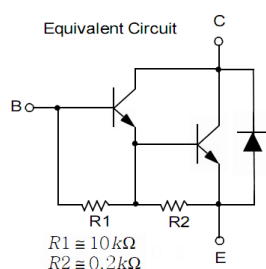
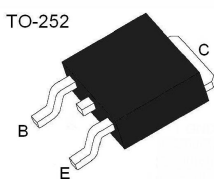


Features

- High DC Current Gain
- Built-in a Damper Diode at E-C
- Electrically Similar to Popular TIP122
- Complementary to MJD127

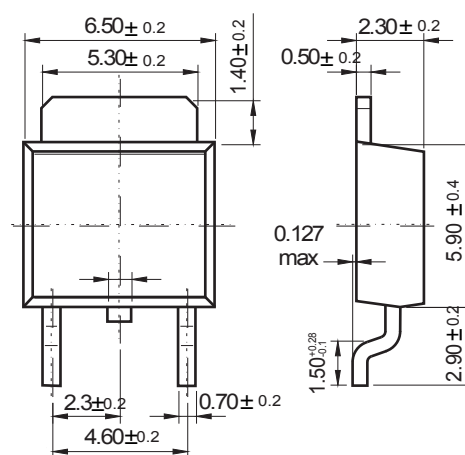


TO-252



TO-252

Unit: mm



Dimensions in inches and (millimeters)

Absolute Maximum Rating ($T_A=25^\circ\text{C}$)

Parameter		Symbol	Value	Unit
Collector-base voltage		BV_{CBO}	100	V
Collector-emitter voltage		BV_{CEO}	100	V
Emitter-base voltage		BV_{EBO}	5	V
Collector current (DC)		I_C	8	A
Collector current (Pulse)		I_{CP}	8	A
Collector Dissipation	$T_A = 25^\circ\text{C}$	P_C	1.75	W
	$T_C = 25^\circ\text{C}$		20	
Junction Temperature		T_j	150	$^\circ\text{C}$
Storage Temperature		T_{stg}	-55 ~ 150	$^\circ\text{C}$

MJD122

Electrical Characteristics ($T_A=25^{\circ}\text{C}$)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Collector-base voltage	BV_{CBO}	$I_C = 10\text{mA}$, $I_E = 0$	100			V
Collector-emitter voltage	BV_{CEO}	$I_C = 30\text{mA}$, $I_B = 0$	100			V
Emitter-base voltage	BV_{EBO}	$I_E = 30\text{mA}$, $I_C = 0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB} = 100\text{V}$, $I_E = 0$			10	μA
Collector cut-off current	I_{CEO}	$V_{CE} = 50\text{V}$, $I_E = 0$			10	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5\text{V}$, $I_C = 0$			2	mA
DC current gain*	h_{FE}	$V_{CE} = 4\text{V}$, $I_C = 4\text{A}$ $V_{CE} = 4\text{V}$, $I_C = 8\text{A}$	1000 500		12K	
Collector-emitter saturation voltage*	$V_{CE(sat)}$	$I_C = 4\text{A}$, $I_B = 16\text{mA}$ $I_C = 8\text{A}$, $I_B = 80\text{mA}$			2 4	V
Base-emitter saturation voltage*	$V_{BE(sat)}$	$I_C = 8\text{A}$, $I_B = 80\text{mA}$			4.5	V
Base-emitter on voltage*	$V_{BE(on)}$	$V_{CE} = 4\text{V}$, $I_C = 4\text{A}$			2.8	V
Output capacitance	C_{ob}	$V_{CB} = 10\text{V}$, $f = 1\text{MHz}$			200	pF

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

RATING AND CHARACTERISTIC CURVES (MJD122)

