

KSB707/708

Low Frequency Power Amplifier

- Low Speed Switching
- Industrial Use
- Complement to KSD568/569



TO-220
1.Base 2.Collector 3.Emitter

PNP Epitaxial Silicon Transistor

Absolute Maximum Ratings $T_C=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	- 80	V
V_{CEO}	Collector-Emitter Voltage	: B707 : B708	V
V_{EBO}	Emitter-Base Voltage	- 7.0	V
I_C	Collector Current (DC)	- 7.0	A
I_{CP}	*Collector Current (Pulse)	- 15	A
I_B	Base Current (DC)	- 3.5	A
P_C	Collector Dissipation ($T_C=25^\circ\text{C}$)	40	W
P_C	Collector Dissipation ($T_a=25^\circ\text{C}$)	1.5	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{STG}	Storage Temperature	- 55 ~ 150	$^\circ\text{C}$

* $PW \leq 300\mu\text{s}$, Duty Cycle $\leq 10\%$

Electrical Characteristics $T_C=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Condition	Typ.	Max.	Units
I_{CBO}	Collector Cut-off Current	$V_{CB} = - 60\text{V}$, $I_E = 0$		- 10	μA
I_{EBO}	Emitter Cut-off Current	$V_{EB} = - 5\text{V}$, $I_C = 0$		- 10	μA
h_{FE1} h_{FE2}	* DC Current Gain	$V_{CE} = - 1\text{V}$, $I_C = - 3\text{A}$ $V_{CE} = - 1\text{V}$, $I_C = - 5\text{A}$	40 20	200	
$V_{CE(sat)}$	* Collector-Emitter Saturation Voltage	$I_C = - 5\text{A}$, $I_B = - 0.5\text{A}$		- 0.5	V
$V_{BE(sat)}$	* Base-Emitter Saturation Voltage	$I_C = - 5\text{A}$, $I_B = - 0.5\text{A}$		- 1.5	V

