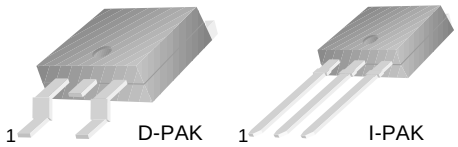
FAIRCHILD
SEMICONDUCTOR®

KSH41C

General Purpose Amplifier Low Speed Switching 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 TIP41 and TIP41C



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_{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)	6	A
I_{CP}	Collector Current (Pulse)	10	A
I_B	Base Current	2	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.	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} = 60V, I_B = 0		50	μA
I_{CES}	Collector Cut-off Current	V_{CE} = 100V, V_{BE} = 0		10	uA
I_{EBO}	Emitter Cut-off Current	V_{BE} = 5V, I_C = 0		0.5	mA
h_{FE}	* DC Current Gain	V_{CE} = 4V, I_C = 0.3A V_{CE} = 4V, I_C = 3A	30 15	 75	
V_{CE}(sat)	* Collector-Emitter Saturation Voltage	I_C = 6A, I_B = 600mA		1.5	V
V_{BE}(on)	* Base-Emitter On Voltage	V_{CE} = 6A, I_C = 4A		2	V
f_T	Current Gain Bandwidth Product	V_{CE} = 10V, I_C = 500mA	3		MHz

* Pulse Test: PW≤300μs, Duty Cycle≤2%

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Typical Characteristics

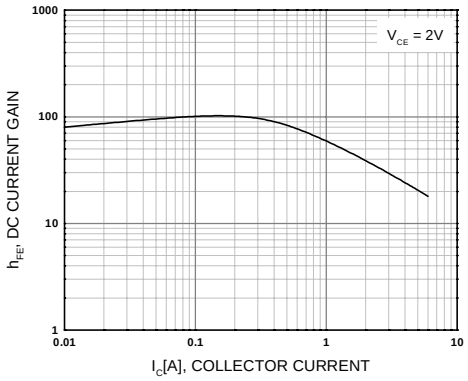


Figure 1. DC current Gain

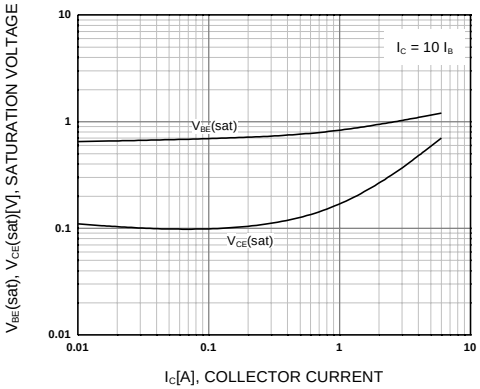


Figure 2. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

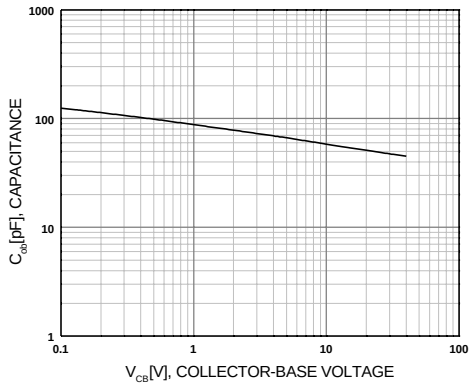


Figure 3. Collector Capacitance

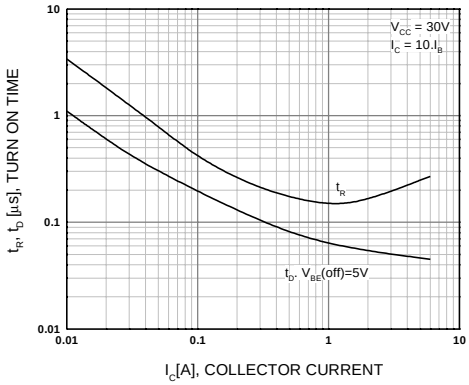


Figure 4. Turn On Time

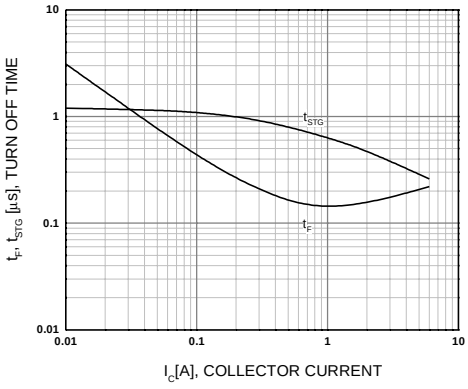


Figure 5. Turn Off Time

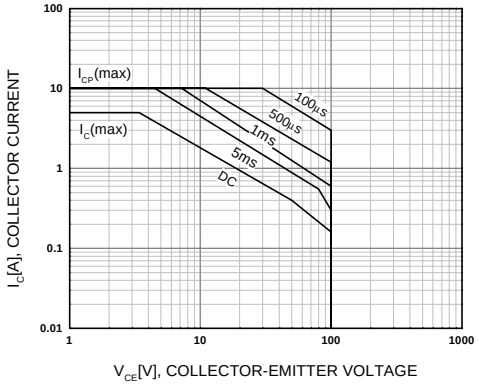


Figure 6. Safe Operating Area

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Typical Characteristics (Continued)

