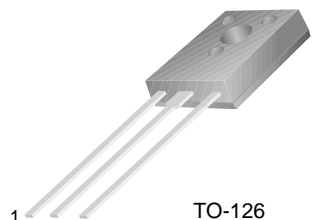


# KSB794/795

KSB794/795

## Audio Frequency Power Amplifier

- Low Speed Switching Industrial Use



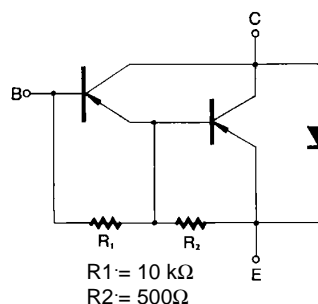
TO-126  
1. Emitter 2. Collector 3. Base

## PNP Epitaxial Silicon Darlington Transistor

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

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	: KSB794	- 60 V
		: KSB795	- 80 V
$V_{CEO}$	Collector-Emitter Voltage	: KSB794	- 60 V
		: KSB795	- 80 V
$V_{EBO}$	Emitter-Base Voltage	- 8	V
$I_C$	Collector Current (DC)	- 1.5	A
$I_{CP}$	*Collector Current (Pulse)	- 3	A
$I_B$	Base Current (DC)	- 0.15	A
$P_C$	Collector Dissipation ( $T_a=25^\circ\text{C}$ )	1	W
$P_C$	Collector Dissipation ( $T_C=25^\circ\text{C}$ )	10	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	Min.	Max.	Units
$I_{CBO}$	Collector Cut-off Current	$V_{CB} = -60\text{V}$ , $I_E = 0$		- 10	$\mu\text{A}$
$I_{CER}$	Collector Cut-off Current	$V_{CE} = -60\text{V}$ , $R_{BE} = 51\Omega$ @ $T_C = 125^\circ\text{C}$		- 1	mA
$I_{CEX1}$	Collector Cut-off Current	$V_{CE} = -60\text{V}$ , $V_{BE}(\text{off}) = 1.5\text{V}$		- 10	$\mu\text{A}$
$I_{CEX2}$	Collector Cut-off Current	$V_{CE} = -60\text{V}$ , $V_{BE}(\text{off}) = 1.5\text{V}$ @ $T_C = 125^\circ\text{C}$		- 1	mA
$I_{EBO}$	Emitter Cut-off Current	$V_{EB} = -5\text{V}$ , $I_C = 0$		- 1	mA
$h_{FE1}$	* DC Current Gain	$V_{CE} = -2\text{V}$ , $I_C = -0.5\text{A}$	1000		
$h_{FE2}$		$V_{CE} = -2\text{V}$ , $I_C = -1\text{A}$	2000	30000	
$V_{CE}(\text{sat})$	* Collector-Emitter Saturation Voltage	$I_C = -1\text{A}$ , $I_B = -1\text{mA}$		- 1.5	V
$V_{BE}(\text{sat})$	* Base-Emitter Saturation Voltage	$I_C = -1\text{A}$ , $I_B = -1\text{mA}$		- 2	V

