

KSB1149

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Low Collector Saturation Voltage Built-in Damper Diode at E-C

- High DC Current Gain
- High Power Dissipation : $P_C=1.3W$ ($T_a=25^\circ C$)

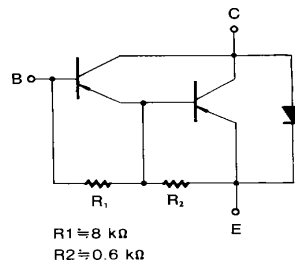


PNP Silicon Darlington Transistor

Absolute Maximum Ratings $T_C=25^\circ C$ 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	- 8	V
I_C	Collector Current (DC)	- 3	A
I_{CP}	*Collector Current (Pulse)	- 5	A
P_C	Collector Dissipation ($T_a=25^\circ C$)	1.3	W
P_C	Collector Dissipation ($T_C=25^\circ C$)	15	W
T_J	Junction Temperature	150	$^\circ C$
T_{STG}	Storage Temperature	- 55 ~ 150	$^\circ C$

* $PW \leq 10ms$, Duty Cycle $\leq 50\%$



Electrical Characteristics $T_C=25^\circ C$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
I_{CBO}	Collector Cut-off Current	$V_{CB} = - 100V, I_E = 0$			- 10	μA
I_{EBO}	Emitter Cut-off Current	$V_{EB} = - 5V, I_C = 0$			- 2	mA
h_{FE1} h_{FE2}	* DC Current Gain	$V_{CE} = - 2V, I_C = - 1.5A$ $V_{CE} = - 2V, I_C = - 3A$	2000 1000		20000	
$V_{CE(sat)}$	* Collector-Emitter Saturation Voltage	$I_C = - 1.5A, I_B = - 1.5mA$		- 0.9	- 1.2	V
$V_{BE(sat)}$	* Base-Emitter Saturation Voltage	$I_C = - 1.5A, I_B = - 1.5mA$		- 1.5	- 2	V
t_{ON}	Turn ON Time	$V_{CC} = - 40V, I_C = - 1.5A$ $I_{B1} = - I_{B2} = - 1.5mA$ $R_L = 27\Omega$		0.5		μs
t_{STG}	Storage Time			2		μs
t_F	Fall Time			1		μs

* Pulse test: $PW \leq 350\mu s$, duty Cycles $\leq 2\%$ Pulsed

h_{FE} Classification

Classification	O	Y	G
h_{FE1}	2000 ~ 5000	4000 ~ 12000	6000 ~ 20000

Typical Characteristics

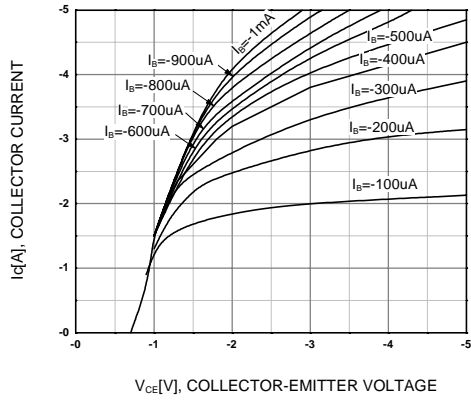


Figure 1. Static Characteristic

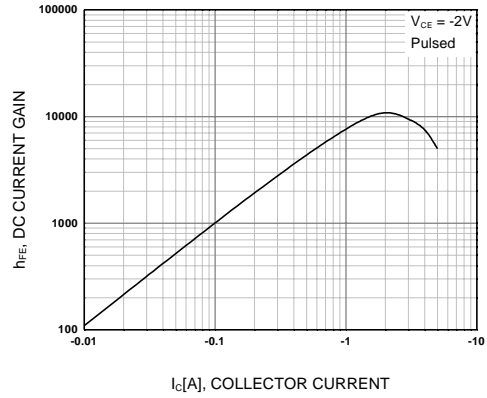


Figure 2. DC current Gain

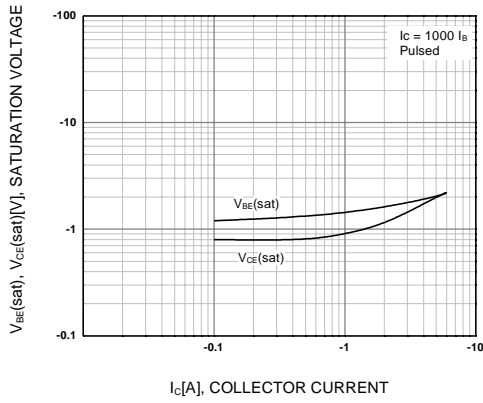


Figure 3. Collector-Emitter Saturation Voltage Base-Emitter Saturation Voltage

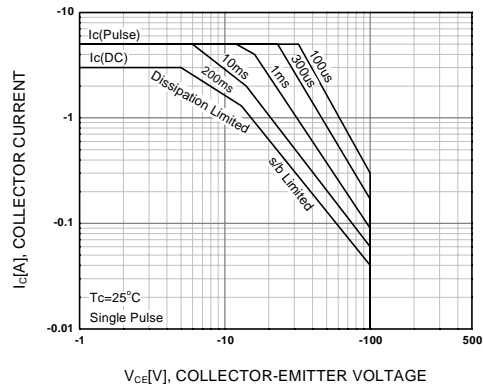


Figure 4. Forward Bias Safe Operating Area

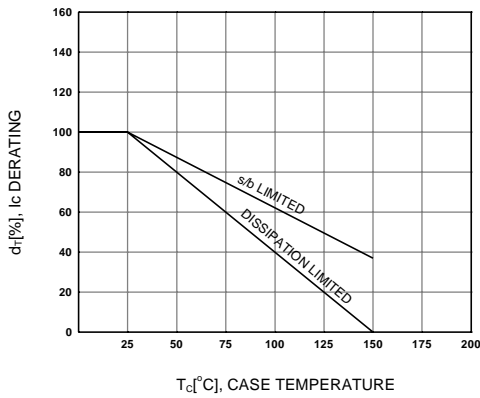


Figure 5. Derating Curve of Safe Operating Areas

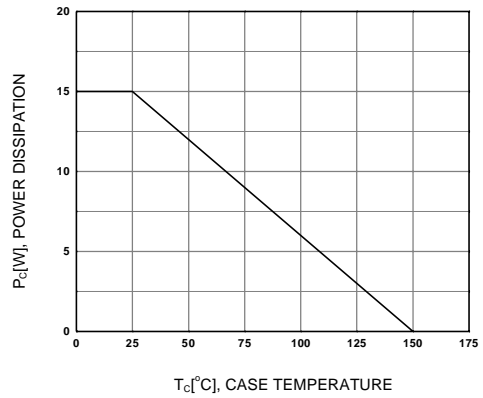


Figure 6. Power Derating

Package Dimensions

KSB1149

TO-126



Dimensions in Millimeters

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