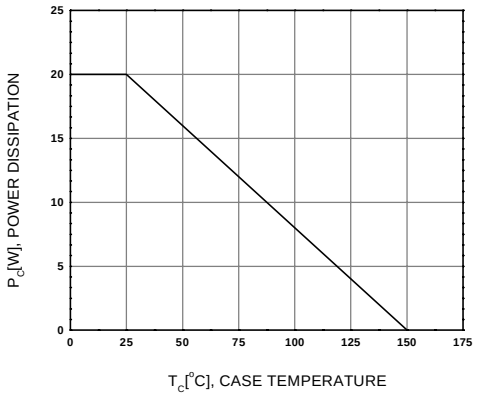
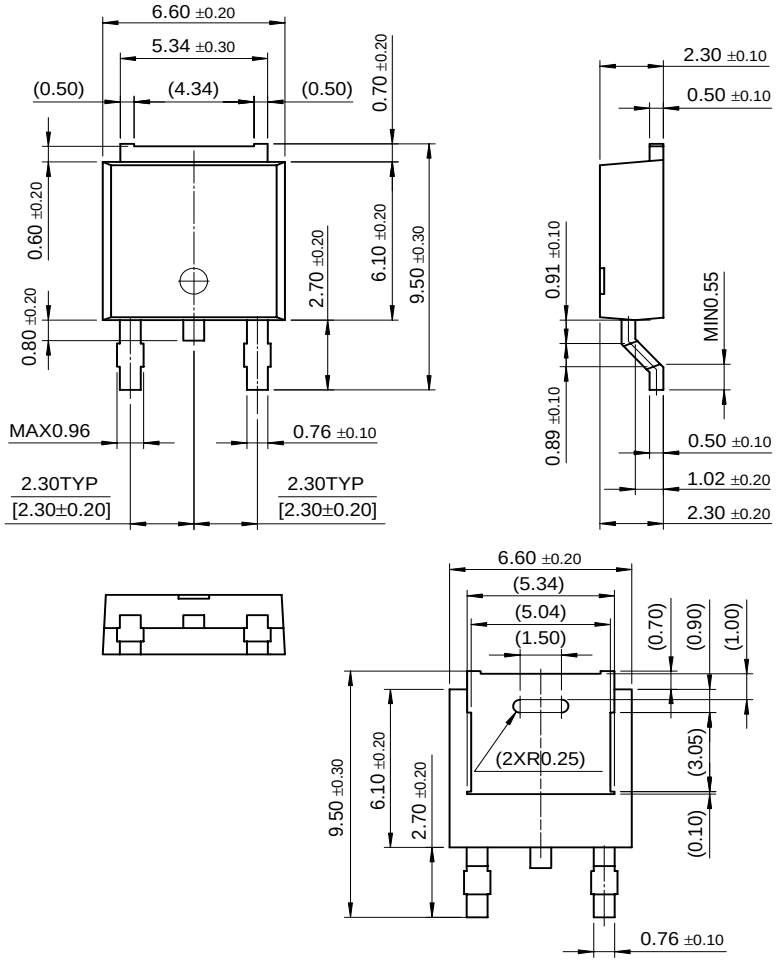


Figure 7. Power Derating

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Package Dimensions

D-PAK

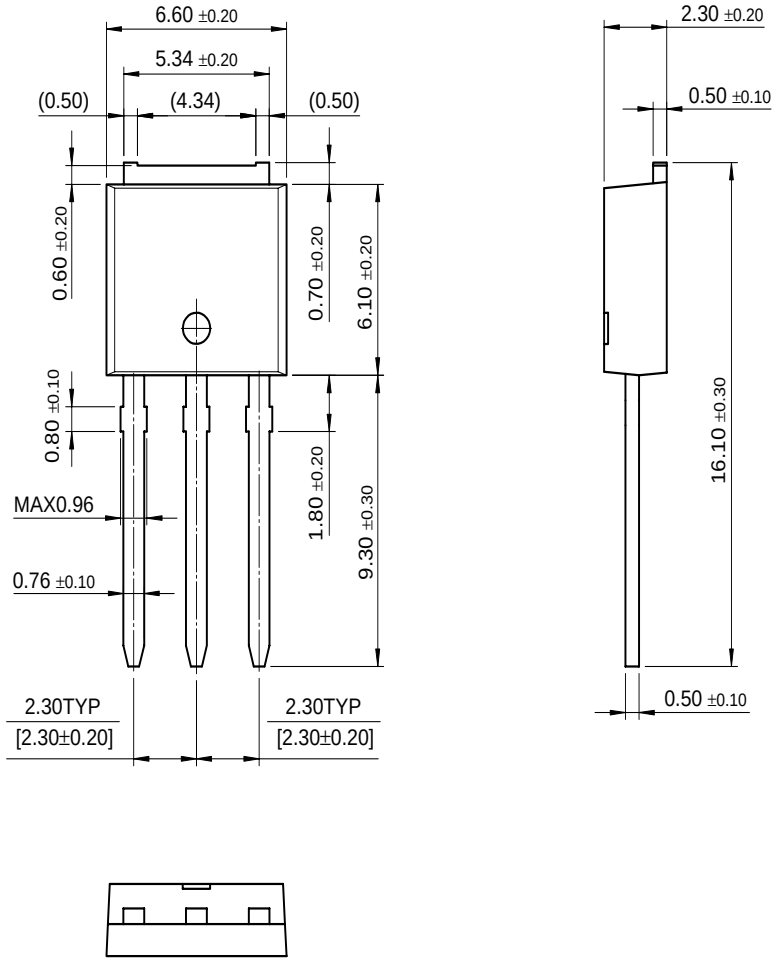


Dimensions in Millimeters

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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™
EcoSPARK™	GTO™	MSX™	QT Optoelectronics™	TinyLogic™
E^2CMOS™	HiSeC™	MSXPro™	Quiet Series™	TruTranslation™
EnSigna™	I^2C™	OCX™	RapidConfigure™	UHC™
Across the board. Around the world.™		OCXPro™	RapidConnect™	UltraFET®
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Programmable Active Droop™		OPTOPLANAR™	SMART START™	

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2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

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No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
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