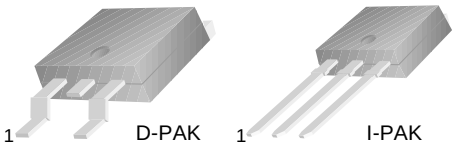
FAIRCHILD
SEMICONDUCTOR®

KSH42C

General Purpose Amplifier
Low Speed Switching Applications

- Lead Formed for Surface Mount Application (No Suffix)
- Straight Lead (I-PAK, "- I" Suffix)
- Electrically Similar to Popular TIP42C



1.Base 2.Collector 3.Emitter

PNP 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	μA
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%

Typical Characteristics

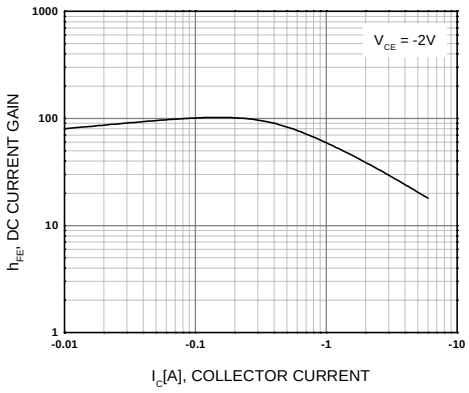


Figure 1. DC current Gain

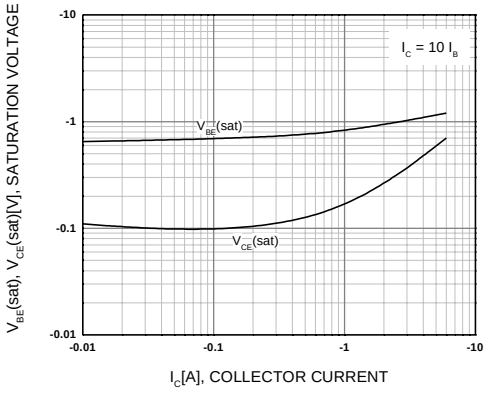


Figure 2. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

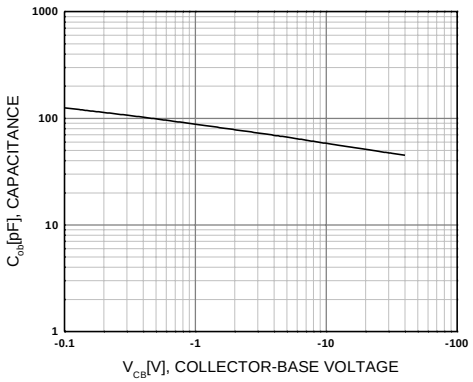


Figure 3. Collector Capacitance

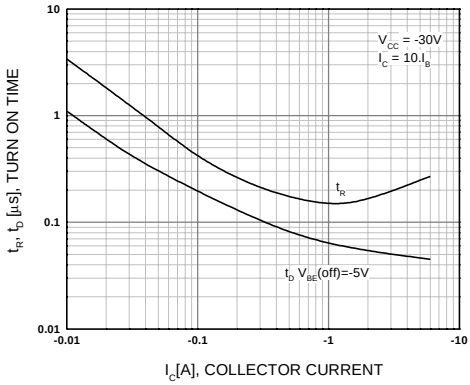


Figure 4. Turn On Time

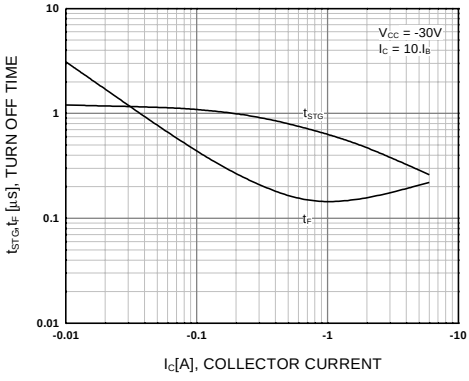


Figure 5. Turn Off Time

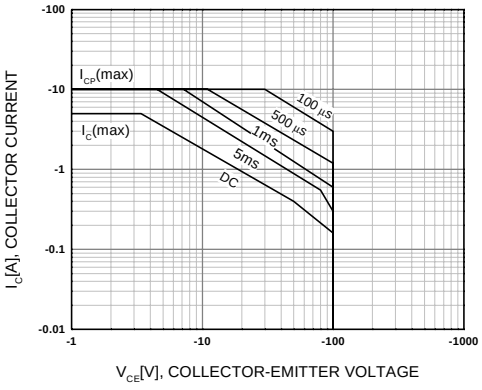


Figure 6. Safe Operating Area

Typical Characteristics (Continued)

