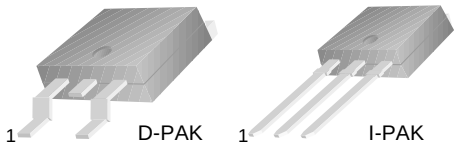
FAIRCHILD
SEMICONDUCTOR®

KSH44H11

General Purpose Power and Switching Such as Output or Driver Stages in Applications D-PAK for Surface Mount Applications

- Lead Formed for Surface Mount Application (No Suffix)
- Straight Lead (I-PAK, "- I" Suffix)
- Electrically Similar to Popular KSE44H
- Fast Switching Speeds
- Low Collector Emitter Saturation Voltage



1.Base 2.Collector 3.Emitter

NPN Epitaxial Silicon Transistor

Absolute Maximum Ratings T_C=25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{CEO}	Collector-Emitter Voltage	80	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current (DC)	8	A
I_{CP}	Collector-Current (Pulse)	16	A
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

Electrical Characteristics T_C=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
V_{CEO}(sus)	* Collector-Emitter Sustaining Voltage	I_C = 30mA, I_B = 0	80			V
I_{CEO}	Collector Cut-off Current	V_{CE} = 80V, I_B = 0			10	µA
I_{EBO}	Emitter Cut-off Current	V_{BE} = 5V, I_C = 0			50	µA
h_{FE}	DC Current Gain	V_{CE} = 1V, I_C = 2A V_{CE} = 1V, I_C = 4A	60 40			
V_{CE}(sat)	Collector-Emitter Saturation Voltage	I_C = 8A, I_B = 0.4A			1	V
V_{BE}(on)	Base-Emitter On Voltage	I_C = 8A, I_B = 0.8A			1.5	V
f_T	Current Gain Bandwidth Product	V_{CE} = 10V, I_C = 0.5A		50		MHz
C_{ob}	Output Capacitance	V_{CB} =10V, f = 1MHz		130		pF
t_{ON}	Turn On Time	I_C = 5A I_{B1} = - I_{B2} = 0.5A		300		ns
t_{STG}	Storage Time			500		ns
t_F	Fall Time			140		ns

