

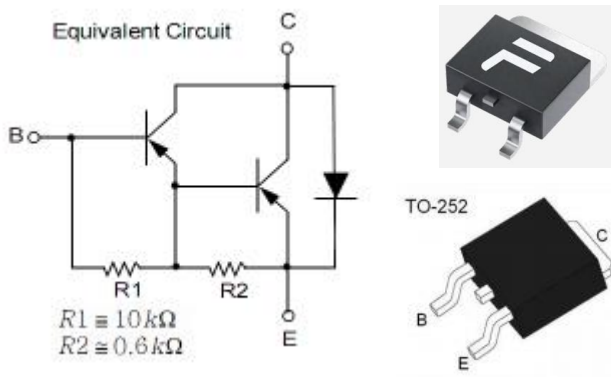
TO-252 Bipolar Transistor 双极型三极管

■Features 特点

PNP Darlington Amplifier 达林顿放大
Built-in a Damper Diode 内置阻尼二极管

■Applications 应用

Medium Power Linear Switching 中功率线性开关



■Absolute Maximum Ratings 最大额定值

Characteristic 特性参数	Symbol 符号	Rat 额定值	Unit 单位
Collector-Base Voltage 集电极基极电压	V_{CBO}	-100	V
Collector-Emitter Voltage 集电极发射极电压	V_{CEO}	-100	V
Emitter-Base Voltage 发射极基极电压	V_{EBO}	-5	V
Collector Current 集电极电流	I_C	-4	A
Power dissipation 耗散功率	$P_C(T_a=25^\circ\text{C})$ $(T_C=25^\circ\text{C})$	1.75 20	W
Junction Temperature 结温	T_J	150	$^\circ\text{C}$
Storage Temperature 储藏温度	T_{stg}	-65to+150	$^\circ\text{C}$

■Electrical Characteristics 电特性

(TA=25℃ unless otherwise noted 如无特殊说明, 温度为 25℃)

Characteristic 特性参数	Symbol 符号	Min 最小值	Type 典型值	Max 最大值	Unit 单位
Collector-Base Breakdown Voltage 集电极基极击穿电压(I _C = -100μA, I _E =0)	BV _{CBO}	-100	—	—	V
Collector-Emitter Sustaining Voltage 集电极发射极维持电压(I _C = -30mA, I _B =0)	BV _{CEO(sus)}	-100	—	—	V
Emitter-Base Breakdown Voltage 发射极基极击穿电压(I _E = -100μA, I _C =0)	BV _{EBO}	-5	—	—	V
Collector-Base Leakage Current 集电极基极漏电流(V _{CB} = -100V, I _E =0)	I _{CBO}	—	—	-20	μA
Collector-Emitter Leakage Current 集电极发射极漏电流(V _{CE} = -50V, I _B =0)	I _{CEO}	—	—	-20	μA
Emitter-Base Leakage Current 发射极基极漏电流(V _{EB} = -5V, I _C =0)	I _{EBO}	—	—	-2	mA
DC Current Gain(V _{CE} = -3V, I _C = -0.5A) 直流电流增益(V _{CE} = -3V, I _C = -2A) (V _{CE} = -3V, I _C = -4A)	H _{FE}	500 1000 200	—		
Collector-Emitter Saturation Voltage 集电极发射极饱和压降(I _C = -2A, I _B = -8mA) (I _C = -4A, I _B = -40mA)	V _{CE(sat)}	—	—	-2 -3	V
Base-Emitter On Voltage 基极发射极开通电压(V _{CE} = -3V, I _C = -2A)	V _{BE(on)}	—	—	-2.8	V
Transition Frequency 特征频率(V _{CE} = -10V, I _C = -750mA)	f _T	25	—	—	MHz
Output Capacitance 输出电容(V _{CB} = -10V, I _E =0, f=0.1MHz)	C _{ob}	—	—	200	pF

