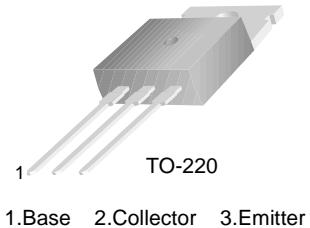


## KSB707/708

### Low Frequency Power Amplifier

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



### 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	- 60	V
$V_{EBO}$	Collector-Emitter Voltage : B708	- 80	V
		- 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≤300μs, Duty Cycle≤10%

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

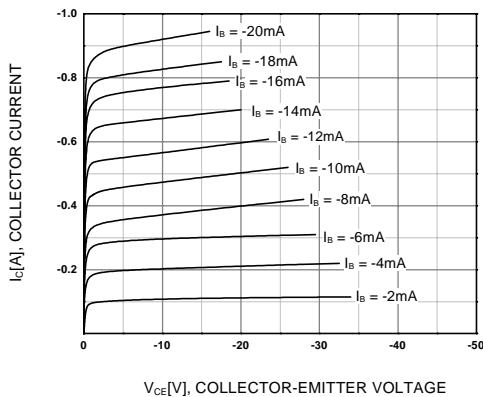
Symbol	Parameter	Test Condition	Typ.	Max.	Units
$I_{CBO}$	Collector Cut-off Current	$V_{CB} = - 60\text{V}$ , $I_E = 0$		- 10	$\mu\text{A}$
$I_{EBO}$	Emitter Cut-off Current	$V_{EB} = - 5\text{V}$ , $I_C = 0$		- 10	$\mu\text{A}$
$h_{FE1}$	* DC Current Gain	$V_{CE} = - 1\text{V}$ , $I_C = - 3\text{A}$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

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

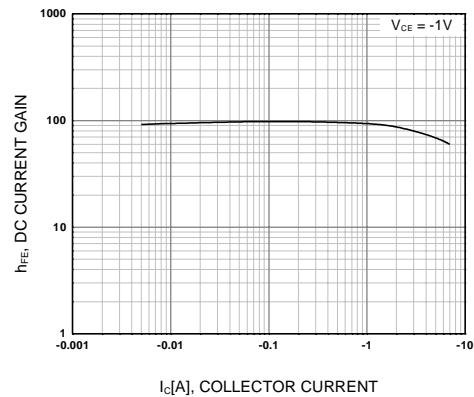
### $h_{FE}$ Classification

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

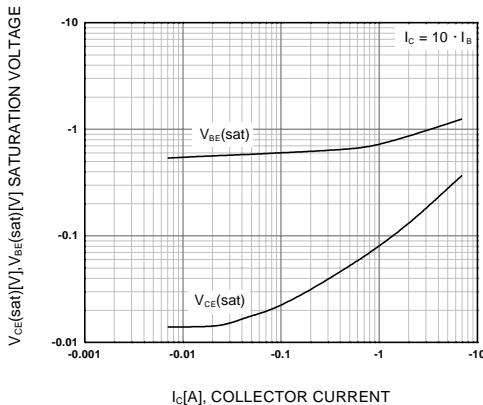
## Typical Characteristics



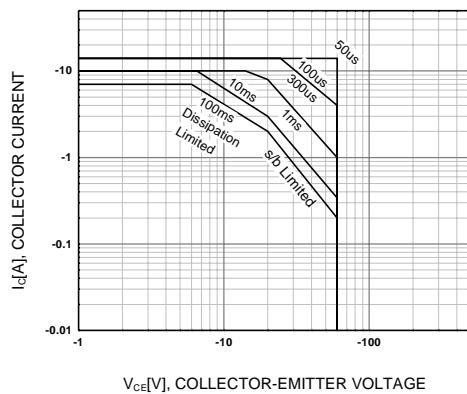
**Figure 1. Static Characteristic**



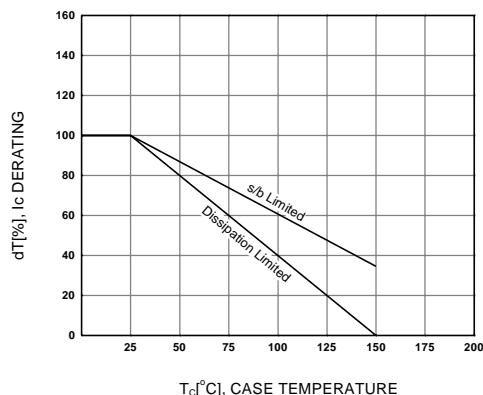
**Figure 2. DC current Gain**



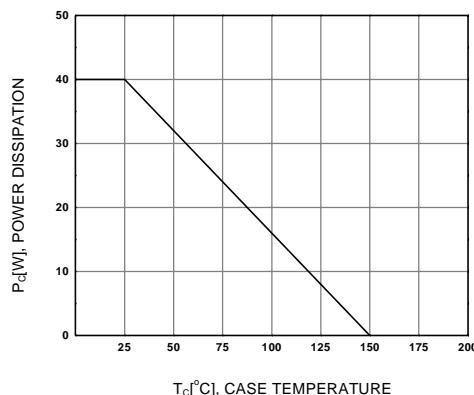
**Figure 3. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage**



**Figure 4. Forward Bias Safe Operating Area**



**Figure 5. Derating Curve of Safe Operating Areas**



**Figure 6. Power Derating**