



**APPLICATIONS**

PNP 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(  $T_c=25$  ).....65W

$P_C$ —Collector Dissipation (  $T_a=25$  ) .....2W

$V_{CBO}$ —Collector-Base Voltage.....-100V

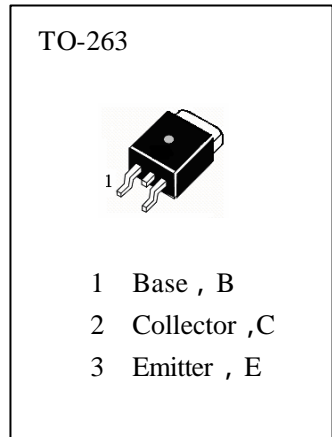
$V_{CEO}$ —Collector-Emitter Voltage.....-100V

$V_{EBO}$ —Emitter-Base Voltage.....-5V

$I_C$ —Collector Current( DC ).....-5A

$I_C$ —Collector Current ( Pulse ) .....-8A

$I_b$ —Base Current.....-120mA



**ELECTRICAL CHARACTERISTICS (  $T_a=25$  )**

Symbol	Characteristics	Min	Typ	Max	Unit	Test Conditions
BVCBO	Collector-Base Breakdown Voltage	-100			V	$I_C=-1mA, I_E=0$
BVCEO	Collector-Emitter Breakdown Voltage	-100			V	$I_C=-5mA, I_B=0$
HFE	*DC Current Gain	1000				$V_{CE}=-3V, I_C=-0.5A$
$V_{CE(sat1)}$	*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	$V_{EB}=-5V, I_C=0$
Cob	Output Capacitance			300	pF	$V_{CB}=-10V, I_E=0, f=0.1MHz$

\*Pulse Test : PW 300  $\mu$ s , Duty cycle 2%

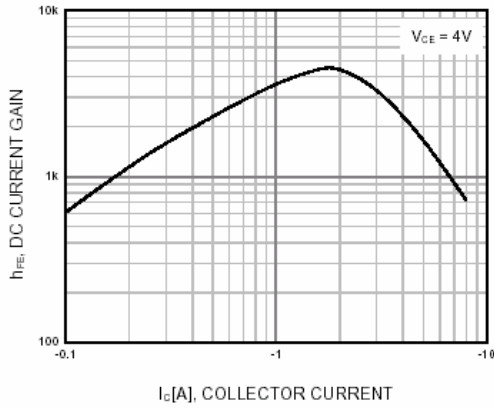


Figure 1. DC current Gain

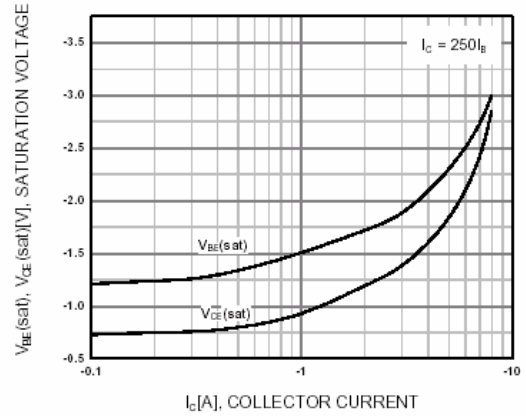


Figure 2. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

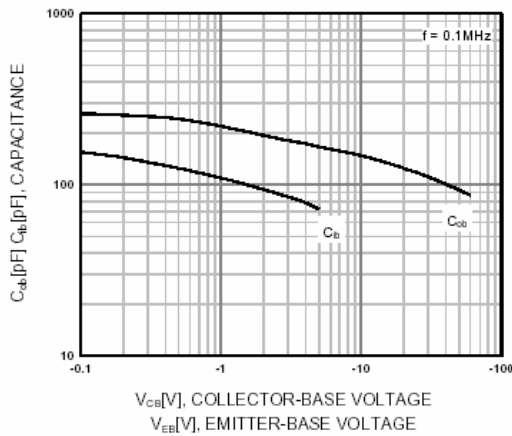


Figure 3. Output and Input Capacitance  
vs. Reverse Voltage

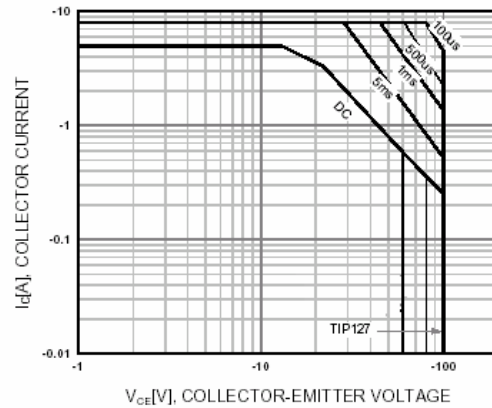


Figure 4. Safe Operating Area

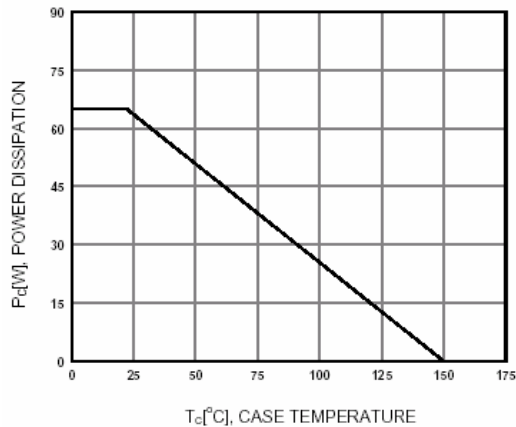


Figure 5. Power Derating