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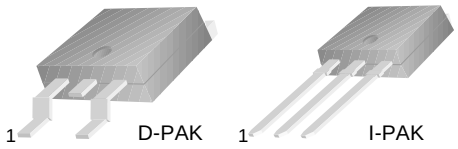
FAIRCHILD
SEMICONDUCTOR®

KSH127

D-PAK for Surface Mount Applications

- High DC Current Gain
- Built-in a Damper Diode at E-C
- Lead Formed for Surface Mount Applications (No Suffix)
- Straight Lead (I-PAK, " - I " Suffix)
- Electrically Similar to Popular TIP127
- Complement to KSH122



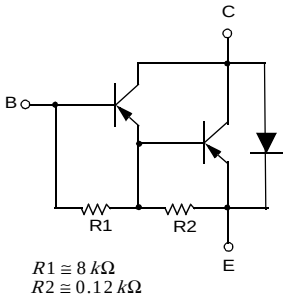
1.Base 2.Collector 3.Emitter

PNP Silicon Darlington Transistor

Absolute Maximum Ratings T_C=25°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	- 5	V
I_C	Collector Current (DC)	- 8	A
I_{CP}	Collector Current (Pulse)	- 16	A
I_B	Base Current	- 120	mA
P_C	Collector Dissipation (T_C=25°C)	20	W
	Collector Dissipation (T_a=25°C)	1.75	W
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	- 65 ~ 150	°C

Equivalent Circuit



$R1 \cong 8\,k\Omega$
$R2 \cong 0.12\,k\Omega$

Electrical Characteristics T_C=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Max.	Units
V_{CEO}(sus)	*Collector-Emitter Sustaining Voltage	I_C = - 30mA, I_B = 0	- 100		V
I_{CEO}	Collector Cut-off Current	V_{CE} = - 50V, I_B = 0		- 10	μA
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_{FE}	*DC Current Gain	V_{CE} = - 4V, I_C = - 4A V_{CE} = - 4V, V_{EB} = -8A	1000 100	12K	
V_{CE}(sat)	*Collector-Emitter Saturation Voltage	I_C = - 4A, I_B = - 16mA I_C = - 8A, I_B = - 80mA		- 2 - 4	V V
V_{BE}(sat)	*Base-Emitter Saturation Voltage	I_C = - 8A, I_B = - 80mA		- 4.5	V
V_{BE}(on)	*Base-Emitter On Voltage	V_{CE} = -4V, I_C = - 4A		- 2.8	V
C_{ob}	Output Capacitance	V_{CB} = - 10V, I_E = 0 f= 0.1MHz		300	pF

