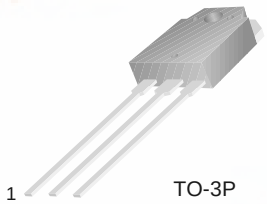
FAIRCHILD SEMICONDUCTOR®

KSC5047

Feature

- High Current Gain
- Low Collector Emitter Saturation Voltage



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TO-3P

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	50	V
V_{EBO}	Emitter-Base Voltage	15	V
I_C	Collector Current	15	A
I_B	Base Current	4	A
P_C	Collector Dissipation (T_C=25°C)	100	W
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	- 55 ~ 150	°C

Electrical Characteristics T_C=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
BV_{CEO}	Collector-Emitter Breakdown Voltage	I_C = 50mA, I_B = 0	50			V
I_{CBO}	Collector Cut-off Current	V_{CB} = 100V, I_E = 0			100	μA
I_{EBO}	Emitter-Base Breakdown Voltage	V_{EB} = 15V, I_C= 0			100	μA
h_{FE}	DC Current Gain	V_{CE} = 5V, I_C = 5A	40			
V_{CE}(sat)	Collector-Emitter Saturation Voltage	I_C = 5A, I_B = 0.12A			0.5	V
V_{BE}(sat)	Base-Emitter Saturation Voltage	I_C = 5A, I_B = 0.12A			1.2	V
t_{ON}	Turn On Time	V_{CC} = 20V, I_C = 5A		0.5		μs
t_{STG}	Storage Time	I_{B1} = - I_{B2} = 0.12A		2.5		μs
t_F	Fall Time	R_L = 4Ω		0.5		μs

Typical Characteristics

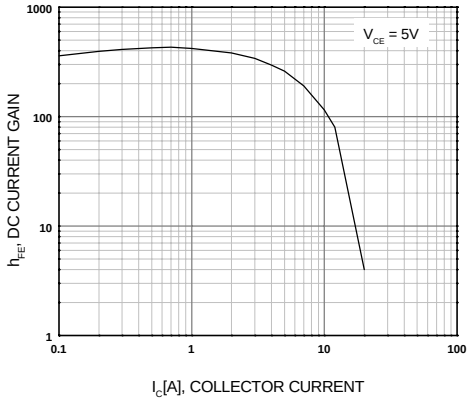


Figure 1. DC current Gain

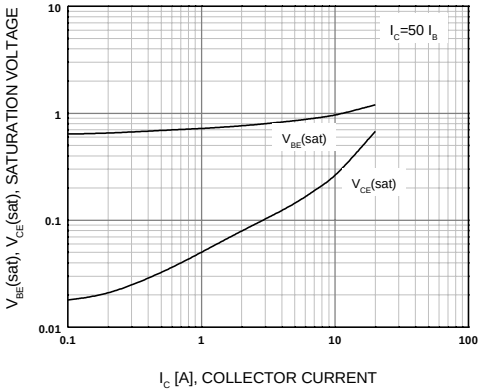


Figure 2. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

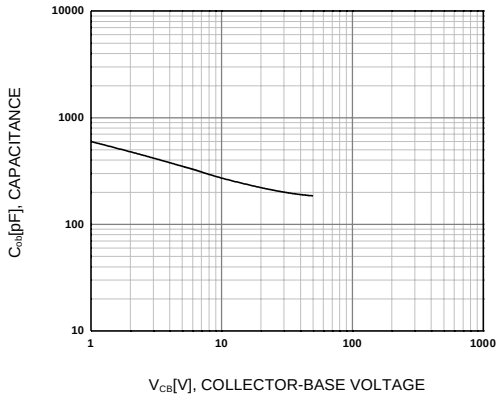


Figure 3. Collector Output Capacitance

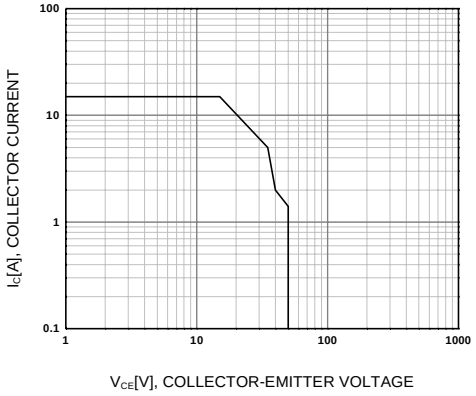


Figure 4. Safe Operating Area

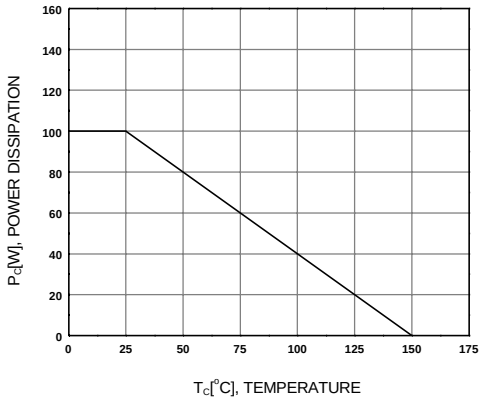
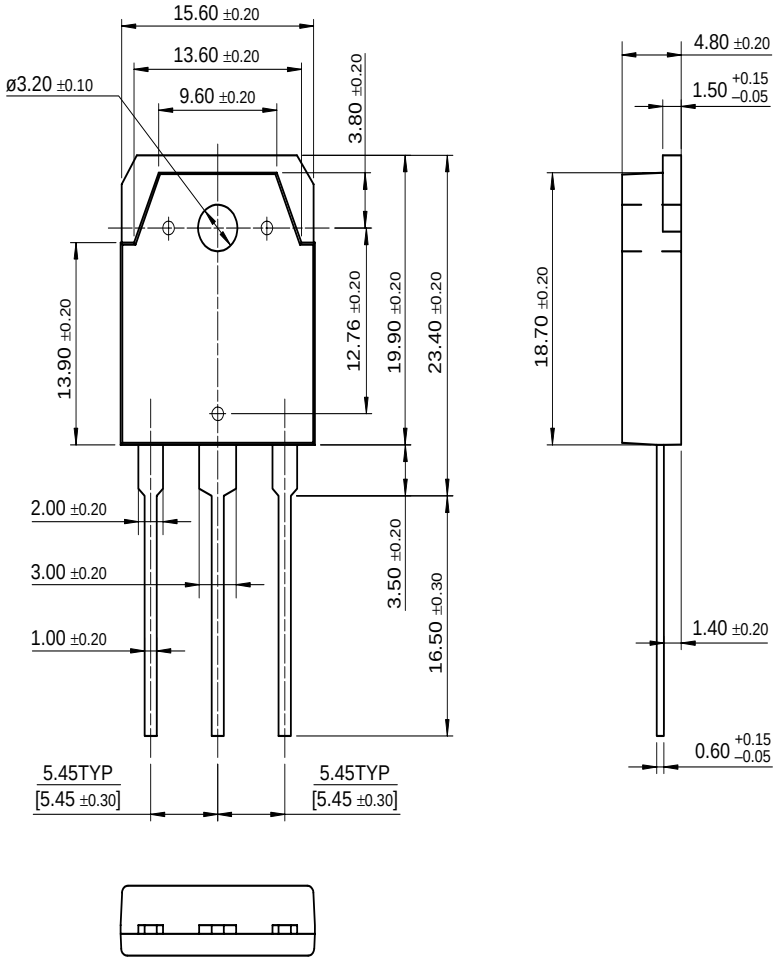


Figure 5. Power Derating

Package Dimensions

TO-3P



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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