■ Typical Characteristic Curve 典型特性曲线

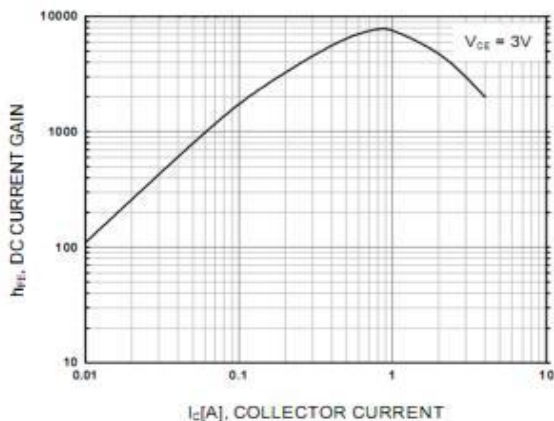


Figure 1. DC current Gain

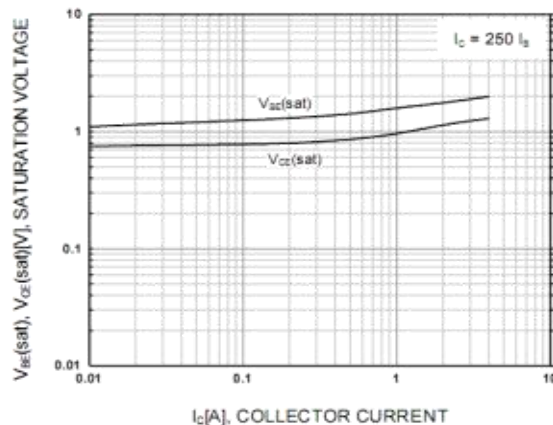


Figure 2. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

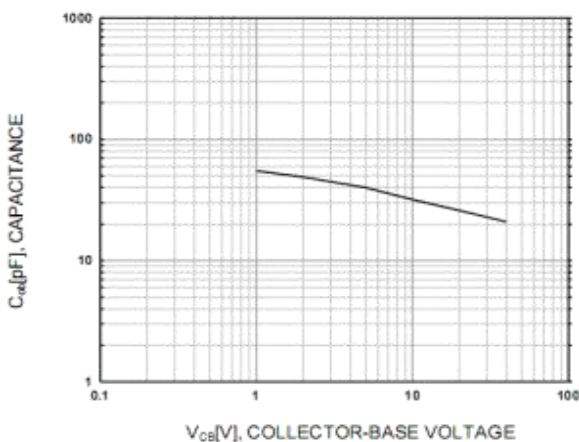


Figure 3. Collector Output Capacitance

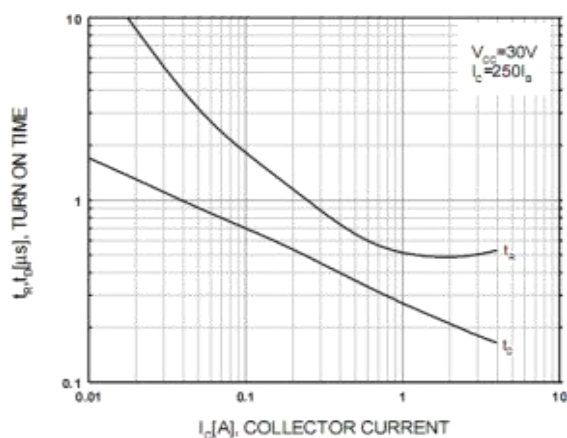


Figure 4. Turn On Time

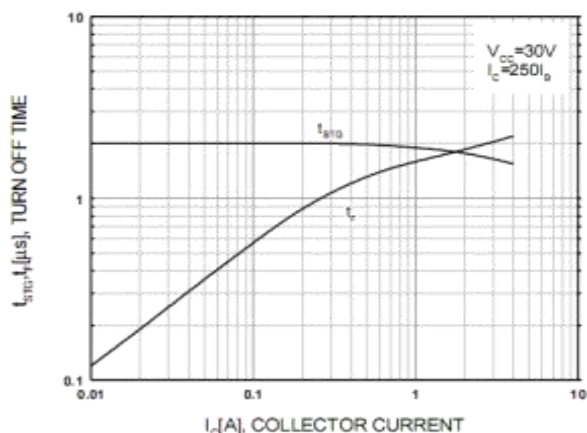
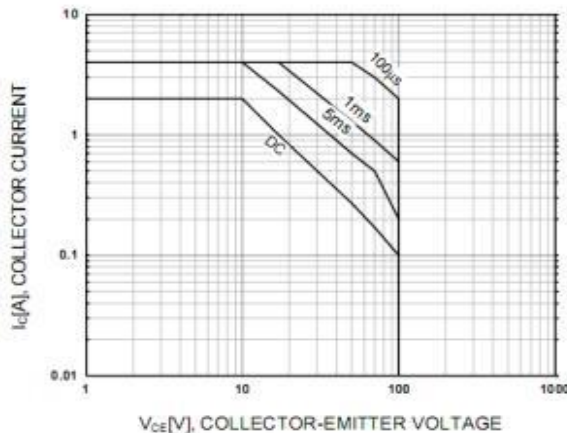


Figure 5. Turn Off Time



6. Safe Operating Area

■Dimension 外形封装尺寸

Dim	Millimeter		Inches	
	Min.	Max.	Min.	Max.
A	2.20	2.50	0.087	0.094
A1	1.00	1.40	0.039	0.055
A2	0.00	0.15	0.000	0.006
B	1.00	1.40	0.039	0.055
b	0.50	0.70	0.020	0.028
b1	0.70	0.90	0.028	0.035
c	0.40	0.60	0.016	0.024
c1	0.40	0.60	0.016	0.024
D	6.30	6.70	0.248	0.264
D1	5.10	5.50	0.201	0.217
E	5.30	6.00	0.209	0.236
e	2.20	2.40	0.087	0.094
e1	4.40	4.80	0.173	0.189
L	9.60	10.40	0.378	0.409
L1	0.60	1.00	0.024	0.039
L2	1.40	1.70	0.055	0.063