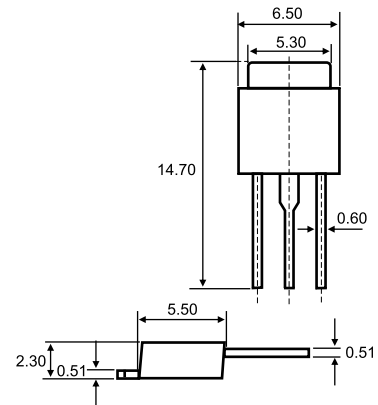


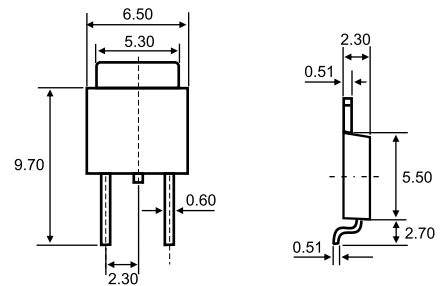


1. BASE
2. COLLECTOR
3. EMITTER

TO-251



TO-252-2L



Dimensions in inches and (millimeters)

Features

- ✧ High DC current gain
- ✧ Electrically similar to popular TIP122
- ✧ Built-in a damper diode at E-C

MAXIMUM RATINGS (T_A=25°C unless otherwise noted)

Symbol	Parameter	Value	Units
V _{CB0}	Collector-Base Voltage	100	V
V _{CEO}	Collector-Emitter Voltage	100	V
V _{EBO}	Emitter-Base Voltage	5	V
I _C	Collector Current -Continuous	8	A
P _C	Collector Power Dissipation	1.5	W
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55-150	°C

ELECTRICAL CHARACTERISTICS (T_{amb}=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 breakdown voltage	V _{(BR)CEO}	I _C =30mA, I _B =0	100			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =3mA, I _C =0	5			V
Collector cut-off current	I _{CBO}	V _{CB} =100V, I _E =0			10	μA
Collector-emitter cut-off current	I _{CEO}	V _{CE} =50V, I _E =0			10	μA
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 =4A	1000		12000	
	h _{FE(2)}	V _{CE} =4V, I _C =8A	100			
Collector-emitter saturation voltage	V _{CE(sat)1}	I _C =4A, I _B =16mA			2	V
	V _{CE(sat)2}	I _C =8A, I _B =80mA			4	V
Base-emitter saturation voltage	V _{BE(sat)}	I _C =8A, I _B =80mA			4.5	V
Base-emitter voltage	V _{BE}	V _{CE} =4V, I _C =4A			2.8	V
Collector output capacitance	C _{ob}	V _{CB} =10V, I _E =0, f=0.1MHz			200	pF

