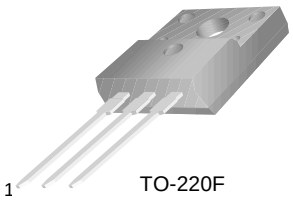
FAIRCHILD SEMICONDUCTOR™

KSD1944

High Gain Power Transistor



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TO-220F

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	8	V
I_C	Collector Current	3	A
P_C	Collector Current (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.	Max.	Units
BV_{CEO}	Collector-Emitter Breakdown Voltage	I_C = 25mA, I_B = 0	60		V
I_{CBO}	Collector Cut-off Current	V_{CB} = 80V, I_E = 0		100	μA
I_{EBO}	Emitter Cut-off Current	V_{EB} = 8V, I_C = 0		10	μA
h_{FE}	DC Current Gain	V_{CE} = 4V, I_C = 0.5A	400	2000	
V_{BE}(sat)	Base-Emitter Saturation Voltage	I_C = 2A, I_B = 0.05A		1.5	V
V_{CE}(sat)	Collector-Emitter Saturation Voltage	I_C = 2A, I_B = 0.05A		1	V

Typical Characteristics

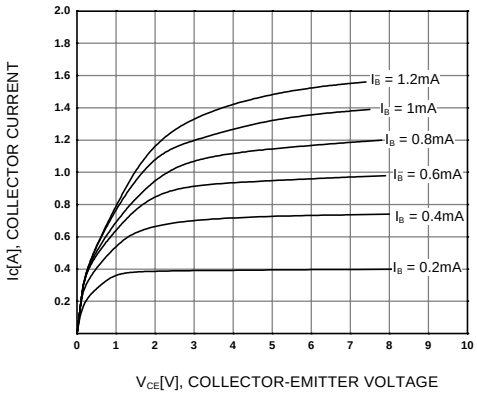


Figure 1. Static Characteristic

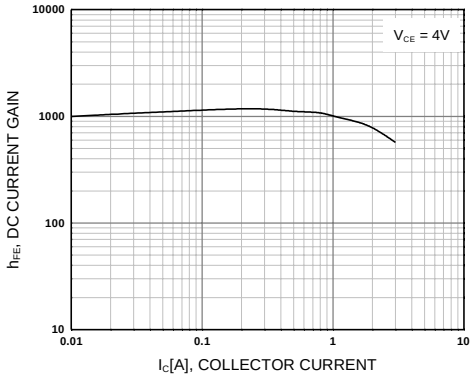


Figure 2. DC current Gain

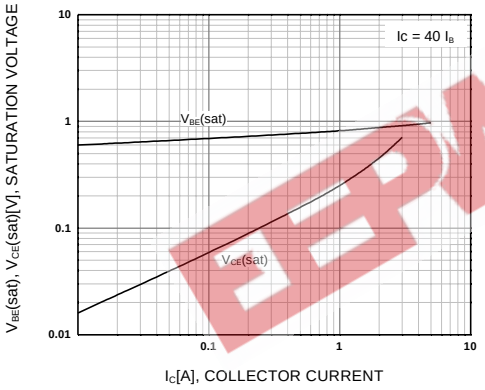


Figure 3. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

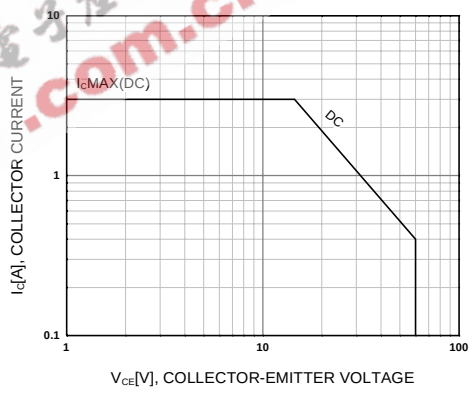


Figure 4. Safe Operating Area

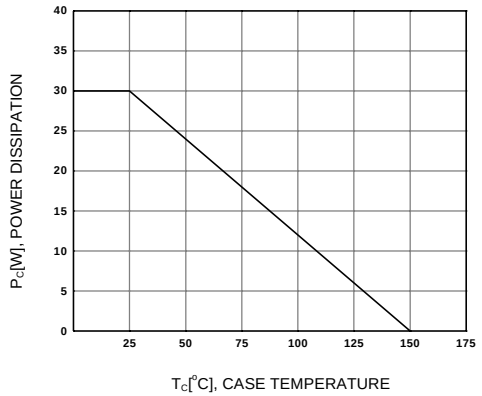
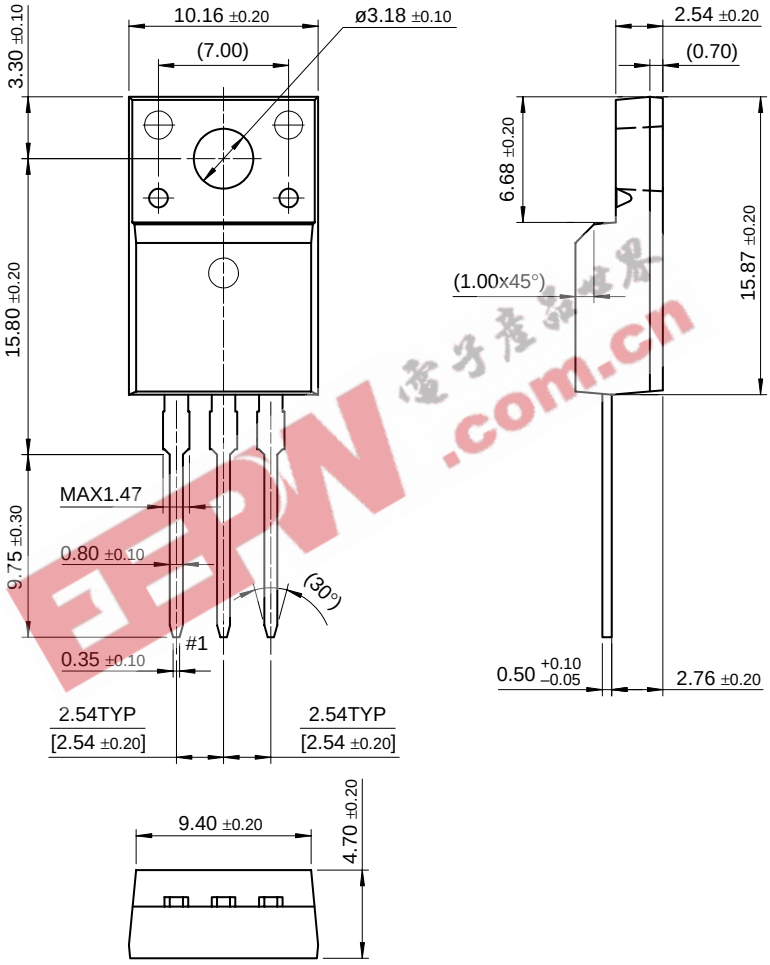


Figure 5. Power Derating

Package Demensions

TO-220F



Dimensions in Millimeters

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