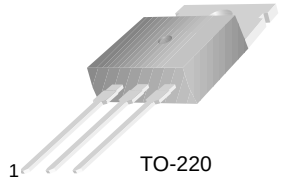
FAIRCHILD
SEMICONDUCTOR TM

KSD568/569

Low Frequency Power Amplifier

- Low Speed Switching Industrial Use
- Complement to KSB707/708



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		100	V
V_{CEO}	Collector-Emitter Voltage	: KSD568	60	V
		: KSD569	80	V
V_{EBO}	Emitter-Base Voltage		7	V
I_C	Collector Current (DC)		7	A
I_{CP}	*Collector Current (Pulse)		15	A
I_B	Base Current		3.5	A
P_C	Collector Dissipation (T_C=25°C)		40	W
P_C	Collector Dissipation (T_a=25°C)		1.5	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.	Max.	Units
I_{CBO}	Collector Cut-off Current	V_{CB} = 80V, I_E = 0		10	μA
I_{EBO}	Emitter Cut-off Current	V_{EB} = 5V, I_C = 0		10	μA
h_{FE1}	*DC Current Gain	V_{CE} = 1V, I_C = 3A	40	200	
h_{FE2}		V_{CE} = 1V, I_C = 5A	20		
V_{CE}(sat)	*Collector-Emitter Saturation Voltage	I_C = 5A, I_B = 0.5A		0.5	V
V_{BE}(sat)	*Base-Emitter Saturation Voltage	I_C = 5A, I_B = 0.5A		1.5	V

