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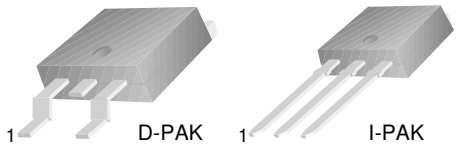
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FAIRCHILD
SEMICONDUCTOR®

KSH210

D-PAK for Surface Mount Applications

- High DC Current Gain
- Low Collector Emitter Saturation Voltage
- Lead Formed for Surface Mount Applications (No Suffix)
- Straight Lead (I-PAK, " - I " Suffix)



1.Base 2.Collector 3.Emitter

Absolute Maximum Ratings T_C=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	- 40	V
V_{CEO}	Collector-Emitter Voltage	- 25	V
V_{EBO}	Emitter-Base Voltage	- 8	V
I_C	Collector Current (DC)	- 5	A
I_{CP}	Collector Peck Current (Pulse)	- 10	A
I_B	Base Current	- 1	A
P_C	Collector Dissipation (T_C = 25°C)	12.5	W
	Collector Dissipation (T_a = 25°C)	1.4	W
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	- 65 ~ 150	°C

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 = - 10mA, I_B = 0	-25		V
I_{CBO}	Collector Cut-off Current	V_{CB} = - 40V, I_E = 0		-100	nA
I_{EBO}	Emitter Cut-off Current	V_{EBO} = - 8V, I_C = 0		-100	nA
h_{FE}	* DC Current Gain	V_{CE} = - 1V, I_C = - 500mA V_{CE} = - 1V, I_C = - 2A V_{CE} = - 2V, I_C = - 5A	70 45 10	 180 	
V_{CE}(sat)	* Collector-Emitter Saturation Voltage	I_C = - 500mA, I_B= - 50mA I_C = - 2A, I_B = - 200mA I_C = - 5A, I_B = - 1A		-0.3 -0.75 -1.8	V V V
V_{BE}(sat)	* Base-Emitter Saturation Voltage	I_C = - 5A, I_B = - 1A		-2.5	V
V_{BE}(on)	* Base-Emitter On Voltage	V_{CE} = - 1V, I_C = - 2A		-1.6	V
f_T	Current Gain Bandwidth Product	V_{CE} = - 10V, I_C = - 100mA	65		MHz
C_{ob}	Output Capacitance	V_{CB} = - 10V, I_E = 0, f = 0.1MHz		120	pF

