

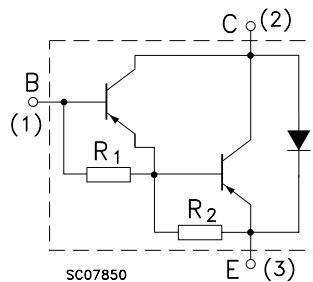
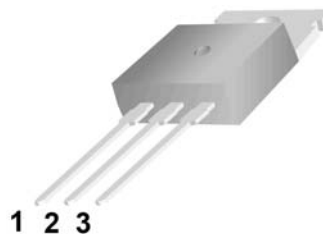
Silicon PNP Darlington Power Transistors

DESCRIPTION

- With TO-220 package
- DARLINGTON
- High DC current gain
- Low collector saturation voltage
- Complement to type TIP120/121/122

APPLICATIONS

- Designed for general-purpose amplifier and low-speed switching applications



PINNING

PIN	DESCRIPTION
1	Base
2	Collector; connected to mounting base
3	Emitter

Absolute maximum ratings($T_c=25$)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	TIP125	-60	V
		TIP126	-80	
		TIP127	-100	
V_{CEO}	Collector-emitter voltage	TIP125	-60	V
		TIP126	-80	
		TIP127	-100	
V_{EBO}	Emitter-base voltage	Open collector	-5	V
I_C	Collector current-DC		-5	A
I_{CM}	Collector current-Pulse		-8	A
I_B	Base current-DC		-120	mA
P_C	Collector power dissipation	$T_c=25$	65	W
		$T_a=25$	2	
T_j	Junction temperature		150	
T_{stg}	Storage temperature		-65~150	

CHARACTERISTICS
T_j=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT	
V _{CE0(SUS)}	Collector-emitter sustaining voltage	TIP125	-60			V	
		TIP126	-80				
		TIP127	-100				
V _{CEsat-1}	Collector-emitter saturation voltage	I _C =-3A, I _B =-12mA			-2.0	V	
V _{CEsat-2}	Collector-emitter saturation voltage	I _C =-5A, I _B =-20mA			-4.0	V	
V _{BE}	Base-emitter on voltage	I _C =-3.0A; V _{CE} =-3V			-2.5	V	
I _{CBO}	Collector cut-off current	TIP125	V _{CB} =-60V, I _E =0			-0.2	mA
		TIP126	V _{CB} =-80V, I _E =0				
		TIP127	V _{CB} =-100V, I _E =0				
I _{CEO}	Collector cut-off current	TIP125	V _{CE} =-30V, I _B =0			-0.5	mA
		TIP126	V _{CE} =-40V, I _B =0				
		TIP127	V _{CE} =-50V, I _B =0				
I _{EBO}	Emitter cut-off current	V _{EB} =-5V; I _C =0			-2	mA	
h _{FE-1}	DC current gain	I _C =-0.5A; V _{CE} =-3V	1000				
h _{FE-2}	DC current gain	I _C =-3.0A; V _{CE} =-3V	1000				
C _{ob}	Output capacitance	I _E =0; V _{CB} =-10V, f=0.1MHz			300	pF	

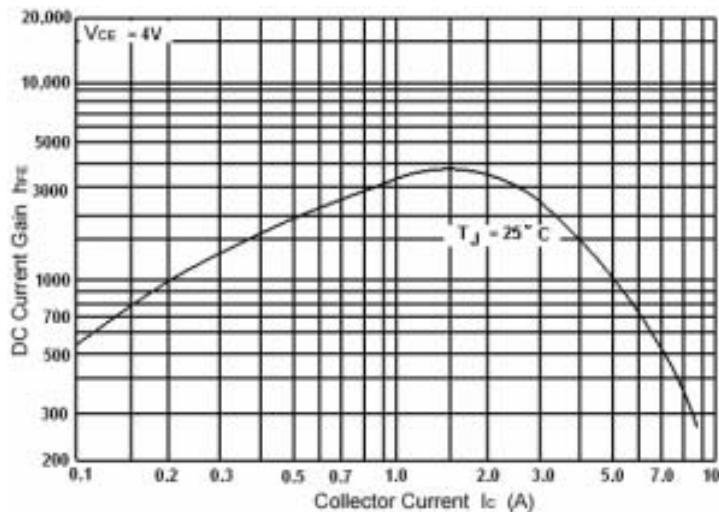
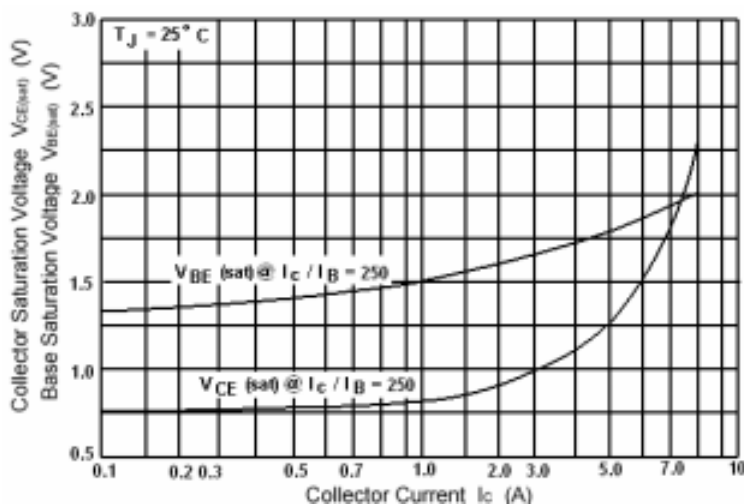


