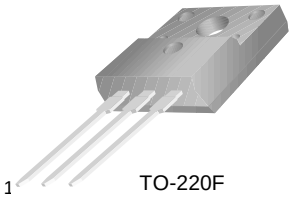
FAIRCHILD SEMICONDUCTOR™

KSB1098

Low Frequency Power Amplifier

- Low Speed Switchng Industrial Use
- Complement to KSD1589



1 TO-220F

1.Base 2.Collector 3.Emitter

PNP Silicon Darlington 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	- 100	V
V_{EBO}	Emitter-Base Voltage	- 7	V
I_C	Collector Current (DC)	- 5	A
I_{CP}	*Collector Current (Pulse)	- 8	A
I_B	Base Current	- 0.5	A
P_C	Collector Dissipation (T_a=25°C)	2	W
P_C	Collector Dissipation (T_C=25°C)	20	W
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	- 55 ~ 150	°C

* PW≤300μs, Duty Cycle≤10%

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} = - 100V, I_E = 0			- 1	μA
I_{EBO}	Emitter Cut-off Current	V_{EB} = - 5V, I_C = 0			- 3	mA
h_{FE1} h_{FE2}	* DC Current Gain	V_{CE} = - 2V, I_C= - 3A V_{CE} = - 2V, I_C = - 5A	2000 500		15K	
V_{CE}(sat)	* Collector-Emitter Saturation Voltage	I_C = - 3A, I_B = - 3mA			- 1.5	V
V_{BE}(sat)	* Base-Emitter Saturation Voltage	I_C = - 3A, I_B = - 3mA			- 2	V
t_{ON}	Turn ON Time	V_{CC} = - 50V, I_C = - 3A I_{B1} = - I_{B2} = - 3mA R_L = 17Ω		0.5		μs
t_{STG}	Storage Time			1		μs
t_F	Fall Time			1		μs

