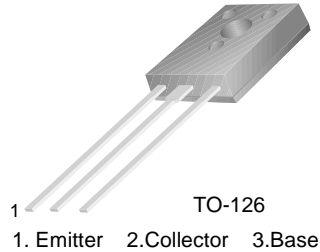


# KSB772

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	$\mu\text{A}$
$I_{EBO}$	Emitter Cut-off Current	$V_{EB} = -3\text{V}, I_C = 0$			- 1	$\mu\text{A}$
$h_{FE1}$	* 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

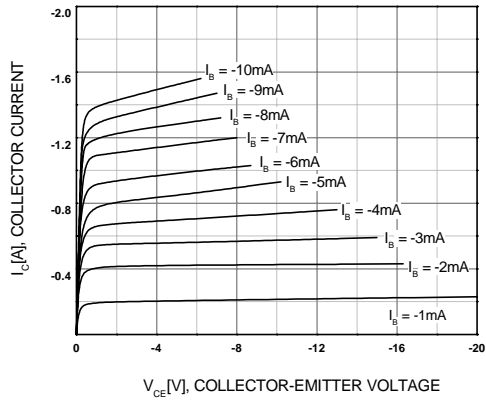


Figure 1. Static Characteristic

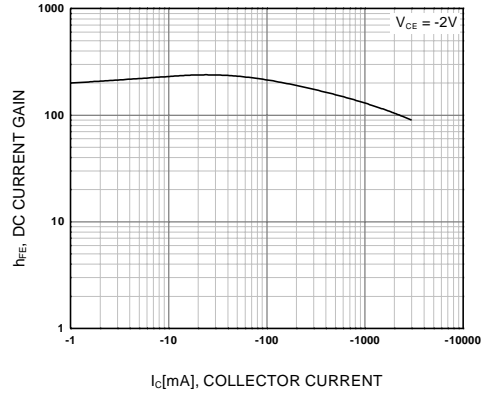


Figure 2. DC current Gain

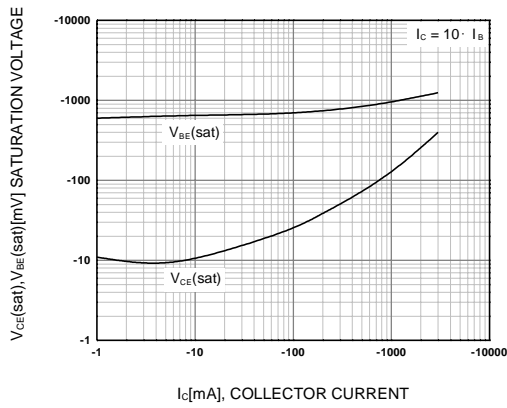


Figure 3. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

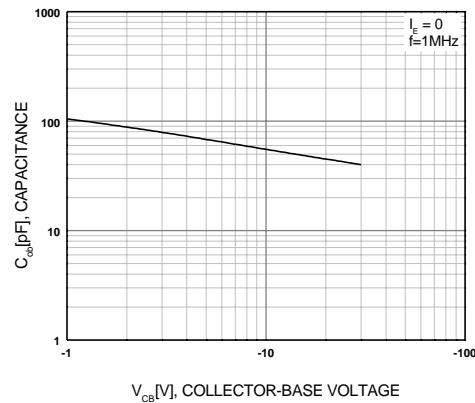


Figure 4. Collector Output Capacitance

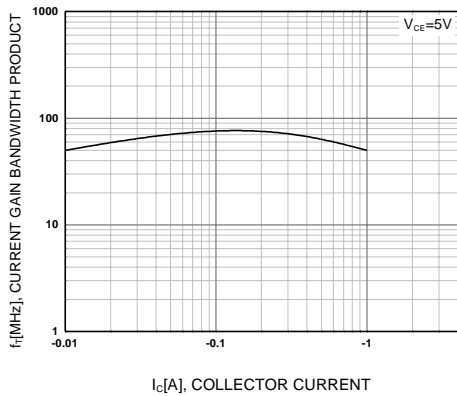


Figure 5. Current Gain Bandwidth Product

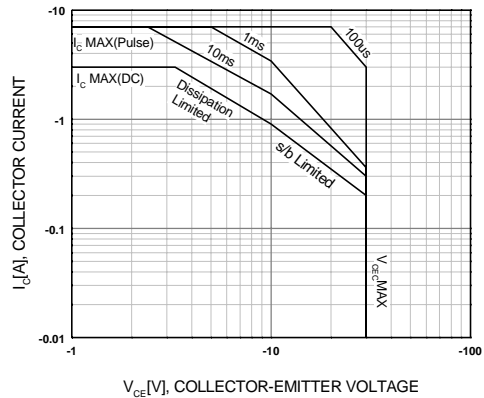


Figure 6. Safe Operating Area

# Typical Characteristics (Continued)

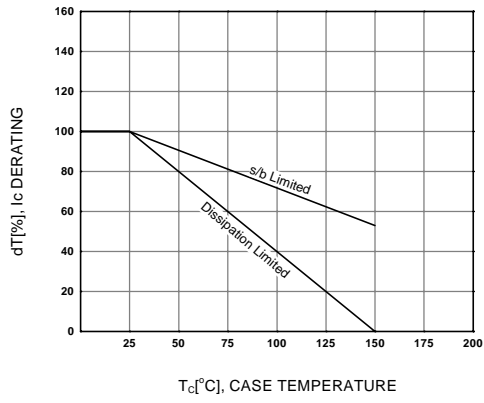


Figure 7. Derating Curve of Safe Operating Areas

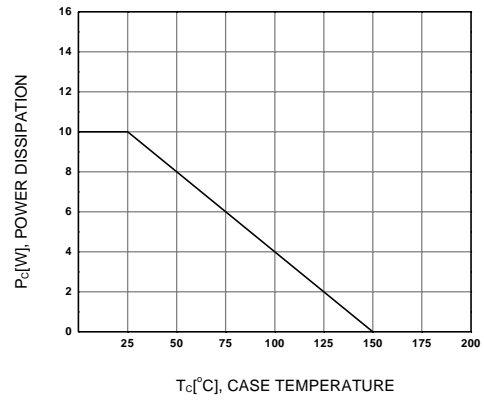


Figure 8. Power Derating

# Package Dimensions

KSB772

## TO-126



Dimensions in Millimeters

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Bottomless <sup>™</sup>	FAST <sup>®</sup>	LittleFET <sup>™</sup>	Power247 <sup>™</sup>	SuperSOT <sup>™</sup> -3
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