

DESCRIPTION

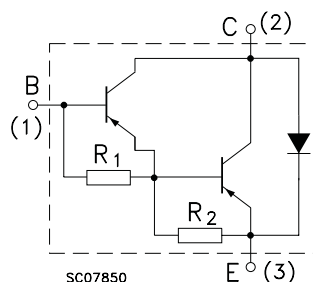
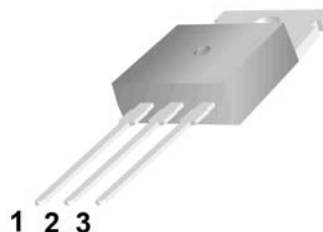
- With TO-220C package
- DARLINGTON
- High DC current gain
- Low collector saturation voltage
- Complement to type TIP120/121/122

APPLICATIONS

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

PINNING

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



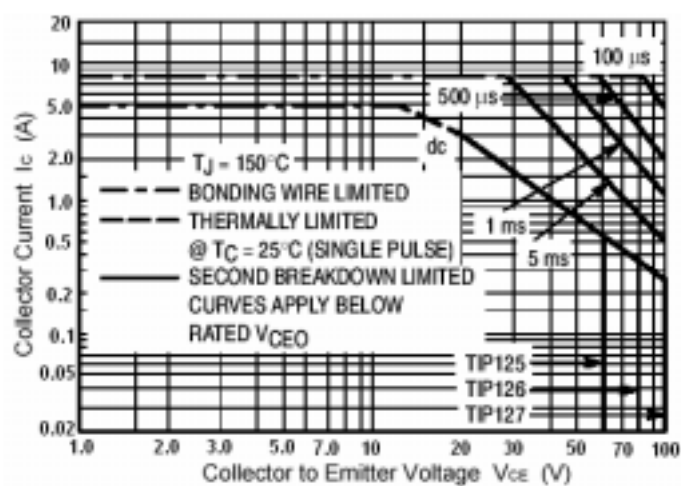
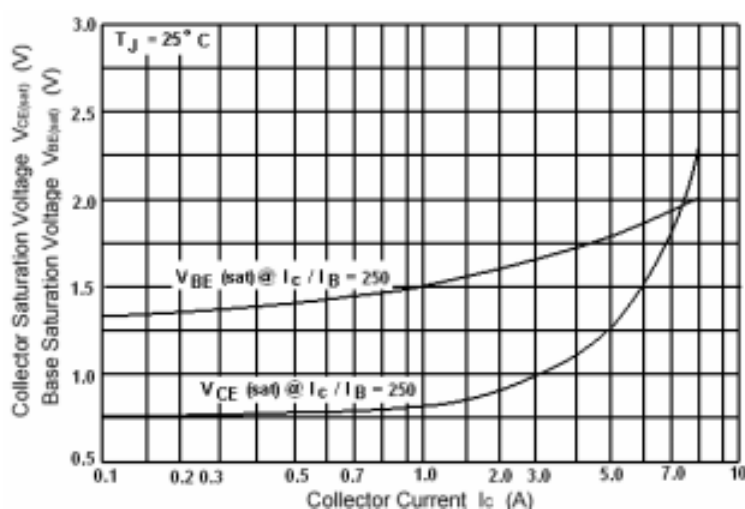
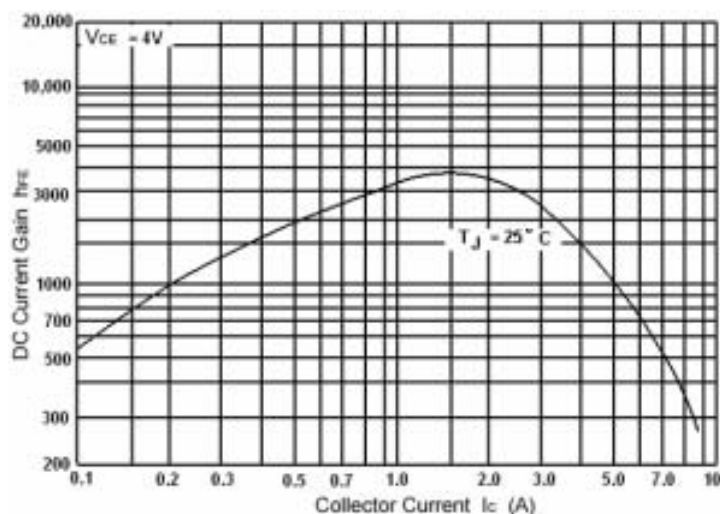
Absolute maximum ratings($T_c=25^\circ\text{C}$)