* Pulse Test: $PW \leq 350\mu\text{s}$, Duty Cycle $\leq 2\%$

h_{FE} Classification

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

Typical Characteristics

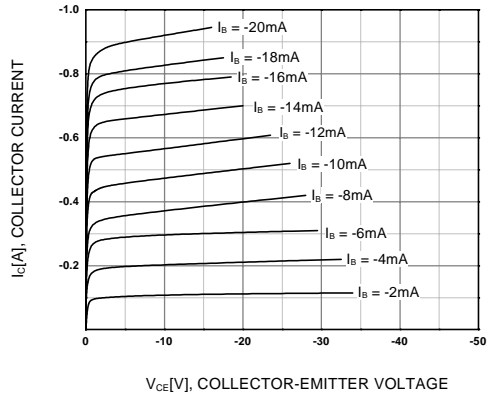


Figure 1. Static Characteristic

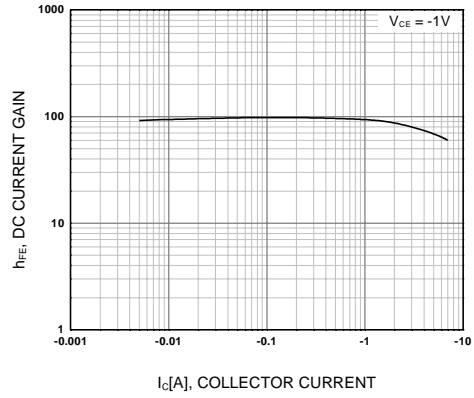


Figure 2. DC current Gain

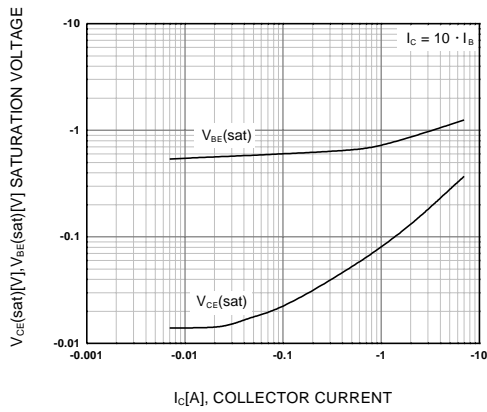


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

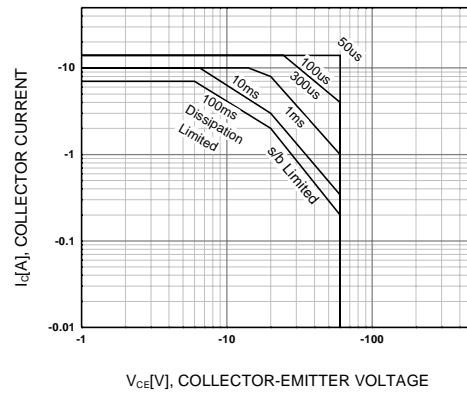


Figure 4. Forward Bias Safe Operating Area

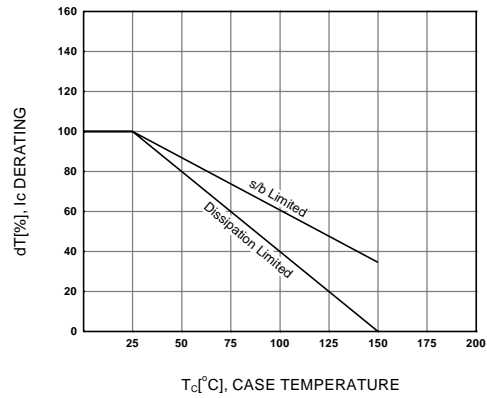


Figure 5. Derating Curve of Safe Operating Areas

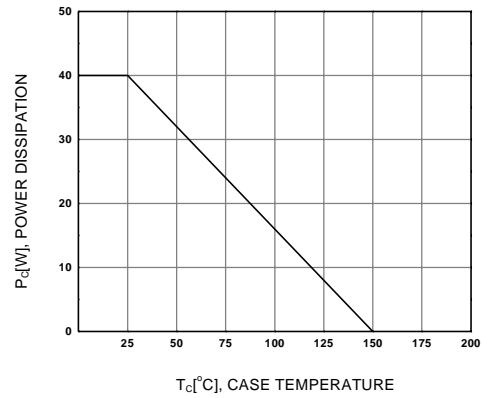
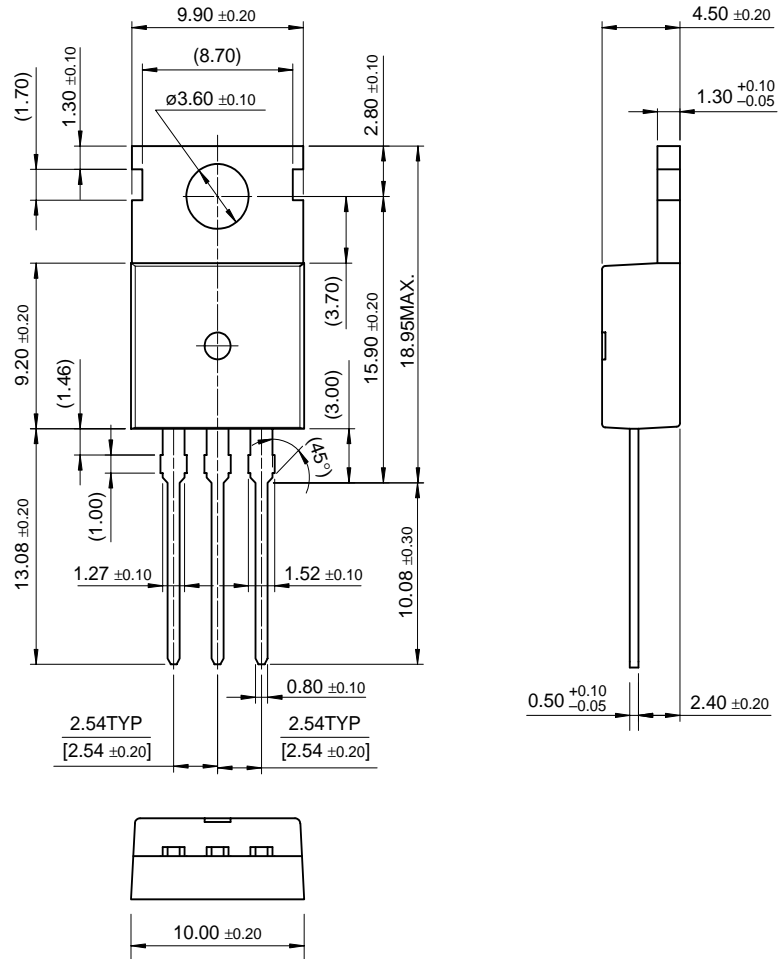


Figure 6. Power Derating

Package Dimensions

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TO-220



Dimensions in Millimeters

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