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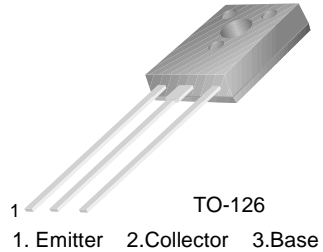


# KSB772

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

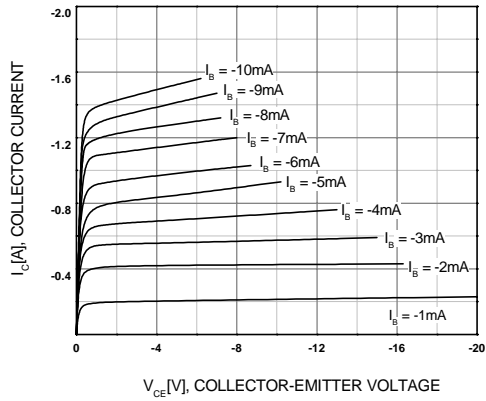


Figure 1. Static Characteristic

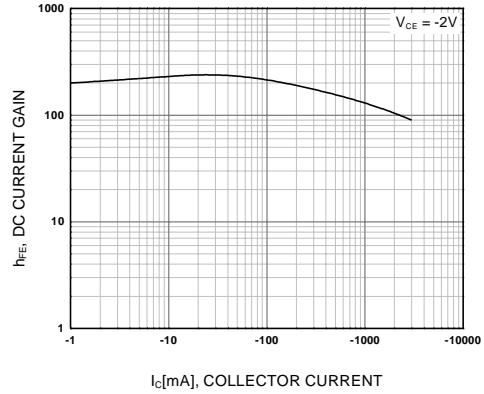


Figure 2. DC current Gain

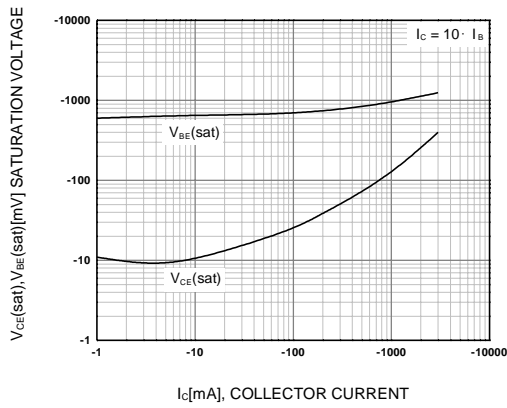


Figure 3. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

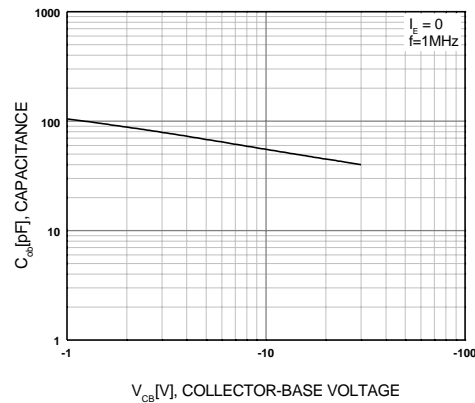


Figure 4. Collector Output Capacitance

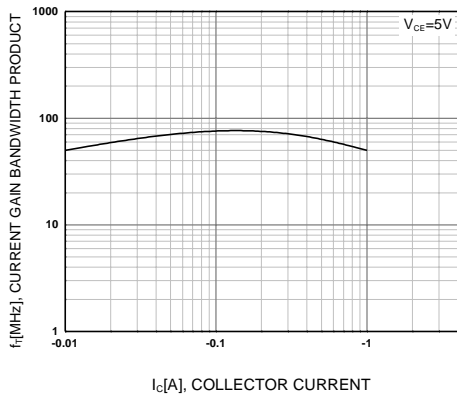


Figure 5. Current Gain Bandwidth Product

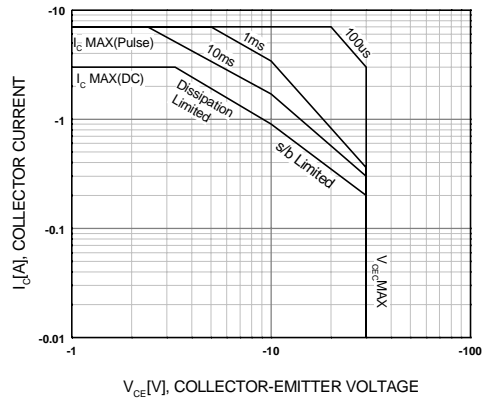


Figure 6. Safe Operating Area

### Typical Characteristics (Continued)

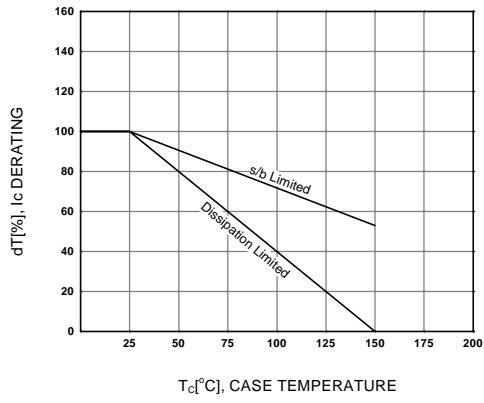