* Pulse Test: PW≤300μs, Duty Cycle≤2%

Typical Characteristics

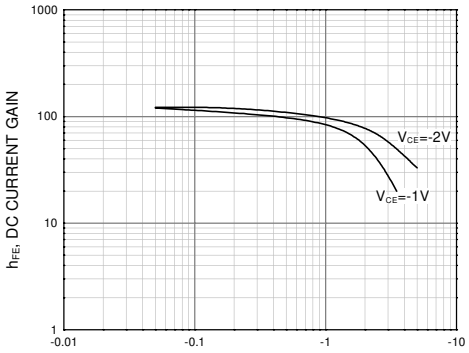


Figure 1. DC current Gain

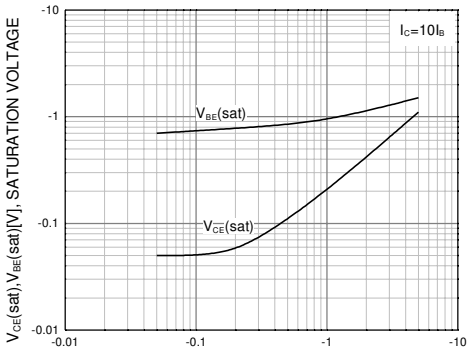


Figure 2. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

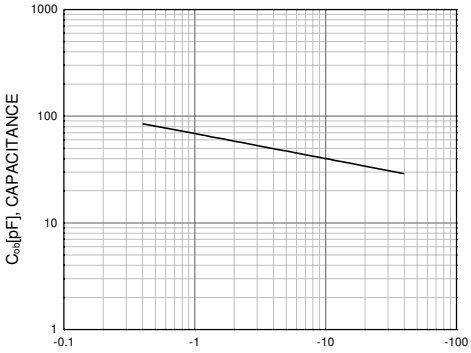


Figure 3. Collector Output Capacitance

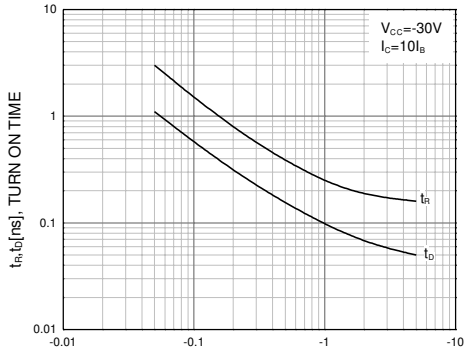


Figure 4. Turn On Time

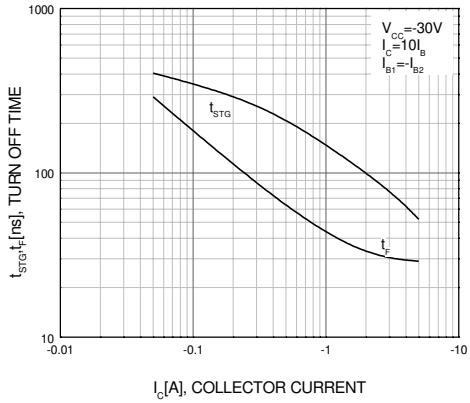


Figure 5. Turn Off Time

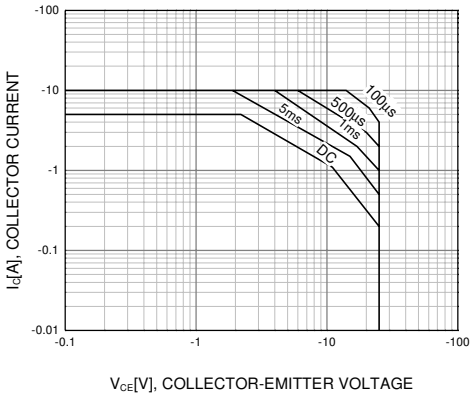


Figure 6. Safe Operating Area

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Typical Characteristics (Continued)

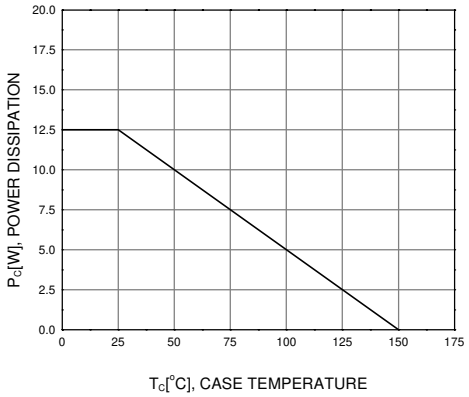
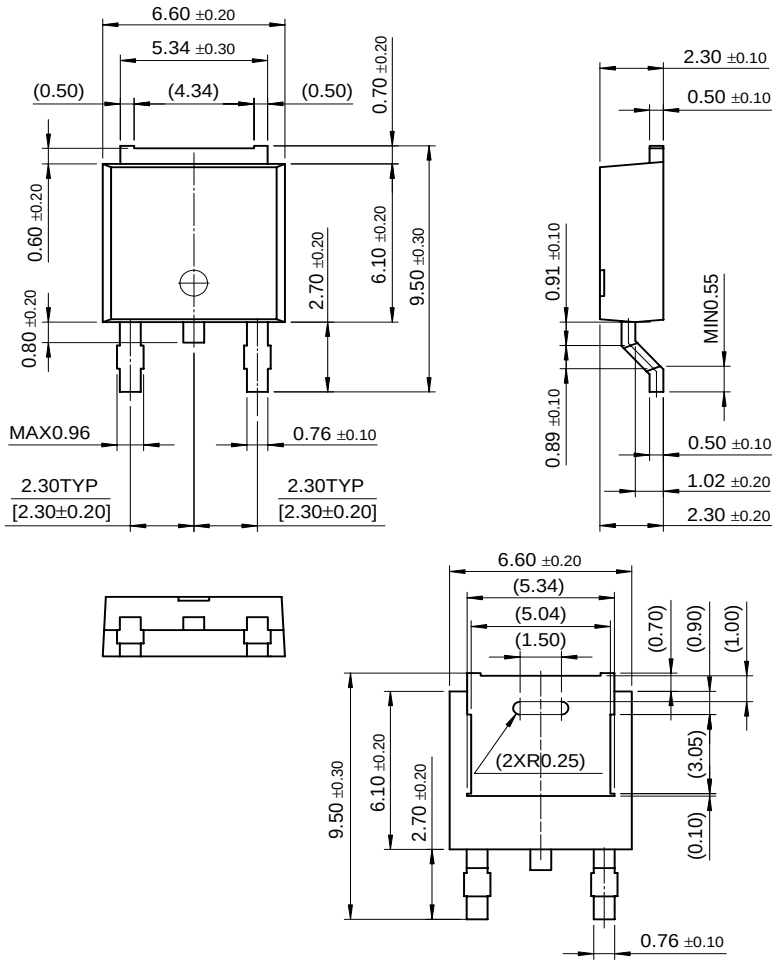