Typical Characteristics

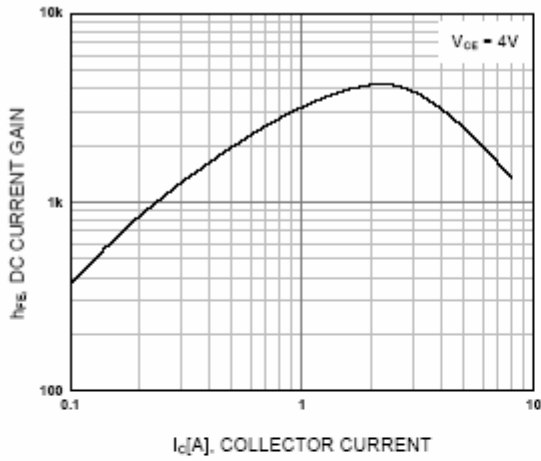


Figure 1. DC current Gain

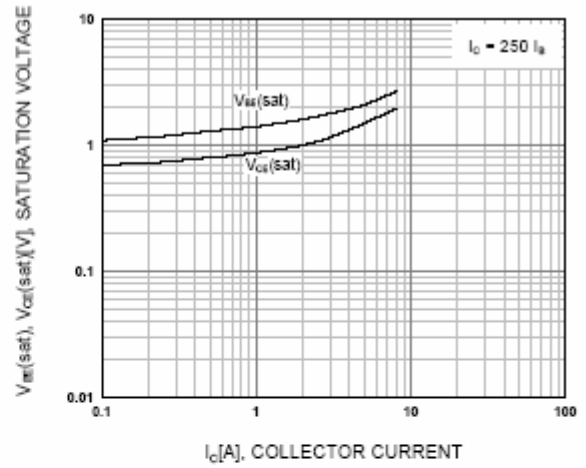


Figure 2. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

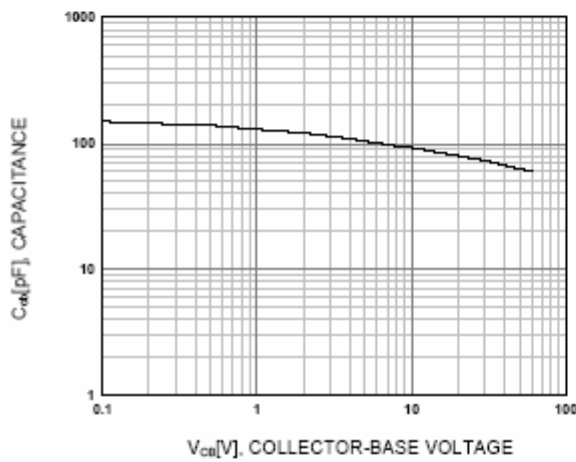


Figure 3. Collector Output Capacitance

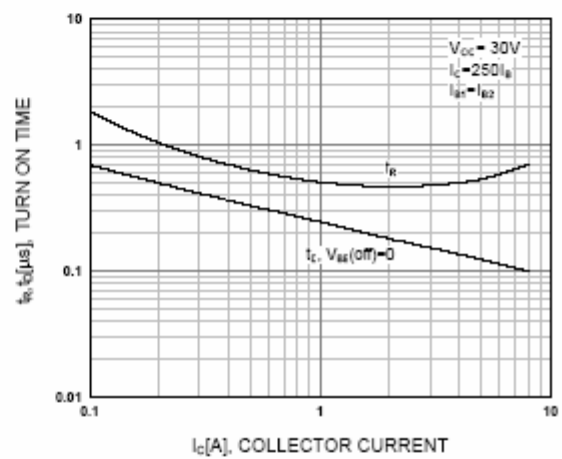


Figure 4. Turn On Time

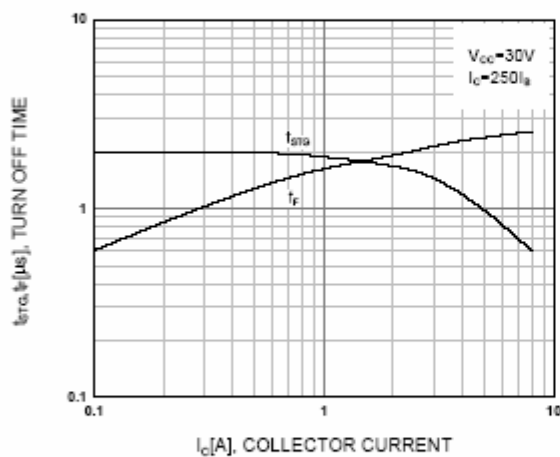


Figure 5. Turn Off Time

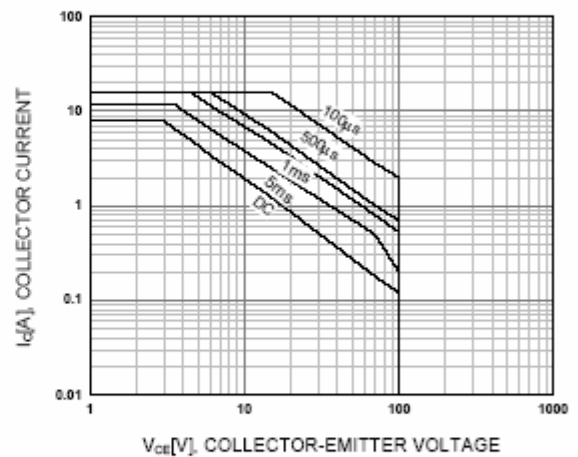


Figure 6. Safe Operating Area