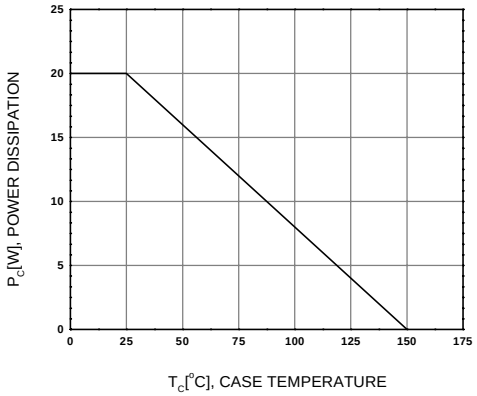
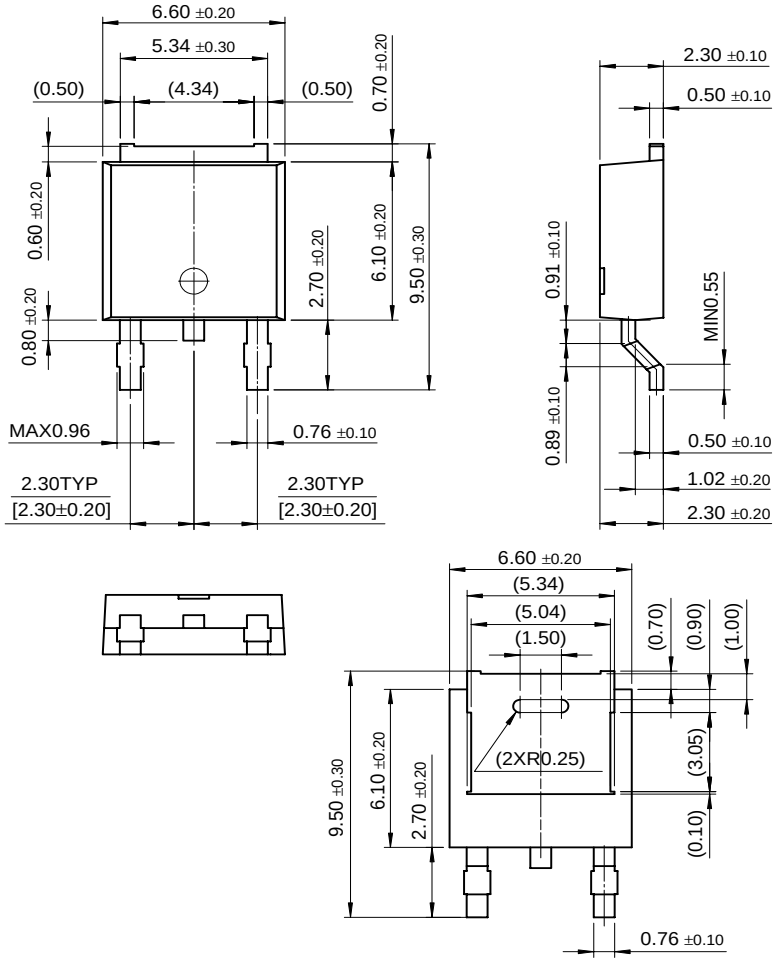


Figure 7. Power Derating

Package Dimensions

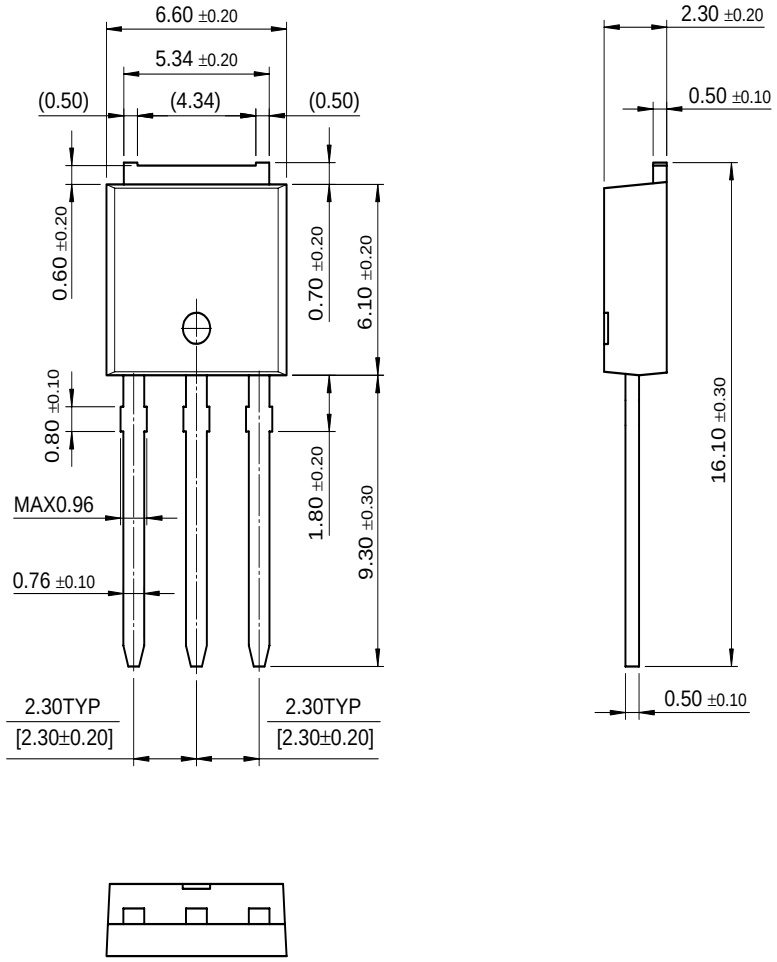
D-PAK



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™
EcoSPARK™	GTO™	MSX™	QT Optoelectronics™	TinyLogic™
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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