* Pulse Test: PW≤300μs, Duty Cycle≤2%

Typical Characteristics

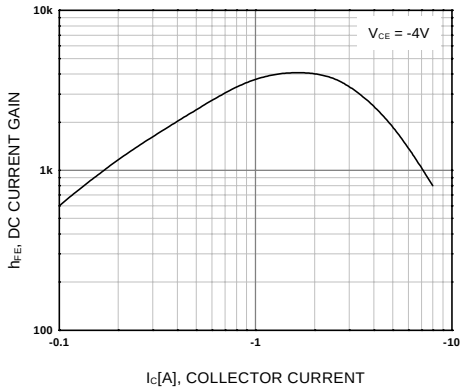


Figure 1. DC current Gain

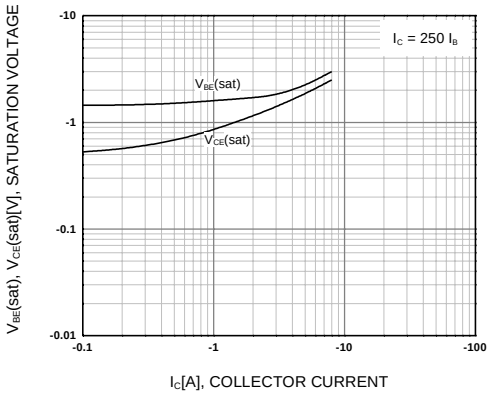


Figure 2. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

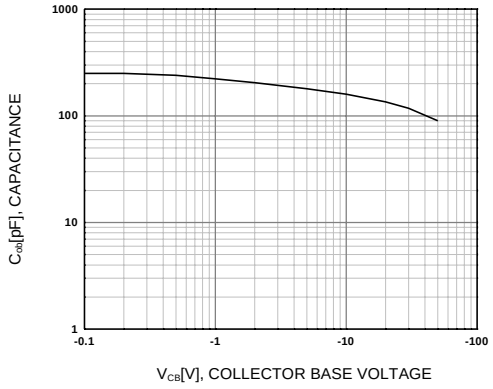


Figure 3. Collector Output Capacitance

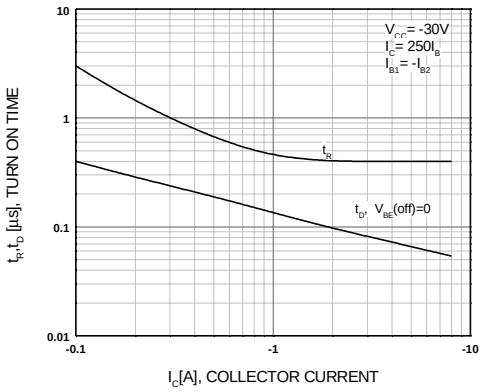


Figure 4. Turn On Time

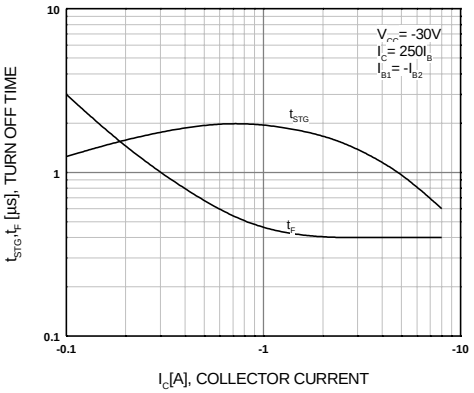


Figure 5. Turn Off Time

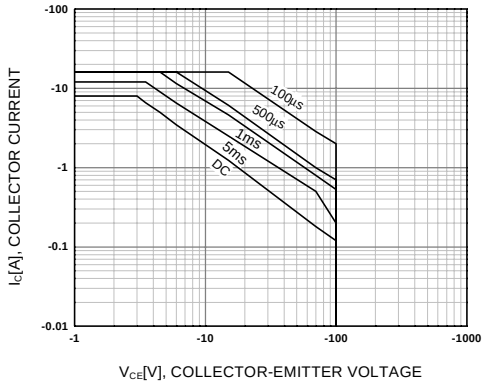


Figure 6. Safe Operating Area

Typical Characteristic (Continued)

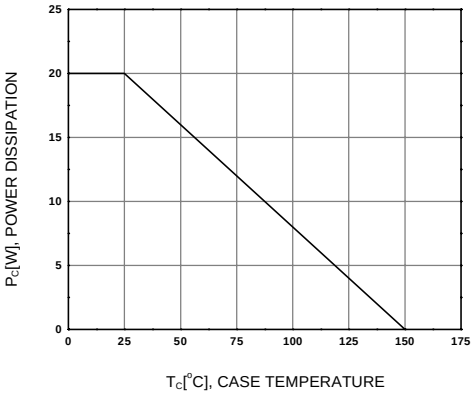
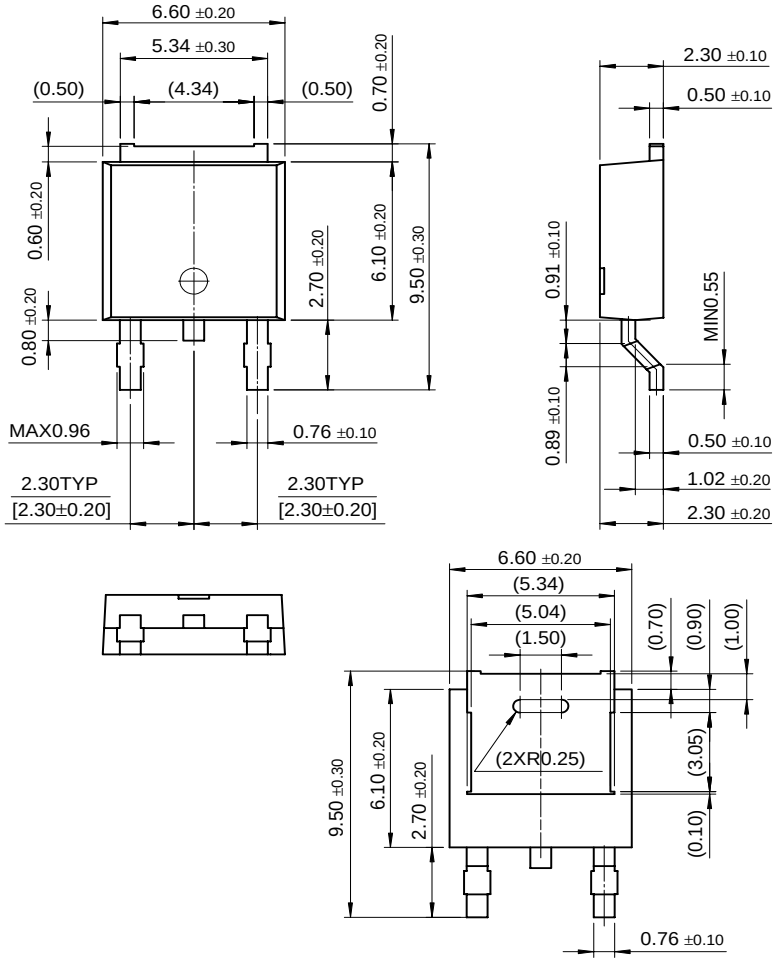


