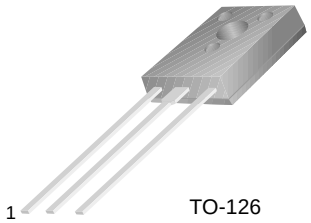
FAIRCHILD
SEMICONDUCTOR TM

KSD1692

Feature

- High Dc Durrent Gain
- Low Collector Saturation Voltage
- Built-in a Damper Diode at E-C
- High Power Dissipation : P_C = 1.3W (Ta=25°C)



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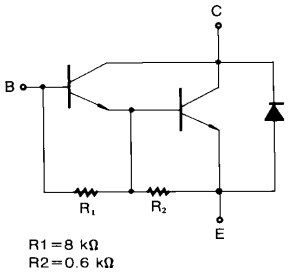
1. Emitter 2.Collector 3.Base

NPN Silicon Darlington Transistor

Absolute Maximum Ratings T_C=25°C unless otherwise noted

Sym-bol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	150	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°C)	1.3	A
P_C	Collector Dissipation (T_C=25°C)	15	W
T_J	Junction Temperature	150	W
T_{STG}	Storage Temperature	- 55 ~ 150	°C

* PW≤10ms, duty Cycle≤50%



Electrical Characteristics T_C=25°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	2K 1K		20K	
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 = 27Ω		0.5		μs
t_{STG}	Storage Time			2		μs
t_F	Fall Time			1		μs

