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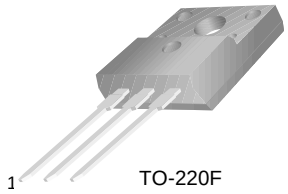
KSD1408

Power Amplifier Applications

- Complement to KSB1017



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	80	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current	4	A
I_B	Base Current	0.4	A
P_C	Collector Dissipation (T_C=25°C)	25	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	80			V
I_{CBO}	Collector Cut-off Current	V_{CB} = 80V, I_E = 0			30	µA
I_{EBO}	Emitter Cut-off Current	V_{EB} = 5V, I_C = 0			100	µA
h_{FE1} h_{FE2}	DC Current Gain	V_{CE} = 5V, I_C = 0.5A V_{CE} = 5V, I_C = 3A	40 15	 50	240	
V_{CE}(sat)	Collector-Emitter Saturation Voltage	I_C = 3A. I_B = 0.3A		0.45	1.5	V
V_{BE}(on)	Base-Emitter On Voltage	V_{CE} = 5V, I_C = 3A		1	1.5	V
f_T	Current Gain Bandwidth Product	V_{CE} = 5V, I_C = 0.5A		8		MHz
C_{ob}	Output Capacitance	V_{CB} = 10V, f = 1MHz		90		pF

h_{FE1} Classification

Classification	R	O	Y
h_{FE1}	40 ~ 80	70 ~ 140	120 ~ 240

Typical Characteristics

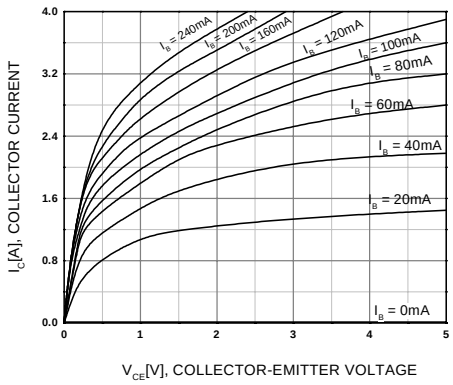


Figure 1. Static Characteristic

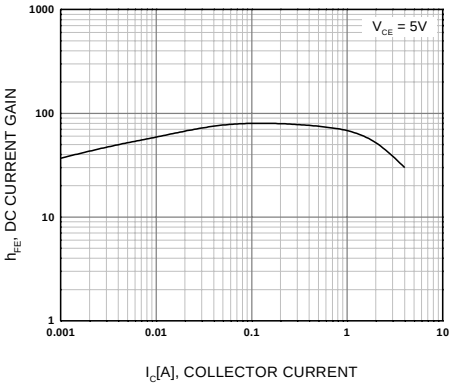


Figure 2. DC current Gain

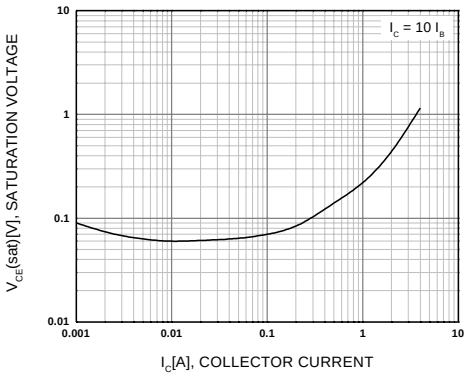


Figure 3. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

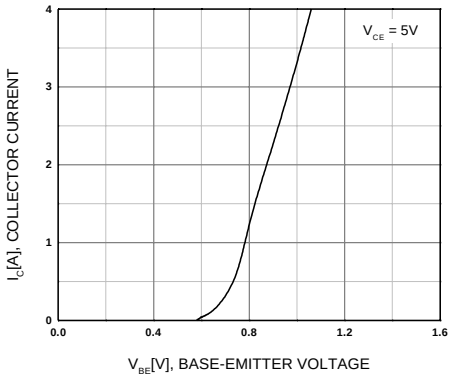


Figure 4. Collector Output Capacitance

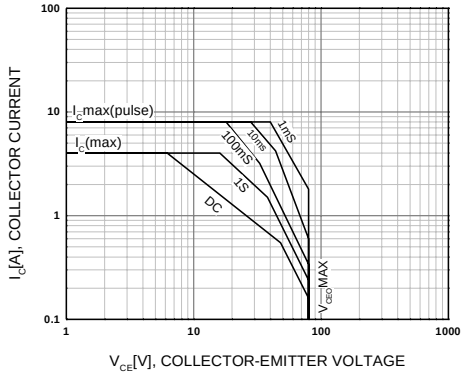


Figure 5. Safe Operating Area

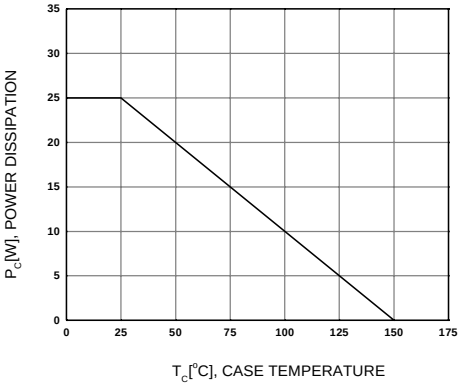
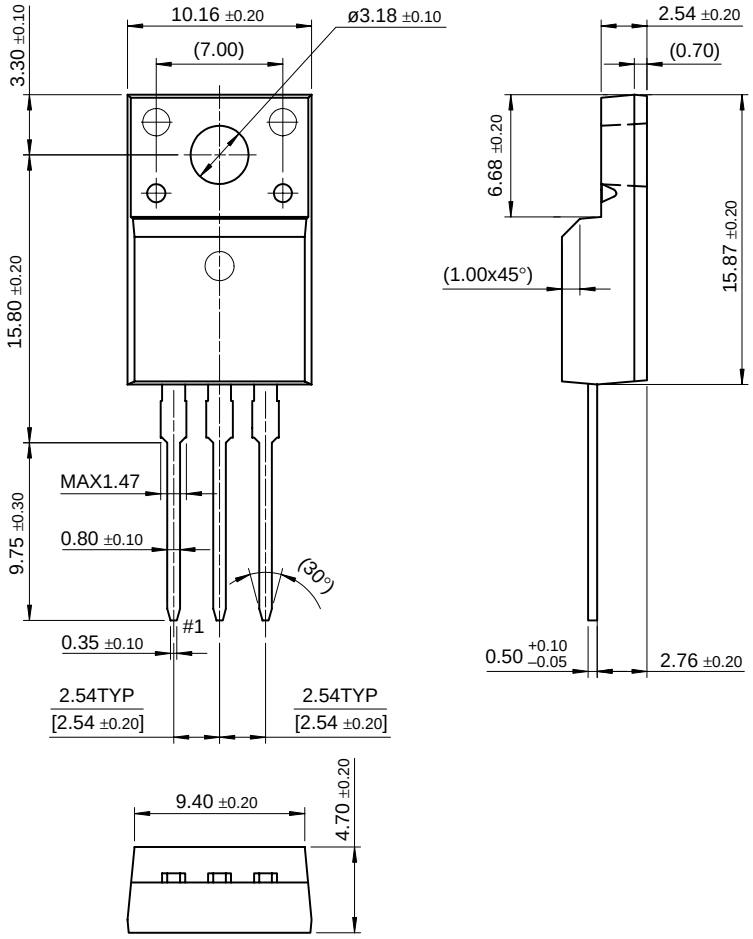


Figure 6. Power Derating

Package Demensions

TO-220F



Dimensions in Millimeters

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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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