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

h_{FE} Classification

Classification	R	O	Y
h_{FE1}	2000 ~ 5000	3000 ~ 7000	5000 ~ 15000

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Typical Characteristics

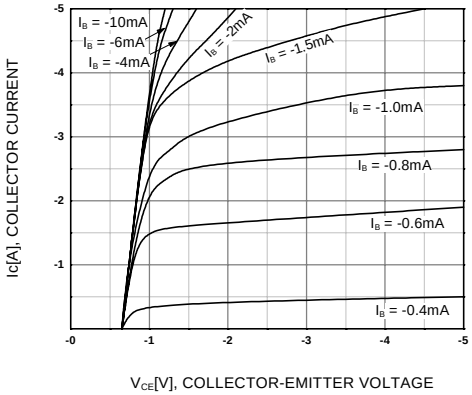

Figure 1. DC current Gain

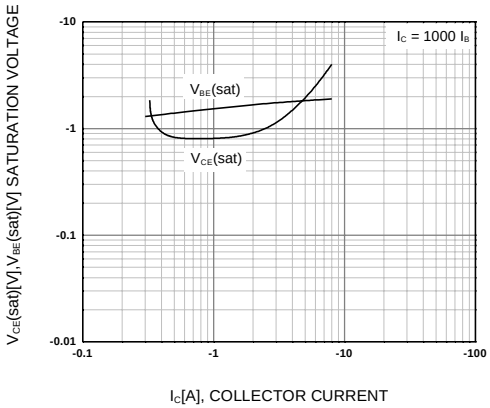

Figure 2. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

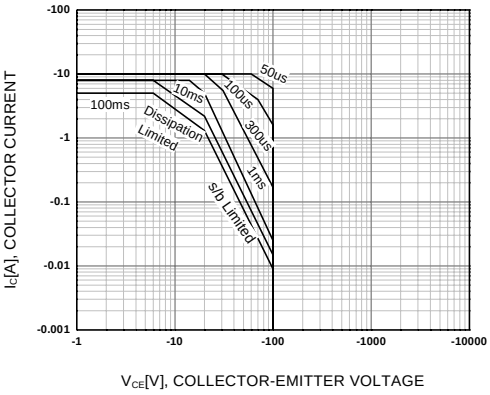

Figure 3. Safe Operating Area

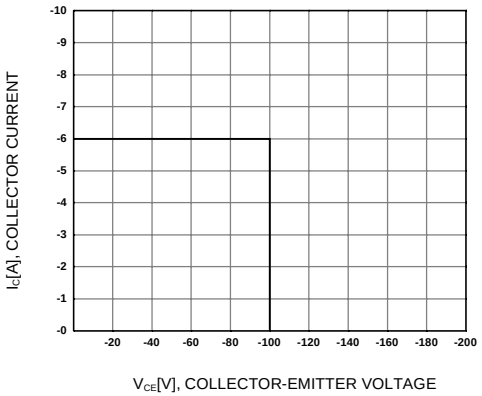

Figure 4. Reverse Bias Safe Operating Area

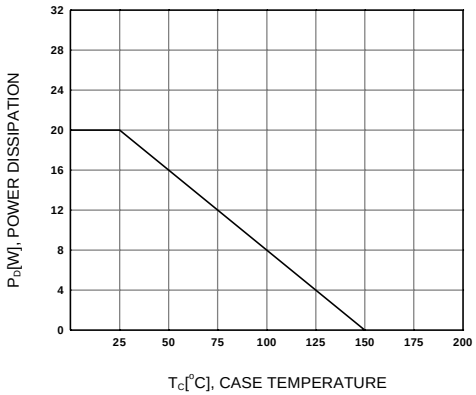

Figure 5. Power Derating

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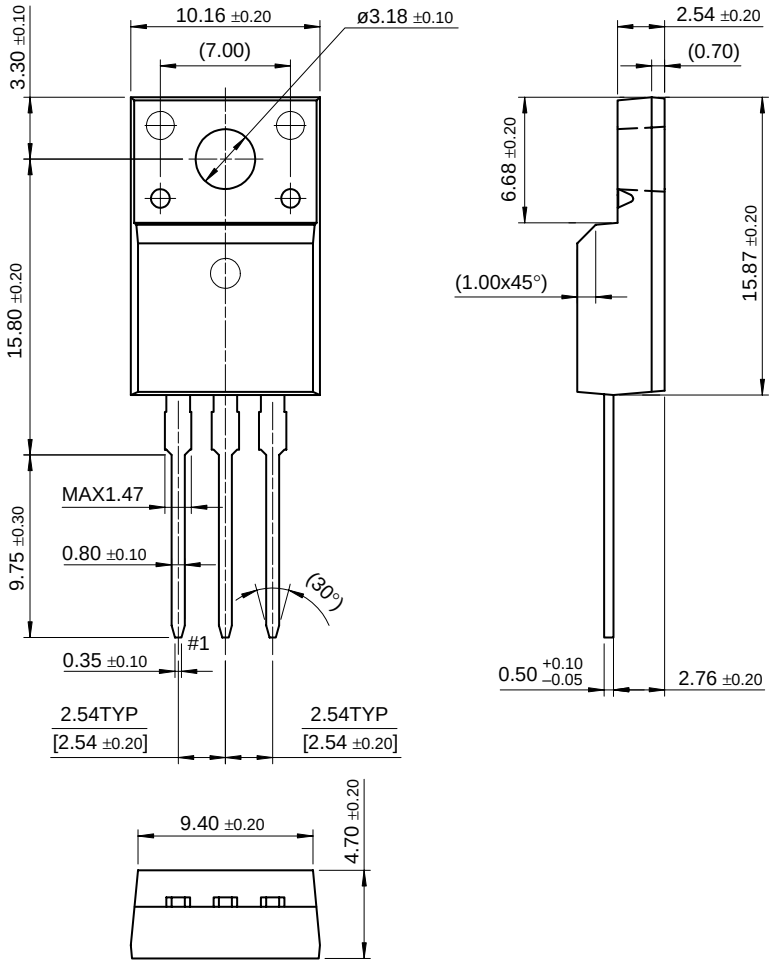
Package Demensions

TO-220F



Dimensions in Millimeters

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