* Pulse test: PW≤350μs, duty Cycle≤2% Pulsed

h_{FE} Classificntion

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

Typical Characteristics

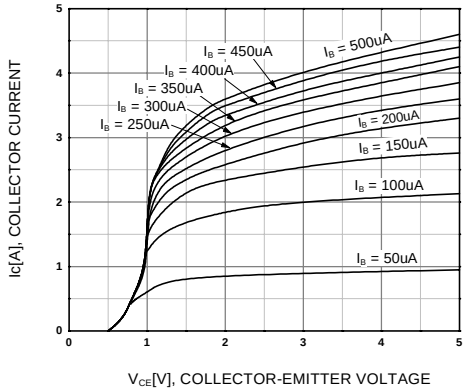


Figure 1. Static Characteristic

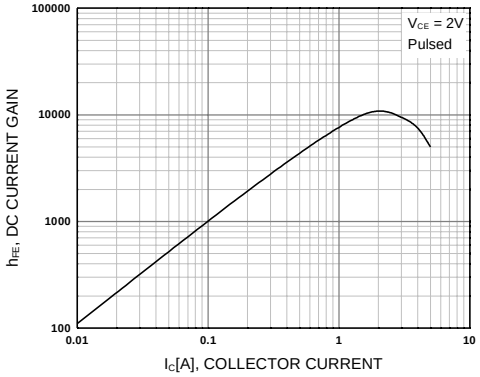


Figure 2. DC current Gain

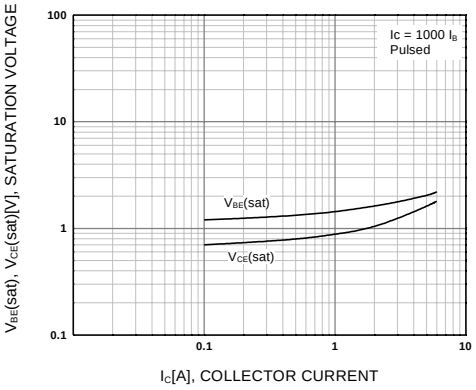


Figure 3. Collector-Emitter Saturation Voltage Base-Emitter Saturation Voltage

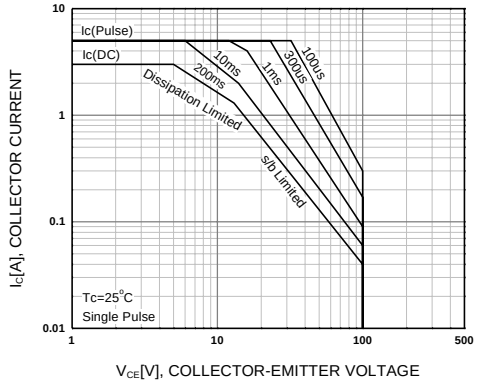


Figure 4. Forward Bias Safe Operating Areas

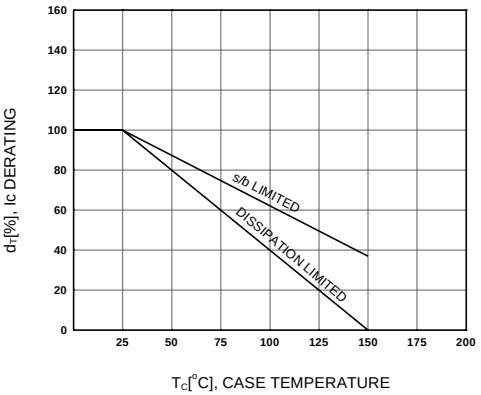


Figure 5. Derating Curve of Safe Operating Areas

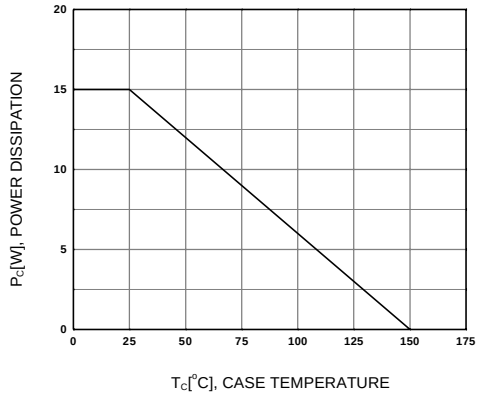


Figure 6. Power Derating

Package Demensions

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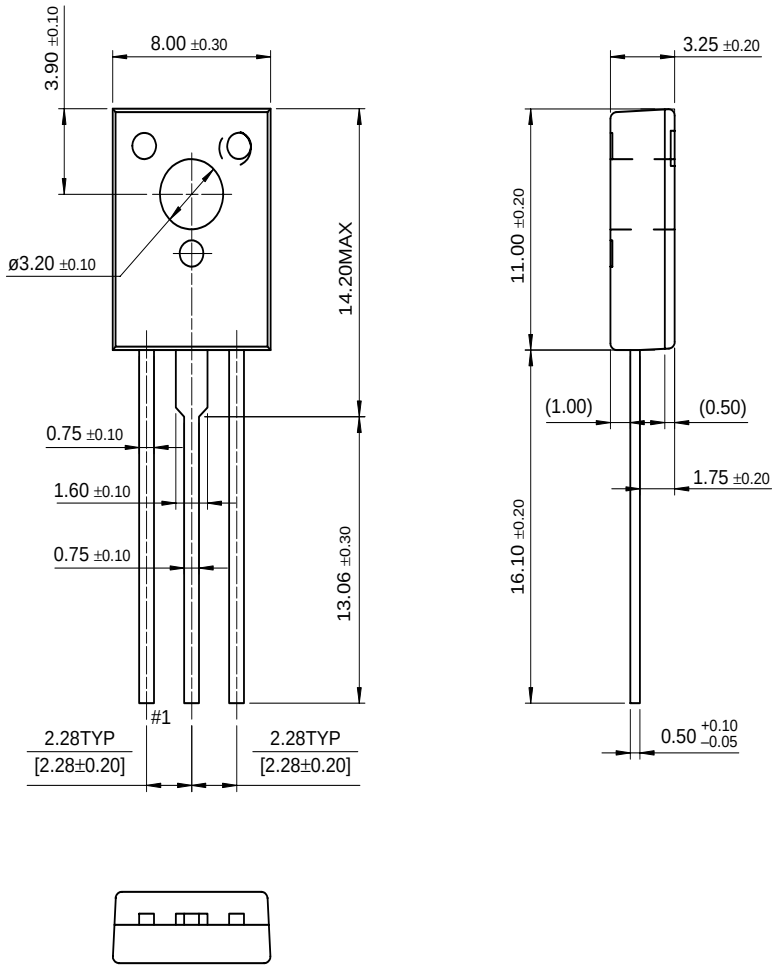

Dimensions in Millimeters

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