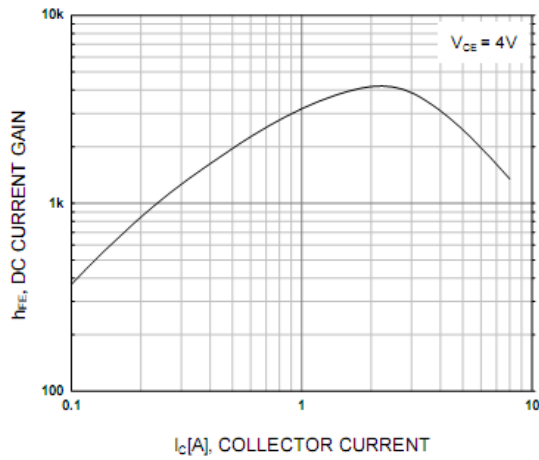


Figure 1. DC current Gain

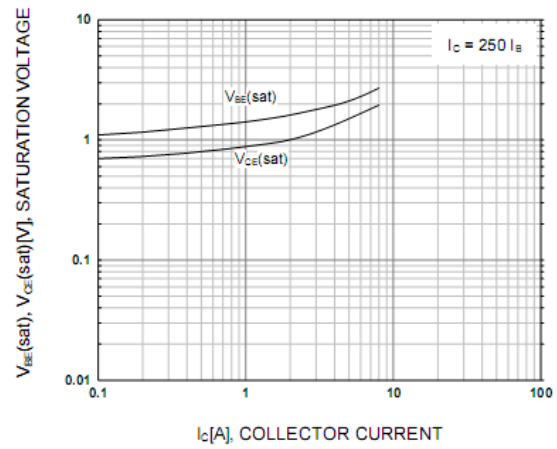


Figure 2. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

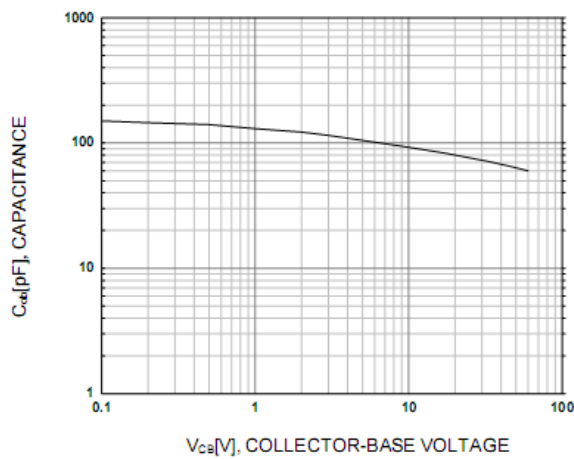


Figure 3. Collector Output Capacitance

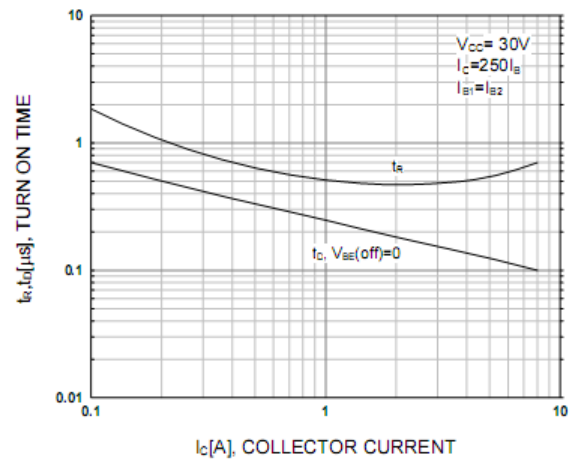


Figure 4. Turn On Time

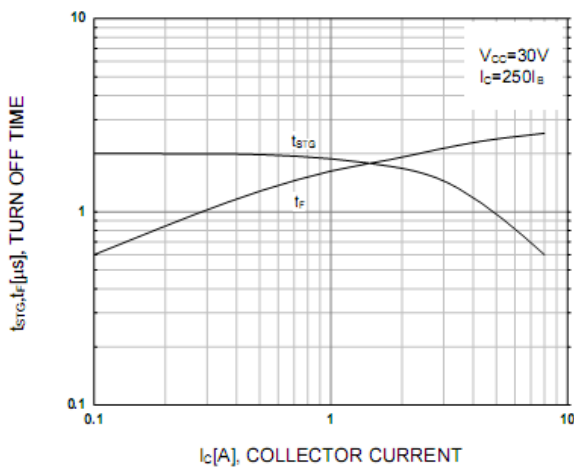


Figure 5. Turn Off Time

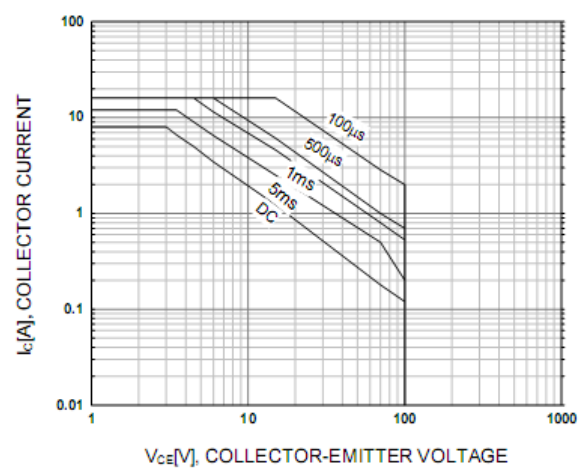


Figure 6. Safe Operating Area