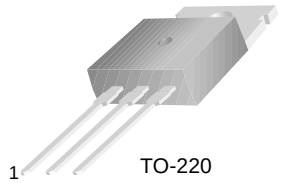
FAIRCHILD
SEMICONDUCTOR®

KSC1983

High Gain Power Transistor



TO-220

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	80	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current	3	A
I_B	Base Current	1	A
P_C	Collector Dissipation (T_C=25°C)	30	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
I_{CBO}	Collector Cut-off Current	V_{CB} = 80V, I_E = 0			100	μA
I_{EBO}	Emitter Cut-off Current	V_{EB} = 6V, I_C = 0			100	μA
BV_{CEO}	Collector-Emitter Breakdown Voltage	I_C = 25mA, I_B = 0	60			V
h_{FE}	* DC Current Gain	V_{CE} = 4V, I_C = 0.5A	500			
V_{CE}(sat)	* Collector-Emitter Saturation Voltage	I_C = 2A, I_B = 0.05A			1	V
f_T	Current Gain Bandwidth Product	V_{CE} = 12V, I_C = 0.2A		15		MHz

* Pulse Test: PW≤350μs, Duty Cycle≤2% Pulsed

Typical Characteristics

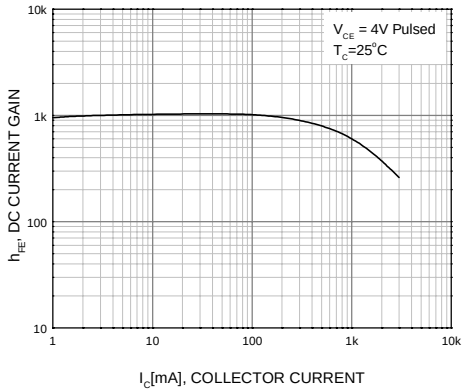


Figure 1. DC current Gain

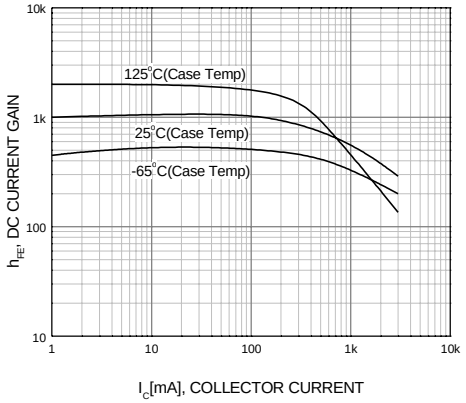


Figure 2. DC current Gain Temperature Characteristic

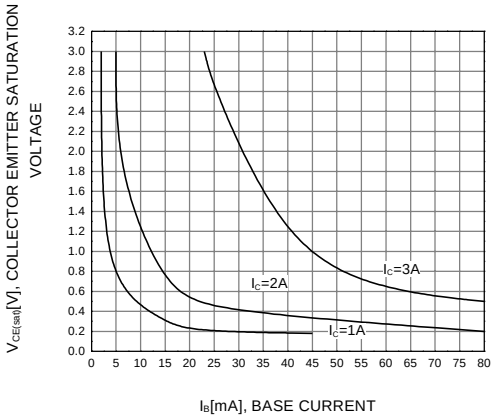


Figure 3. Collector-Emitter Saturation Characteristic

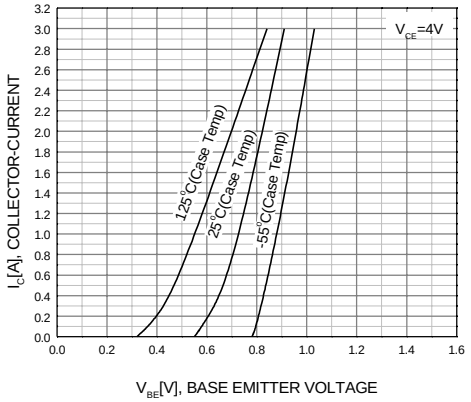


Figure 4. Base-Emitter On Voltage

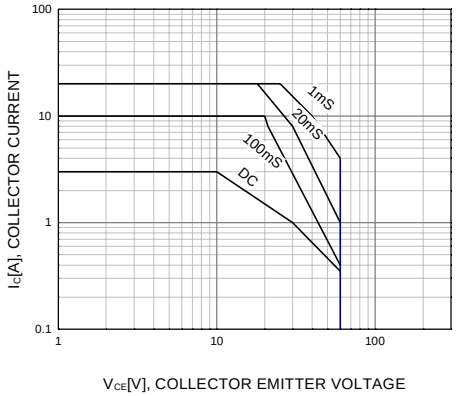


Figure 5. Safe Operating Area

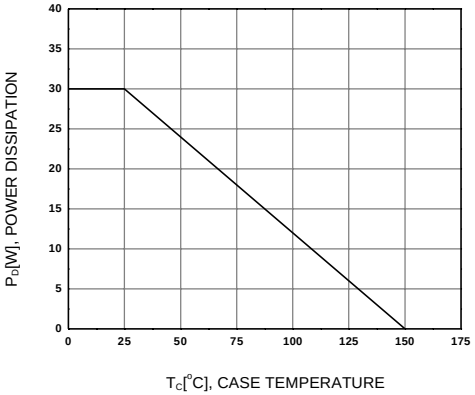
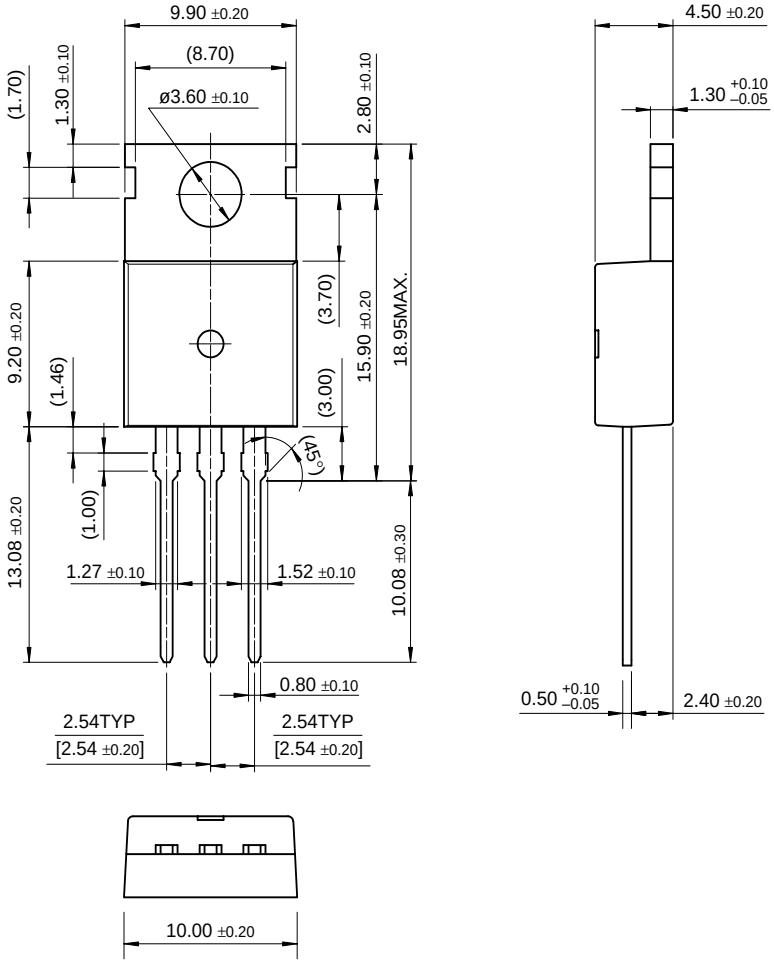


Figure 6. Power Derating

Package Demensions

TO-220



Dimensions in Millimeters

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