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

### $h_{FE}$ Classification

Classification	R	O	Y
$h_{FE2}$	2000 ~ 5000	4000 ~ 10000	8000 ~ 30000

# Typical Characteristics

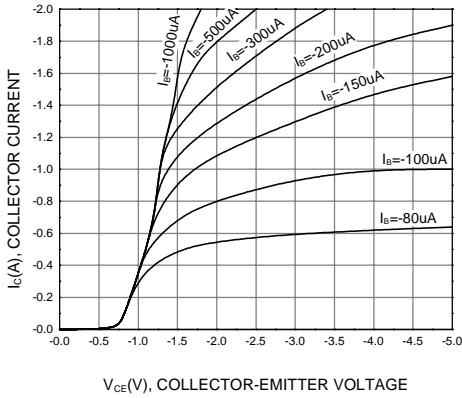


Figure 1. Static Characteristic

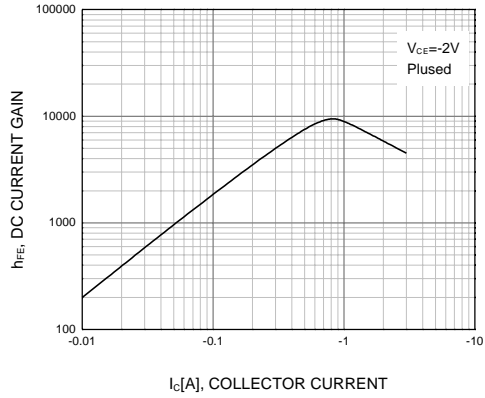


Figure 2. DC current Gain

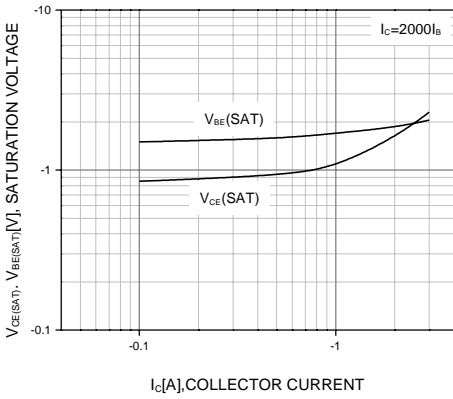


Figure 3. Base-Emitter Saturation Voltage  
Collector-Emitter Saturation Voltage

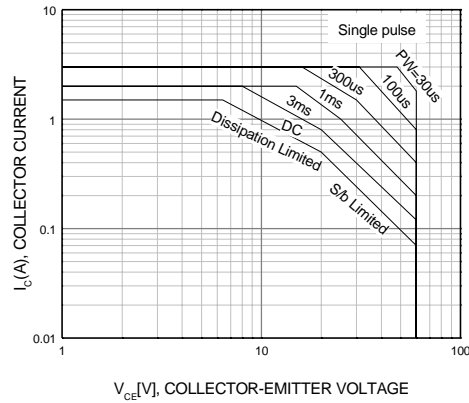


Figure 4. Safe Operating Area

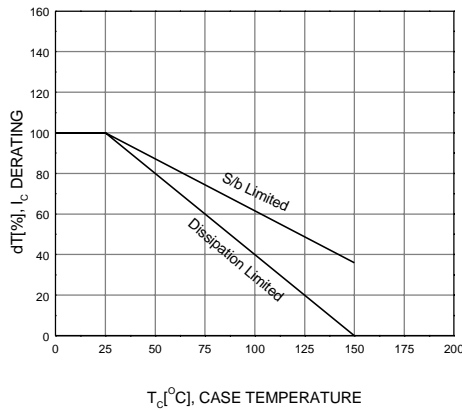


Figure 5. Derating Curve of Safe Operating Area

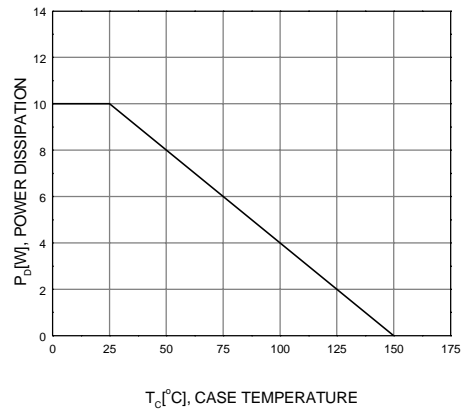


Figure 6. Power Derating

# Package Dimensions

KSB794/795

## TO-126



Dimensions in Millimeters

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E <sup>2</sup> CMOS™	LittleFET™	QT Optoelectronics™	TinyLogic™
EnSigna™	MicroFET™	Quiet Series™	UHC™
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FACT Quiet Series™	OPTOLOGIC™	SMART START™	VCX™

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