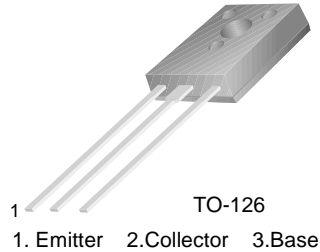


KSB772

KSB772

Audio Frequency Power Amplifier

- Low Speed Switching
- Complement to KSD882



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	- 40	V
V_{CEO}	Collector-Emitter Voltage	- 30	V
V_{EBO}	Emitter-Base Voltage	- 5	V
I_C	Collector Current (DC)	- 3	A
I_{CP}	*Collector Current (Pulse)	- 7	A
I_B	Base Current (DC)	- 0.6	A
P_C	Collector Dissipation ($T_C=25^\circ\text{C}$)	10	W
	Collector Dissipation ($T_a=25^\circ\text{C}$)	1	W
$R_{\theta ja}$	Junction to Ambient	132	$^\circ\text{C}/\text{W}$
$R_{\theta jc}$	Junction to Case	13.5	$^\circ\text{C}/\text{W}$
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{STG}	Storage Temperature	- 55 ~ 150	$^\circ\text{C}$

* $PW \leq 10\text{ms}$, Duty Cycle $\leq 50\%$

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

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
I_{CBO}	Collector Cut-off Current	$V_{CB} = -30\text{V}, I_E = 0$			- 1	μA
I_{EBO}	Emitter Cut-off Current	$V_{EB} = -3\text{V}, I_C = 0$			- 1	μA
h_{FE1}	* DC Current Gain	$V_{CE} = -2\text{V}, I_C = -20\text{mA}$	30	220		
h_{FE2}		$V_{CE} = -2\text{V}, I_C = -1\text{A}$	60	160	400	
$V_{CE(sat)}$	* Collector-Emitter Saturation Voltage	$I_C = -2\text{A}, I_B = -0.2\text{A}$		- 0.3	- 0.5	V
$V_{BE(sat)}$	* Base-Emitter Saturation Voltage	$I_C = -2\text{A}, I_B = -0.2\text{A}$		- 1.0	- 2.0	V
f_T	Current Gain Bandwidth Product	$V_{CE} = -5\text{V}, I_E = -0.1\text{A}$		80		MHz
C_{ob}	Output Capacitance	$V_{CB} = -10\text{V}, I_E = 0$ $f = 1\text{MHz}$		55		pF

