

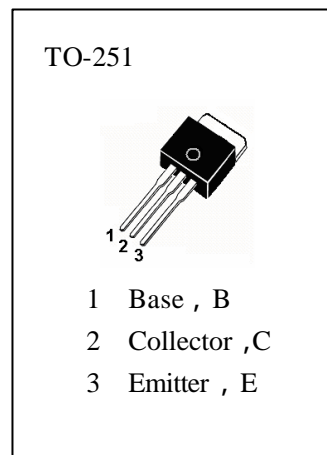


APPLICATIONS

NPN Epitaxial Darlington Transistor. High DC Current Gain.
Monolithic Construction with Built-In Base-Emitter Shunt Resistors.

ABSOLUTE MAXIMUM RATINGS ($T_a=25$)

T_{stg}	Storage Temperature.....	-55~150
T_j	Junction Temperature.....	150
P_C	Collector Dissipation($T_c=25$).....	20W
V_{CBO}	Collector-Base Voltage.....	100V
V_{CEO}	Collector-Emitter Voltage.....	100V
V_{EBO}	Emitter-Base Voltage.....	5V
I_C	Collector Current (DC)	5A
I_{CP}	Collector Current (Pulse)	8A
I_b	Base Current.....	120mA



ELECTRICAL CHARACTERISTICS ($T_a=25$)

Symbol	Characteristics	Min	Typ	Max	Unit	Test Conditions
BV_{CBO}	Collector-Base Breakdown Voltage	100			V	$I_C=1mA, I_E=0$
BV_{CEO}	Collector-Emitter Breakdown Voltage	100			V	$I_C=5mA, I_B=0$
$H_{FE} (1)$	DC Current Gain	1000				$V_{CE}=3V, I_C=0.5A$
$H_{FE} (2)$		1000				$V_{CE}=3V, I_C=3A$
$V_{CE(sat1)}$	Collector- Emitter Saturation Voltage			2.0	V	$I_C=3A, I_B=12mA$
$V_{CE(sat2)}$	Collector- Emitter Saturation Voltage			4.0	V	$I_C=3A, I_B=20mA$
$V_{BE(ON)}$	Base-Emitter On Voltage			2.5	V	$V_{CE}=3V, I_C=3A$
I_{CEO}	Collector Cut-off Current			0.5	mA	$V_{CB}=50V, I_B=0$
I_{CBO}	Collector Cut-off Current			0.2	mA	$V_{CB}=100V, I_E=0$
I_{EBO}	Emitter Cut-off Current			2.0	mA	$V_{EB}=5V, I_C=0$
C_{ob}	Output Capacitance			200	pF	$V_{CB}=10V, I_E=0, f=0.1MHz$

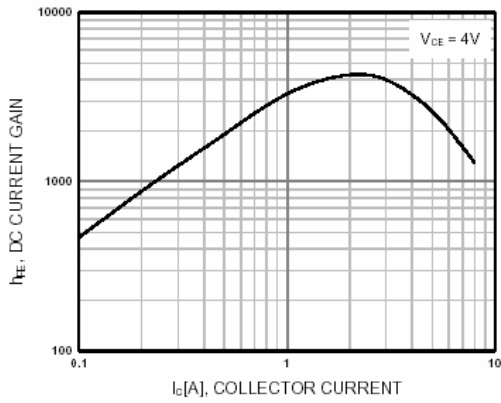


Figure 1. DC current Gain

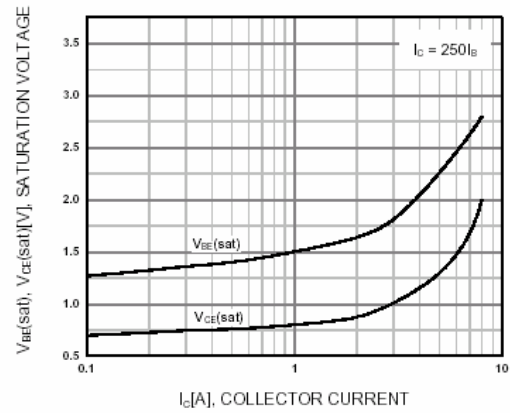


Figure 2. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

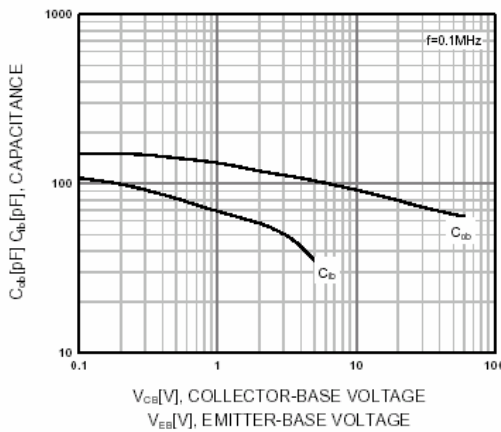


Figure 3. Output and Input Capacitance
vs. Reverse Voltage

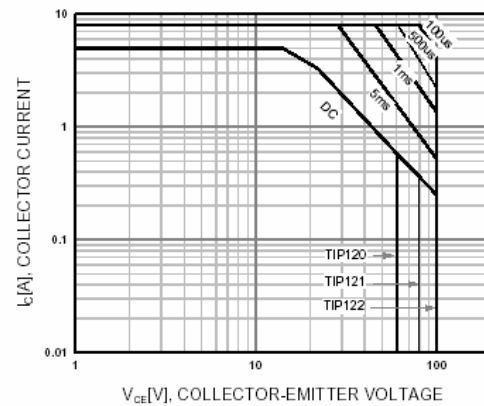


Figure 4. Safe Operating Area

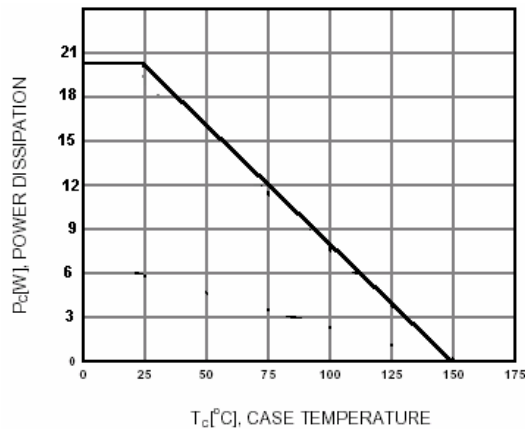


Figure 5. Power Derating