SYMBOL	PARAMETER		CONDITIONS	VALUE	UNIT
V_{CBO}	Collector-base voltage	TIP125	Open emitter	-60	V
		TIP126		-80	
		TIP127		-100	
V_{CEO}	Collector-emitter voltage	TIP125	Open base	-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	$T_c=25^\circ\text{C}$		65	W
		$T_a=25^\circ\text{C}$		2	
T_j	Junction temperature			150	$^\circ\text{C}$
T_{stg}	Storage temperature			-65~150	$^\circ\text{C}$

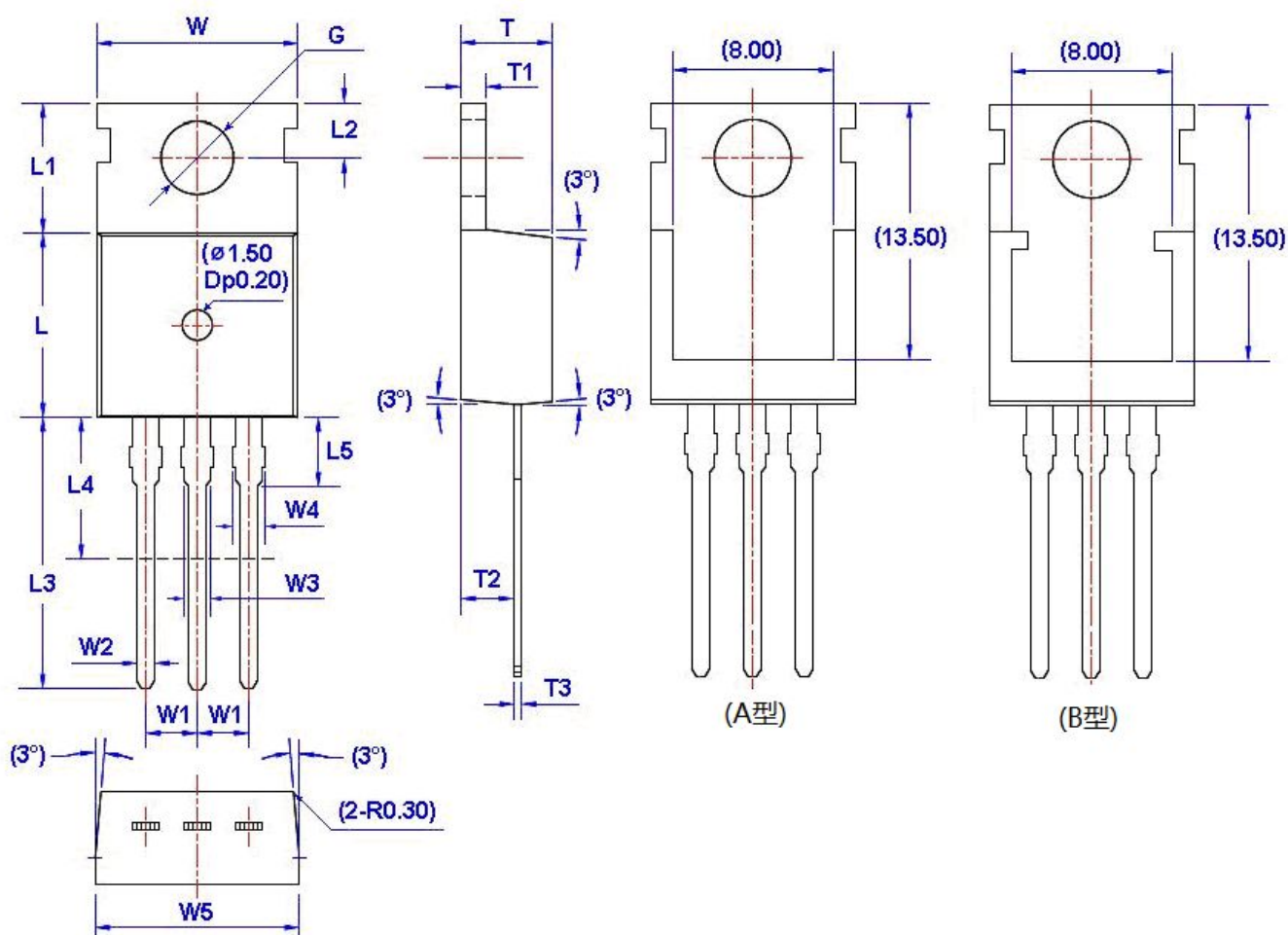
CHARACTERISTICS

$T_j=25^{\circ}\text{C}$ unless otherwise specified

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



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			