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

h_{FE} Classification

Classification	R	O	Y	G
h_{FE2}	60 ~ 120	100 ~ 200	160 ~ 320	200 ~ 400

Typical Characteristics

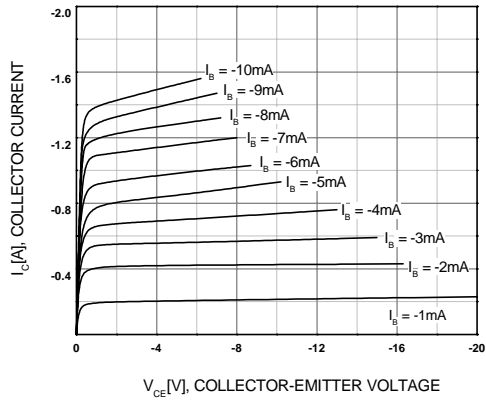


Figure 1. Static Characteristic

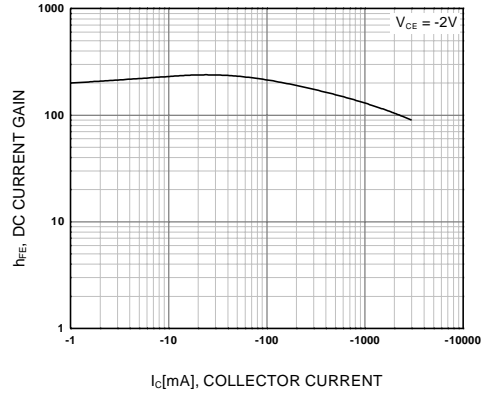


Figure 2. DC current Gain

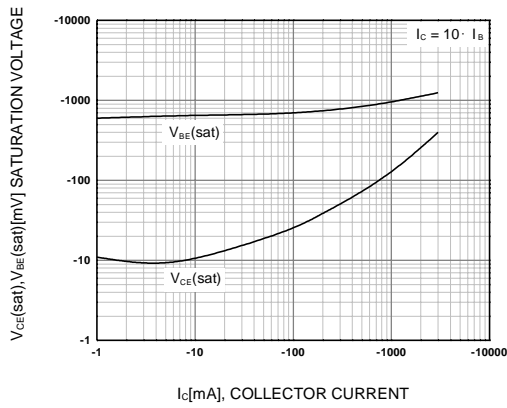


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

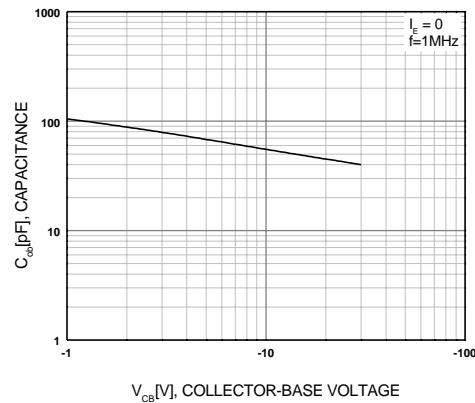


Figure 4. Collector Output Capacitance

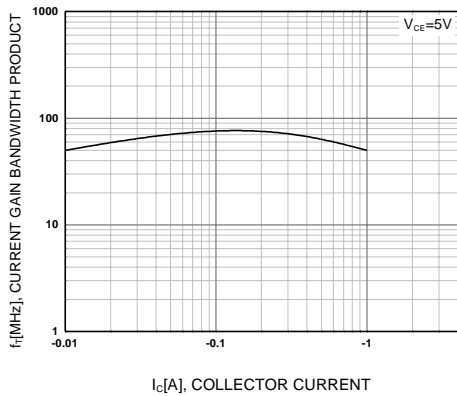


Figure 5. Current Gain Bandwidth Product

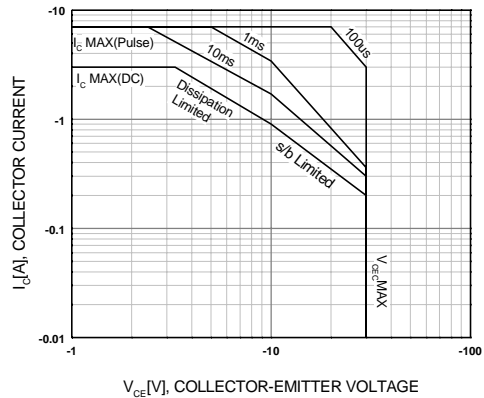


Figure 6. Safe Operating Area

Typical Characteristics (Continued)

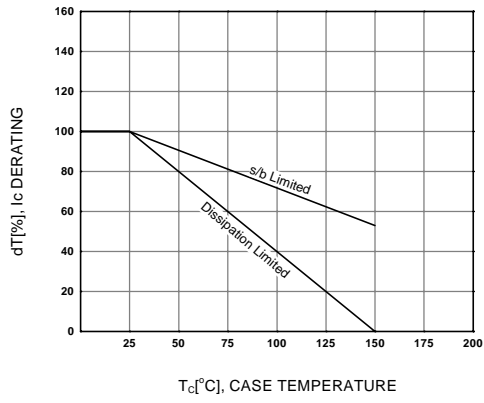


Figure 7. Derating Curve of Safe Operating Areas

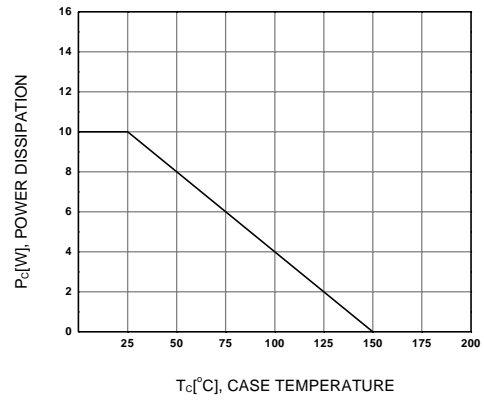


Figure 8. Power Derating

Package Dimensions

KSB772

TO-126



Dimensions in Millimeters

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