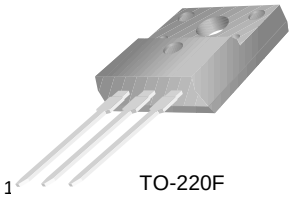
FAIRCHILD SEMICONDUCTOR™

KSD2058

Low Frequency Power Amplifier



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	60	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current	3	A
I_B	Base Current	0.5	A
P_C	Collector Dissipation (T_a=25°C)	1.5	W
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
I_{CBO}	Collector Cut-off Current	V_{CB} = 60V, I_E = 0			10	µA
I_{EBO}	Emitter Cut-off Current	V_{EB} = 7V, I_C = 0			1	mA
V_{CEO}	Collector-Emitter Breakdown Voltage	I_C = 50mA, I_B = 0	60			V
h_{FE}	DC Current Gain	V_{CE} = 5V, I_C = 0.5A	8			
V_{CE}(Sat)	Collector-Emitter Saturation Voltage	I_C = 2A, I_B = 0.2A			1.5	V
V_{BE}(on)	Base-Emitter ON Voltage	V_{CE} = 5V, I_C = 0.5A		3		V
f_T	Current Gain Bandwidth Product	V_{CE} = 5V, I_C = 0.5A			0.4	MHz
C_{ob}	Output Capacitance	V_{CB} = 10V, f = 1MHz		35		pF
t_{ON}	Turn ON Time	V_{CC} = 30V, I_C = 2A I_{B1} = - I_{B2} = 0.2A R_L = 15Ω		0.65		µs
t_{STG}	Storage Time			1.3		µs
t_F	Fall Time			0.65		µs

h_{FE} Classification

Classification	O	Y	G
h_{FE}	60 ~ 120	100 ~ 200	150 ~ 300

Typical Characteristics

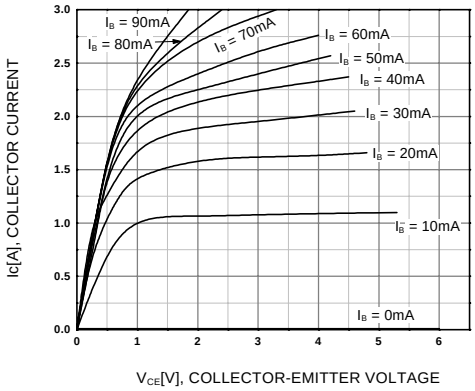


Figure 1. Static Characteristic

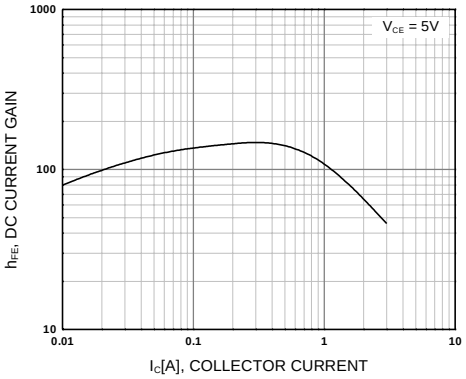


Figure 2. DC current Gain

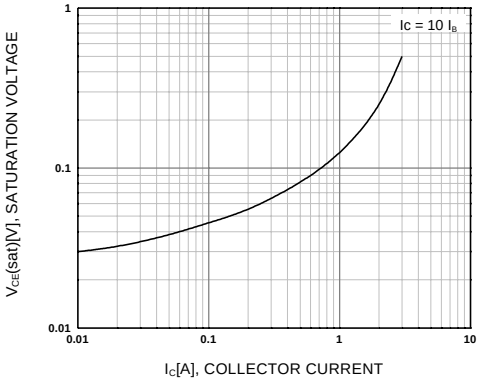


Figure 3. Collector Output Capacitance

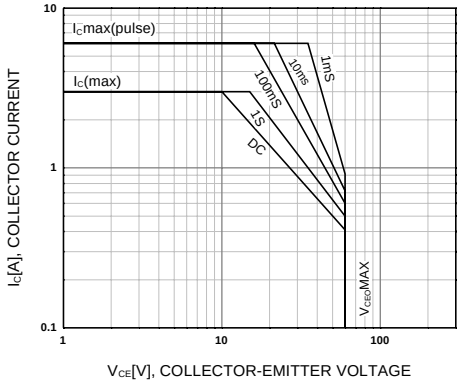


Figure 4. Safe Operating Area

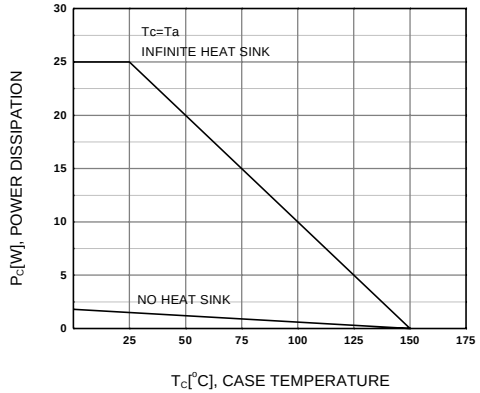
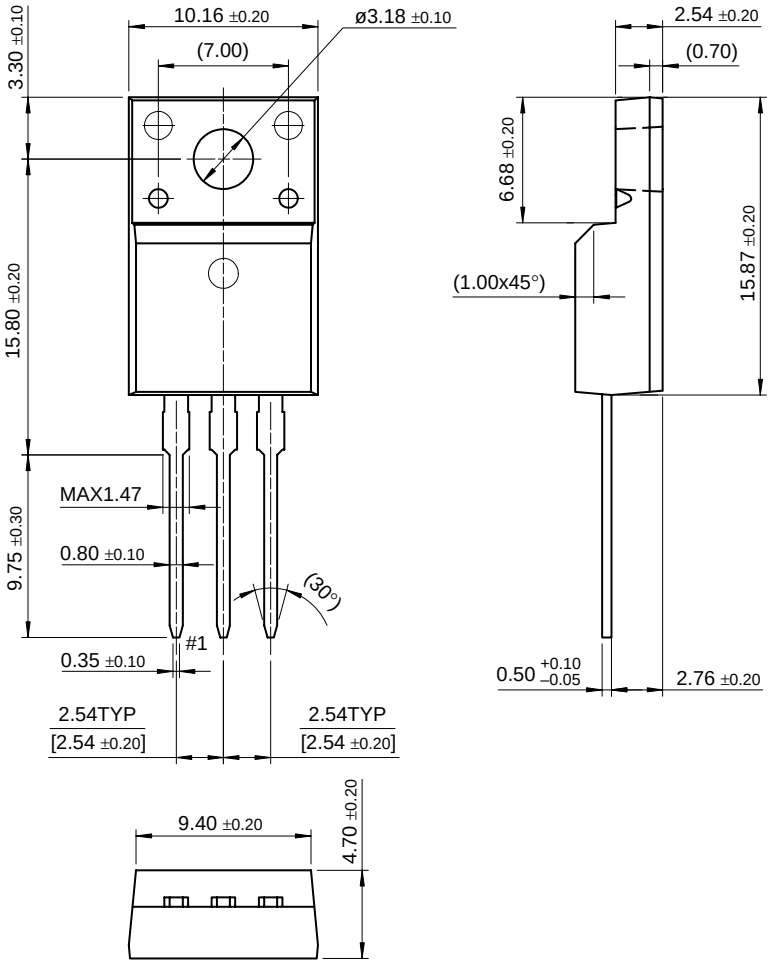


Figure 5. Power Derating

Package Demensions

TO-220F



Dimensions in Millimeters

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