Fig.3 DC current Gain



**Fig.4 Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage**

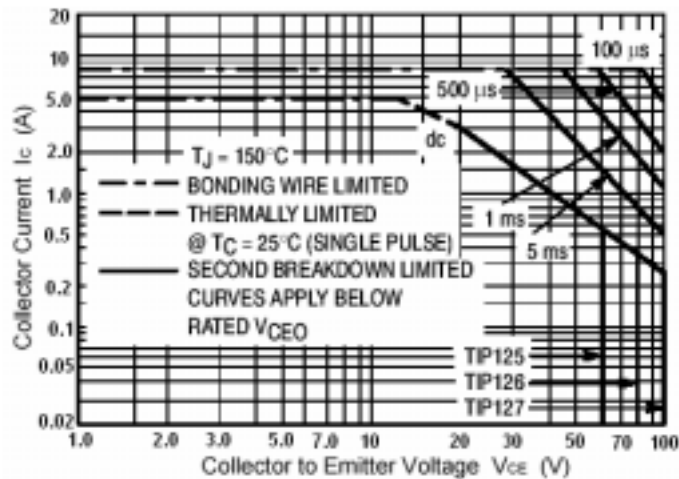
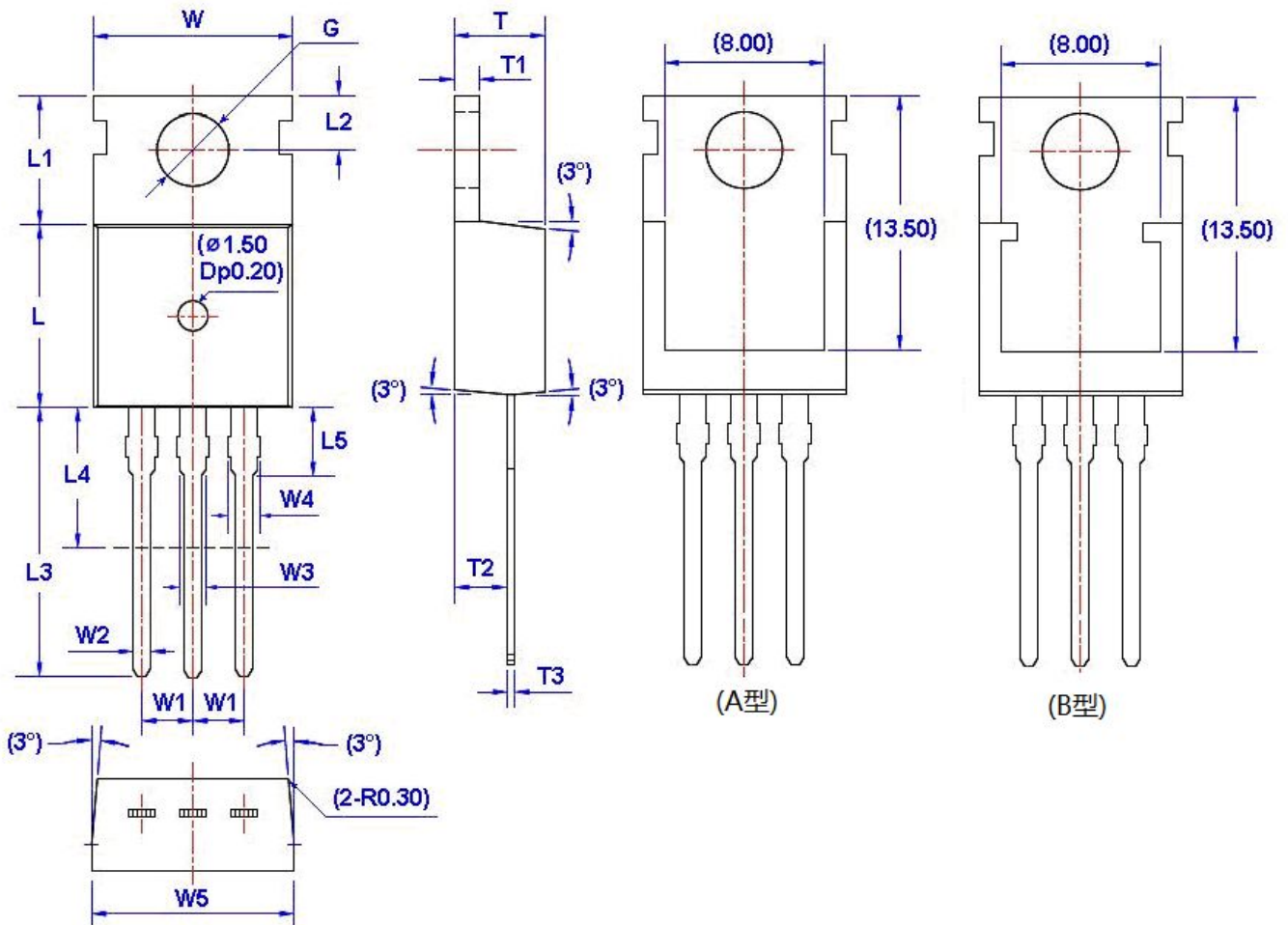


Fig.5 Safe Operating Area

TO-220 Package Dimensions



Unit: mm

Symbol	Size		Symbol	Size		Symbol	Size		Symbol	Size	
	Min	Max		Min	Max		Min	Max		Min	Max
W	9.66	10.28	W5	9.80	10.20	L4**	6.20	6.60	T3	0.45	0.60
W1	2.54 (TYP)		L	9.00	9.40	L5	2.79	3.30	G(Φ)	3.50	3.70
W2	0.70	0.95	L1	6.40	6.80	T	4.30	4.70			
W3	1.17	1.37	L2	2.70	2.90	T1	1.15	1.40			
W4*	1.32	1.72	L3	12.70	14.27	T2	2.20	2.60			