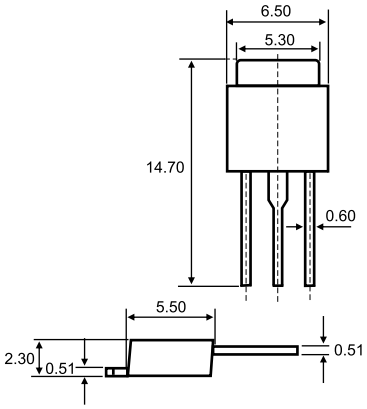
MJD127(PNP)

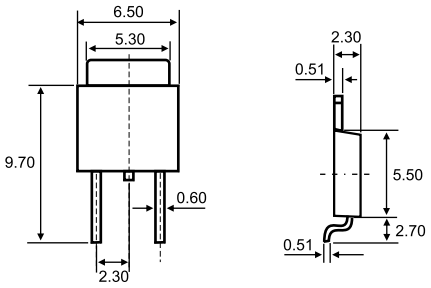
TO-251/TO-252-2L Transistor

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 TIP127**
- ✧ **Built-in a damper diode at E-C**

MAXIMUM RATINGS (T_A=25℃ unless otherwise noted)

Symbol	Parameter	Value	Units
V_{CBO}	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	℃
T_{stg}	Storage Temperature	-55-150	℃

ELECTRICAL CHARACTERISTICS (Tamb=25℃ 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=-1mA,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_{CEX}	V_{CE}=-100V,$V_{BE(off)}$=-1.5V			-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			300	pF

***Pulse Test: Pulse Width≤380μs, Duty Cycle≤2%**

Typical Characteristics

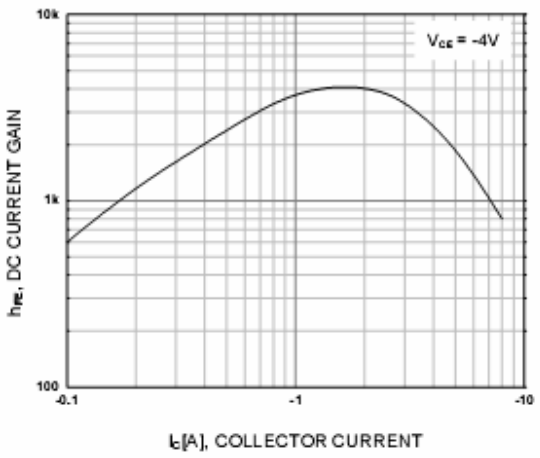


Figure 1. DC current Gain

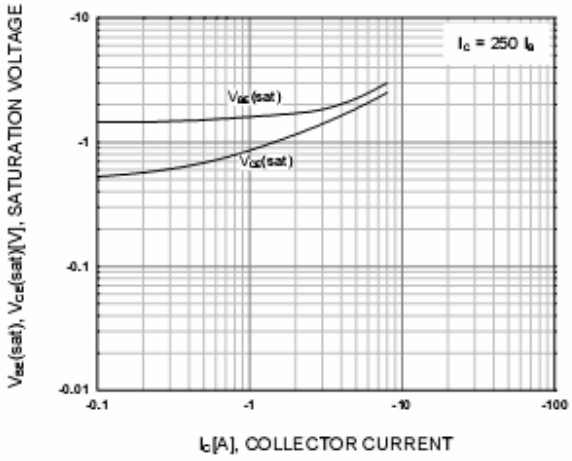


Figure 2. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

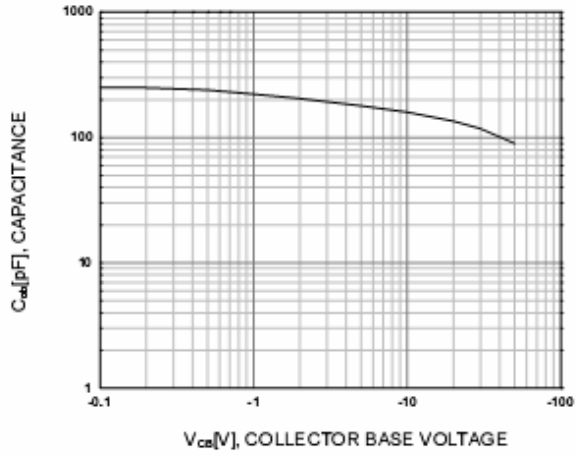


Figure 3. Collector Output Capacitance

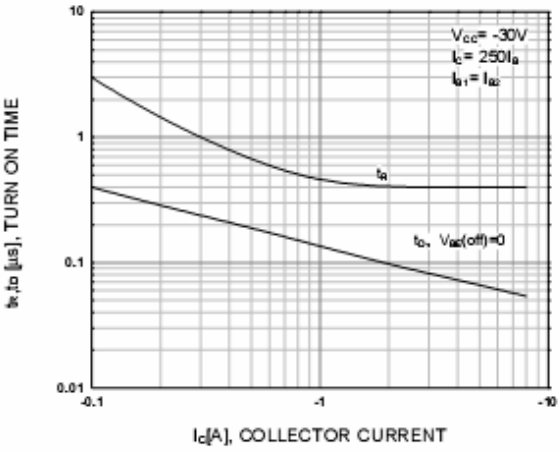


Figure 4. Turn On Time

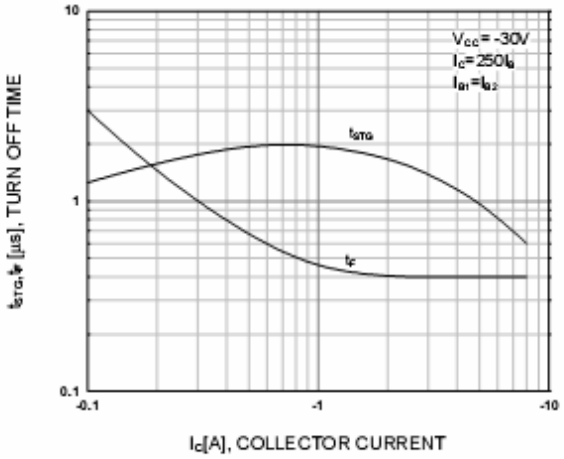


Figure 5. Turn Off Time

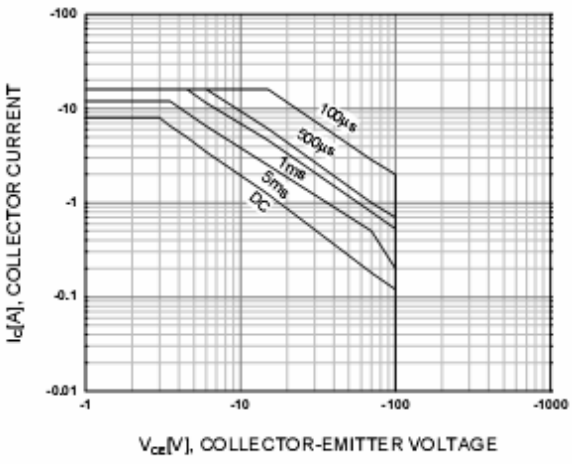


Figure 6. Safe Operating Area