Figure 7. Power Derating

Package Dimensions

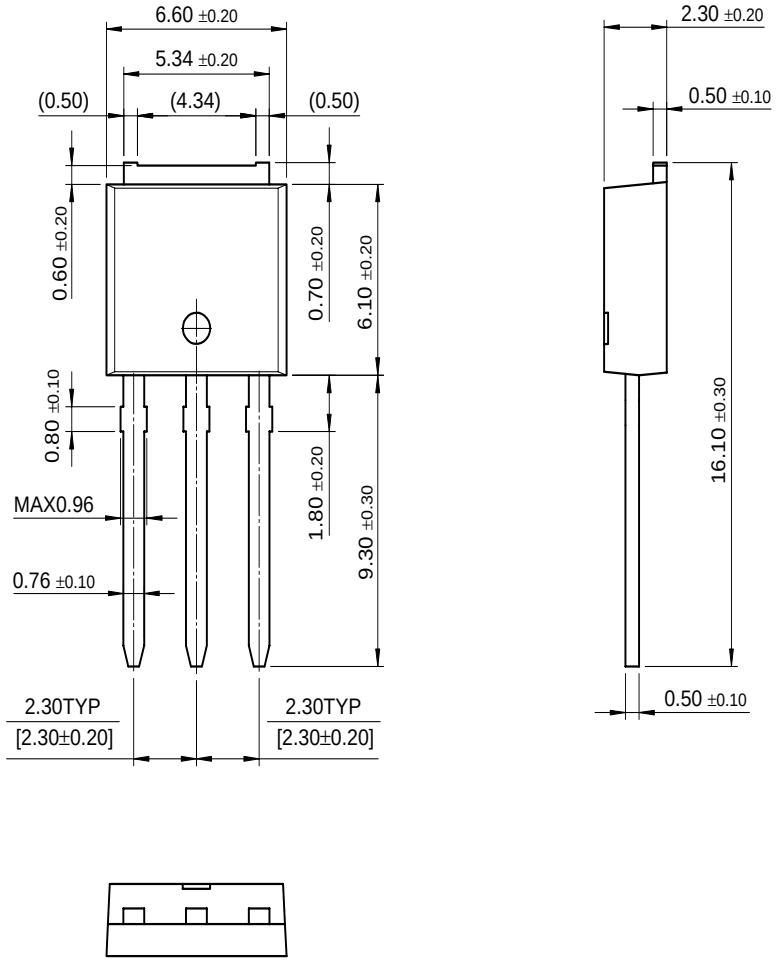
D-PAK



Dimensions in Millimeters

Package Dimensions (Continued)

I-PAK



Dimensions in Millimeters

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