* Pulse Test: PW≤350μs, Duty Cycle≤2%

h_{FE} Classification

Classification	R	O	Y
h_{FE1}	40 ~ 80	60 ~ 120	100 ~ 200

Typical Characteristics

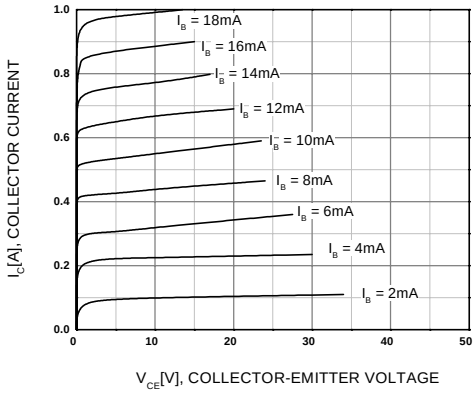


Figure 1. Static Characteristic

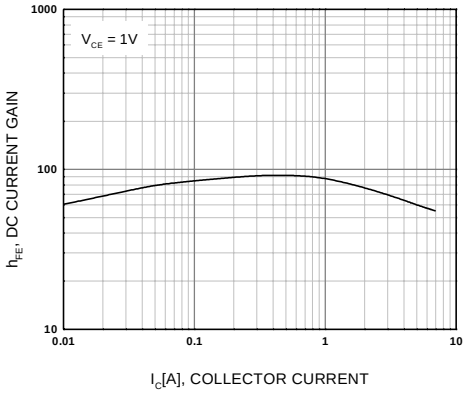


Figure 2. DC current Gain

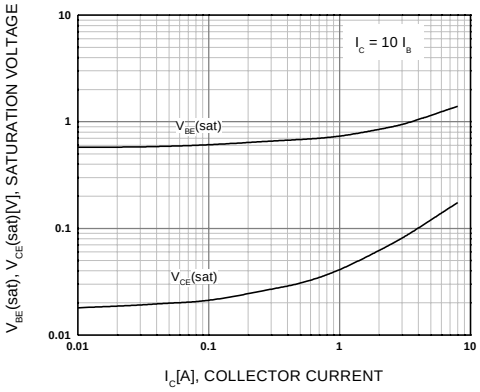


Figure 3. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

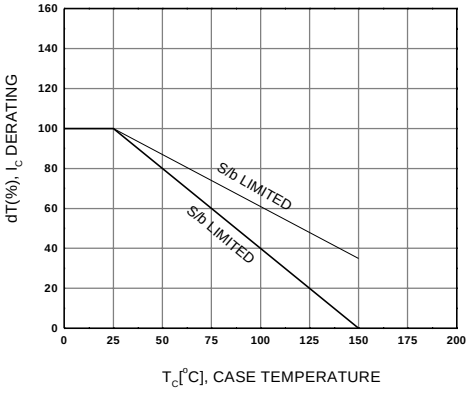


Figure 4. Derating Curve Of Safe Operating Areas

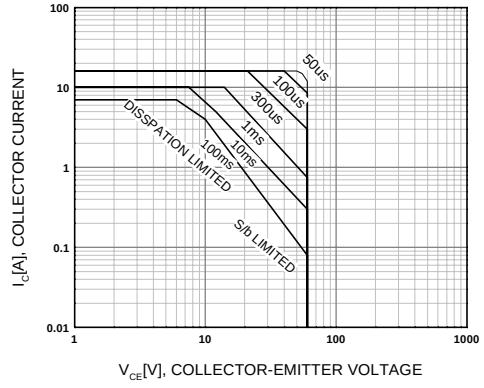


Figure 5. Forward Bias Safe Operating Area

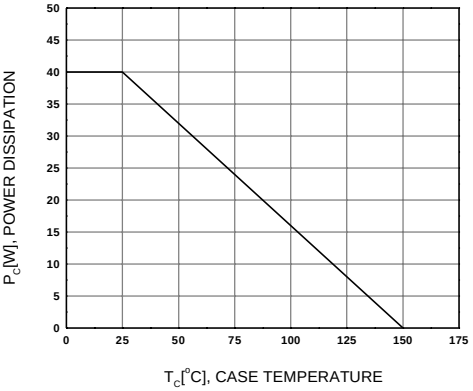
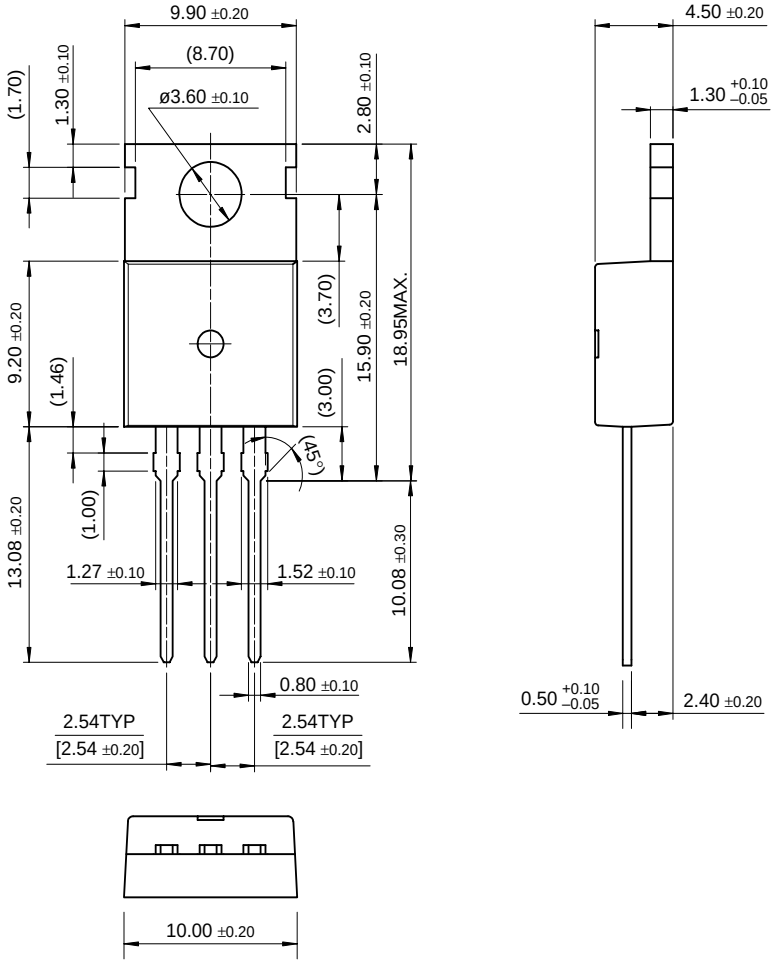


Figure 6. Power Derating

Package Demensions

TO-220



Dimensions in Millimeters

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