Figure 7. Derating Curve of Safe Operating Areas

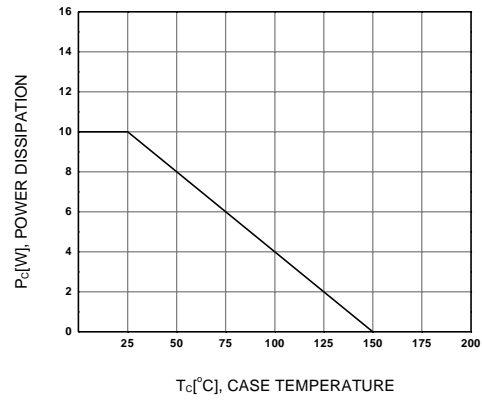
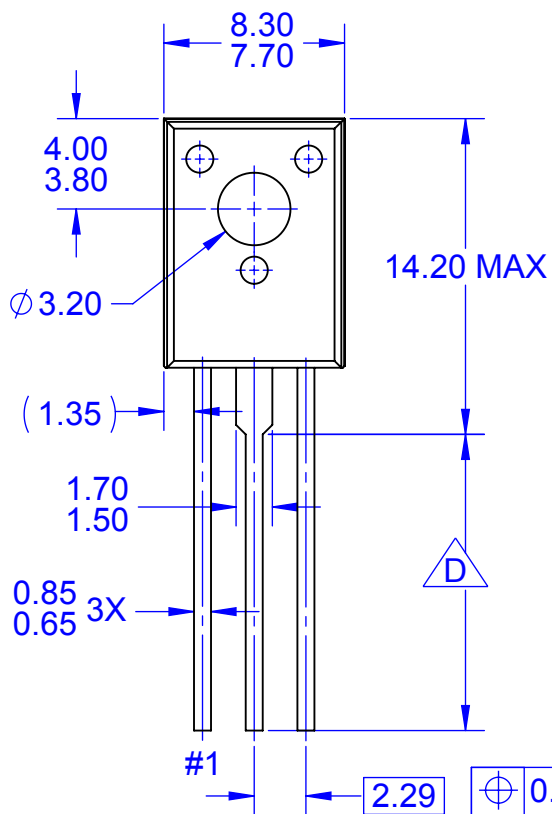
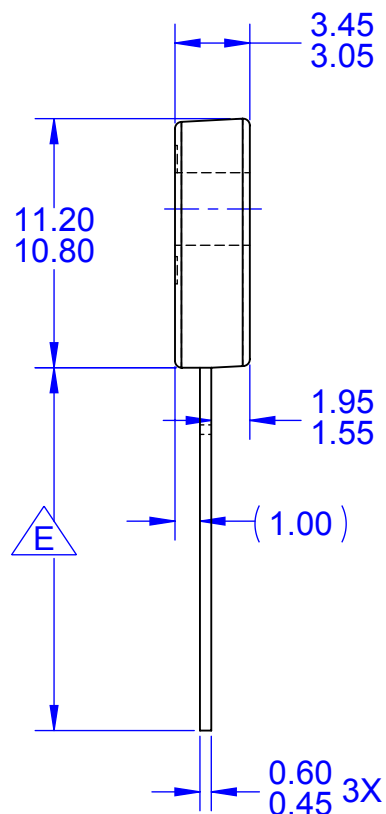


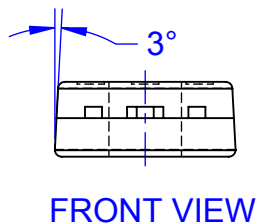
Figure 8. Power Derating



TOP VIEW



SIDE VIEW



FRONT VIEW

PRODUCTION CODE	TERMINAL LENGTH "D"	TERMINAL LENGTH "E"
TSSTU	3.45 - 4.05	6.45-7.45
TSTU	2.36 - 2.96	5.36-6.36
NONE (STD LENGTH)	12.76 - 13.36	15.76-16.76

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- B. ALL DIMENSIONS ARE IN MILLIMETERS
- C. DIMENSIONS ARE EXCLUSIVE OF BURRS, MOLD FLASH, AND TIE BAR PROTRUSIONS

$\triangle D$  FOR TERMINAL LENGTH "D", REFER TO TABLE

$\triangle E$  FOR TERMINAL LENGTH "E", REFER TO TABLE

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