Figure 7. Power Derating

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D-PAK

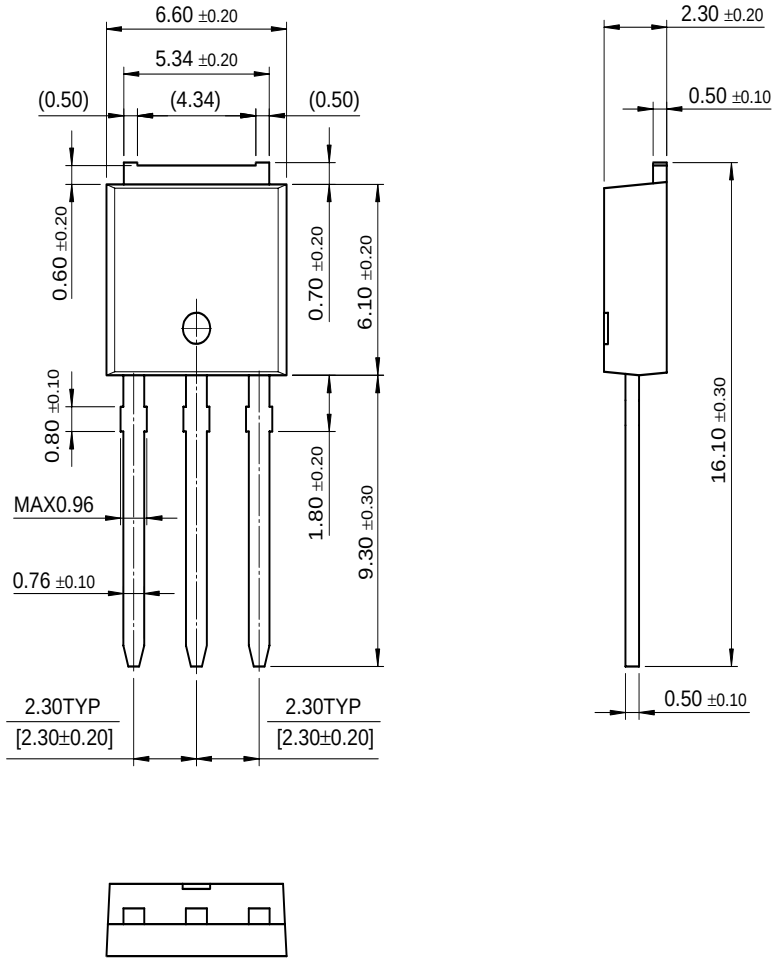


Dimensions in Millimeters

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Package Dimensions (Continued)

I-PAK



Dimensions in Millimeters

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