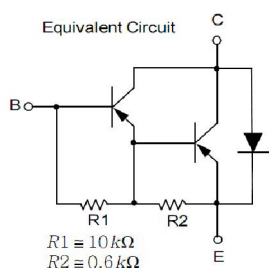


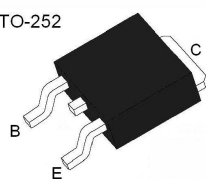
Darlington Transistor

Medium Power Linear Switching Applications

- Complementary to MJD112

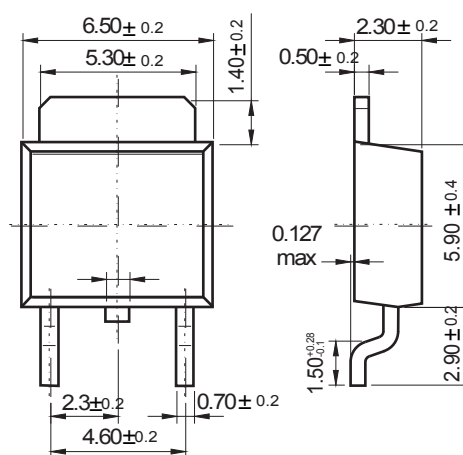


TO-252



TO-252

Unit: mm



Dimensions in inches and (millimeters)

Absolute Maximum Rating (Ta=25°C)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	-100	V
Collector-Emitter Voltage	V_{CEO}	-100	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current(DC)	I_C	-3	A
Collector Dissipation	$T_c = 25\text{ }^{\circ}\text{C}$	20	W
	$T_a = 25\text{ }^{\circ}\text{C}$	1.75	W
Junction Temperature	T_j	150	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	-65 ~ 150	$^{\circ}\text{C}$

MJD127

Electrical Characteristics (Ta=25°C)

Parameter	Symbol	Conditions	Value			Unit
			Min	Typ	Max	
Collector-Emitter Sustaining Voltage	$V_{CEO(sus)}$	$I_C = -30mA, I_B = 0$	-100			V
Collector cut-off current	I_{CBO}	$V_{CB} = -100V, I_E = 0$			-0.2	mA
Collector cut-off current	I_{CEO}	$V_{CE} = -50V, I_E = 0$			-0.5	mA
Emitter cut-off current	I_{EBO}	$V_{EB} = -5V, I_C = 0$			-0.2	mA
* DC current gain	h_{FE}	$V_{CE} = -3V, I_C = -0.5A$ $V_{CE} = -3V, I_C = -3A$	1000 1000			
*Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -3A, I_B = -12mA$ $I_C = -5A, I_B = -20mA$			-2 -4	V
* Base-Emitter ON Voltage	$V_{BE(on)}$	$V_{CE} = -3V, I_C = -3A$			-2.5	V
Output Capacitance	C_{ob}	$V_{CB} = 10V, I_E = 0, f = 0.1MHz$			100	pF

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

RATING AND CHARACTERISTIC CURVES (MJD127)

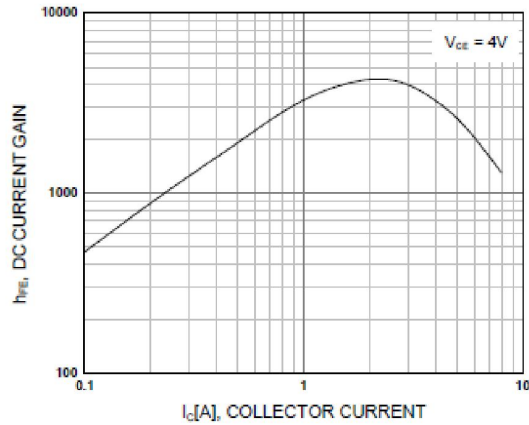


Figure 1. DC current Gain

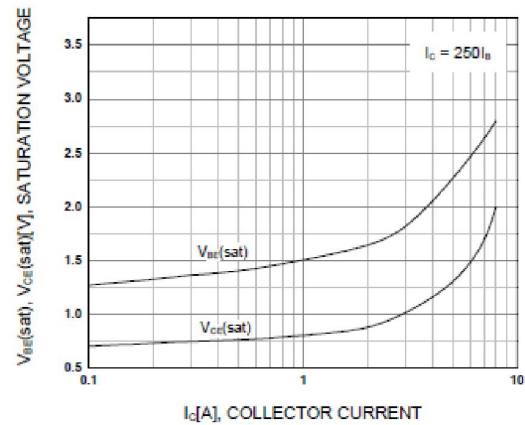


Figure 2. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

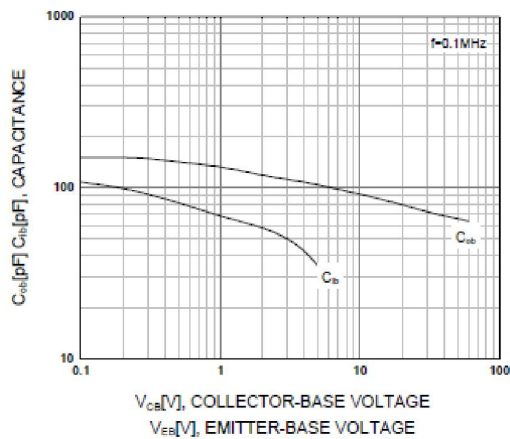


Figure 3. Output and Input Capacitance
vs. Reverse Voltage

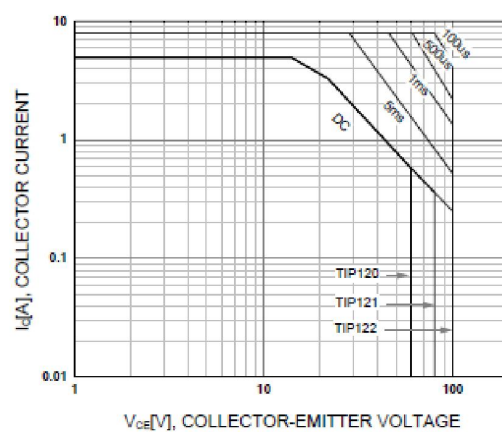


Figure 4. Safe Operating Area

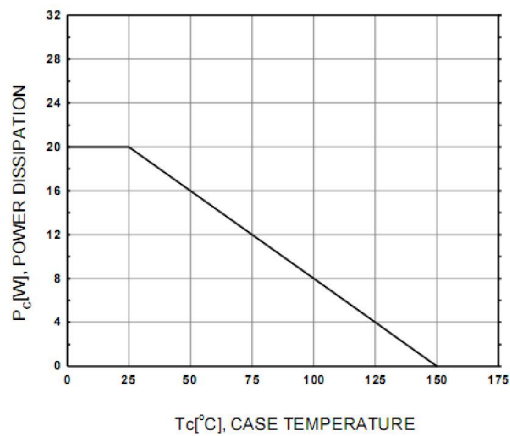


Figure 5. Power Derating