	$h_{FE(1)}$	$V_{CE}=-4V, I_C=-5A$	1000		12000	
	$h_{FE(2)}$	$V_{CE}=-4V, I_C=-10A$	50			
Collector-emitter saturation voltage	$V_{CE(sat)(1)}$	$I_C=-5A, I_B=-10mA$			-2	V
	$V_{CE(sat)(2)}$	$I_C=-10A, I_B=-40mA$			-3	V
Base-emitter voltage	V_{BE}	$V_{CE}=-4V, I_C=-10A$			-3	V

*Pulse test: pulse width $\leq 300\mu s$, duty cycle $\leq 2.0\%$.

Static Characteristic

 $h_{FE} - I_c$

 $V_{BEsat} - I_c$

 $V_{CEsat} - I_c$

 $I_c - V_{BE}$

 $C_{ob} / C_{ib} - V_{CB} / V_{EB}$

 $P_c - T_a$