* Pulse Test: PW≤300µs, Duty Cycle≤2%

Typical Characteristics

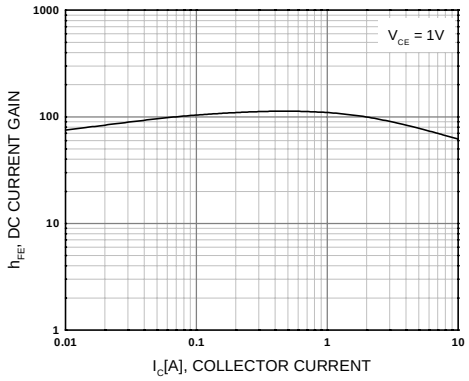


Figure 1. DC current Gain

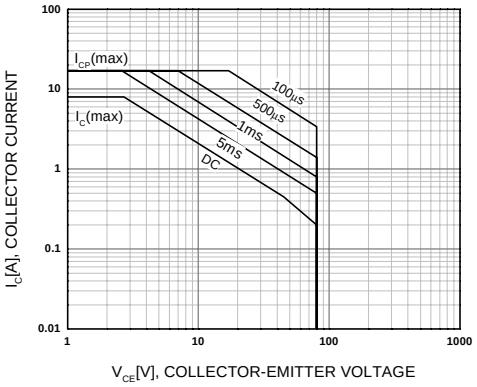


Figure 2. Safe Operating Area

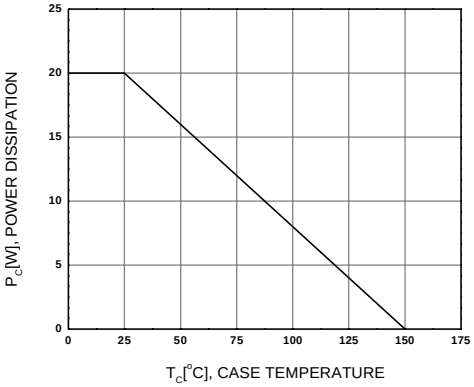
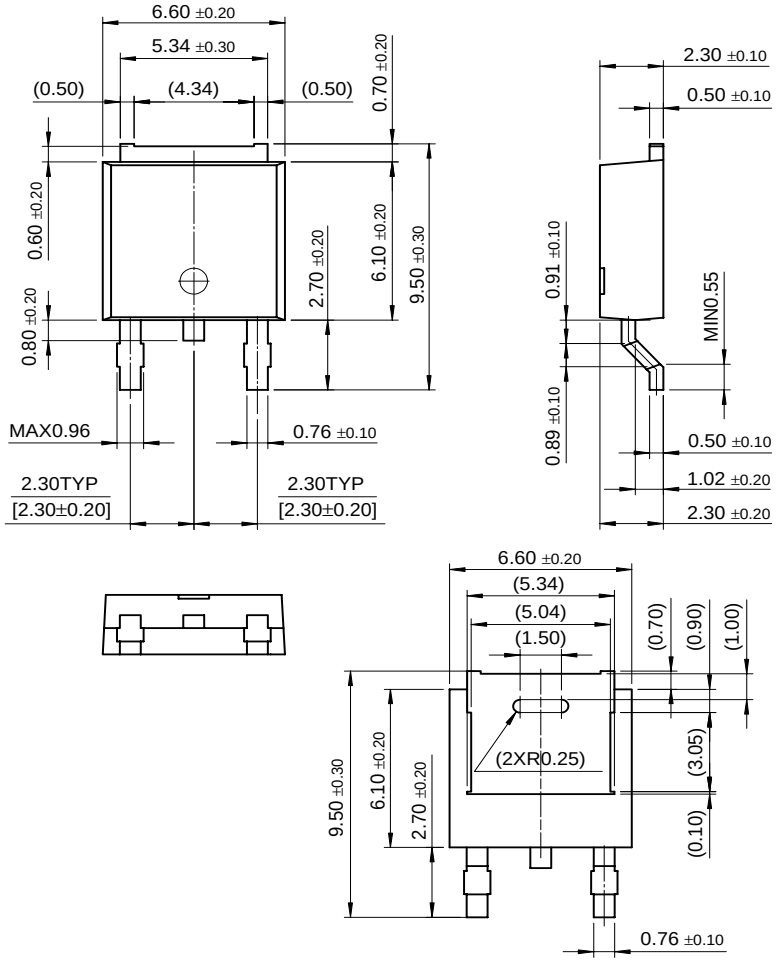


Figure 3. Power Derating

Package Dimensions

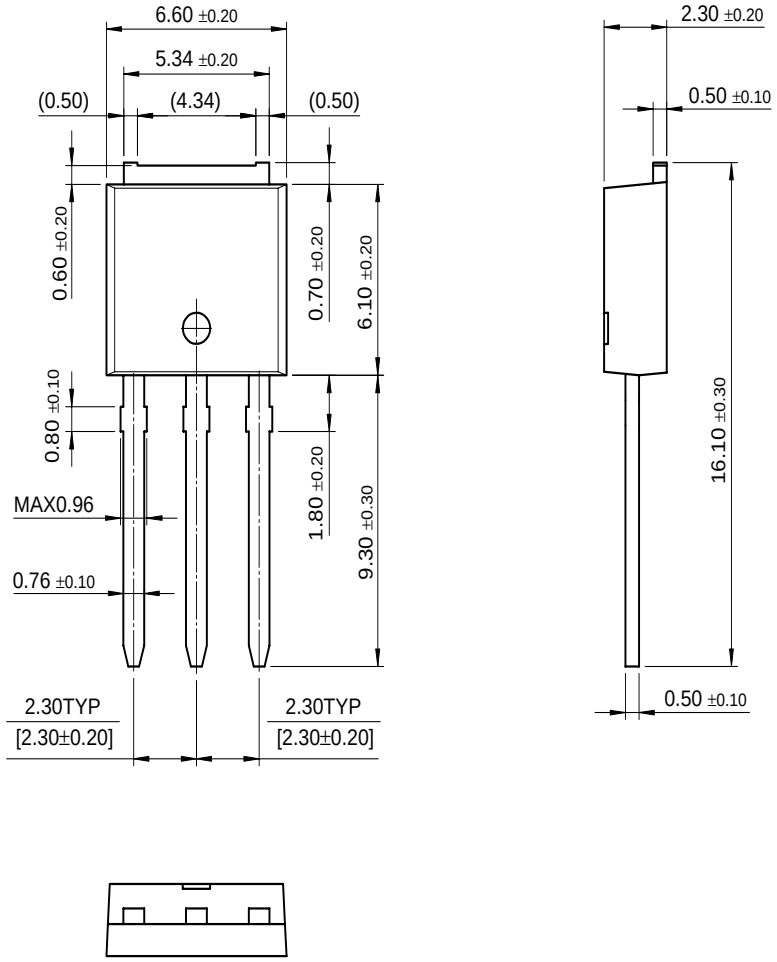
D-PAK



Dimensions in Millimeters

Package Dimensions (Continued)

I-PAK



Dimensions in Millimeters

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CoolFET™	FASTr™	MicroFET™	PowerTrench®	SuperSOT™-6
CROSSVOLT™	FRFET™	MicroPak™	QFET™	SuperSOT™-8
DOME™	GlobalOptoisolator™	MICROWIRE™	QS™	SyncFET™
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E^2CMOS™	HiSeC™	MSXPro™	Quiet Series™	TruTranslation™
EnSigna™	I^2C™	OCX™	RapidConfigure™	UHC™
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The Power Franchise™		OPTOLOGIC®	SILENT SWITCHER®	VCX™
Programmable Active Droop™		OPTOPLANAR™	SMART START™	

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