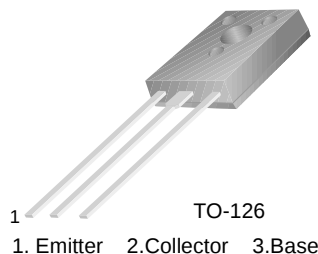


KSB794/795

KSB794/795

Audio Frequency Power Amplifier

- Low Speed Switching Industrial Use

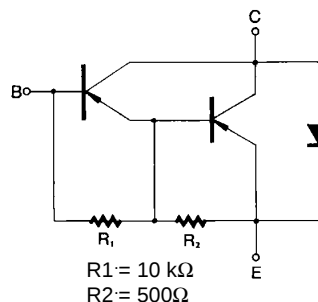


PNP Epitaxial Silicon Darlington Transistor

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

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	: KSB794 : KSB795	- 60 - 80
			V V
V_{CEO}	Collector-Emitter Voltage	: KSB794 : KSB795	- 60 - 80
			V 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	μA
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	μA
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} h_{FE2}	* DC Current Gain	$V_{CE} = -2\text{V}$, $I_C = -0.5\text{A}$ $V_{CE} = -2\text{V}$, $I_C = -1\text{A}$	1000 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

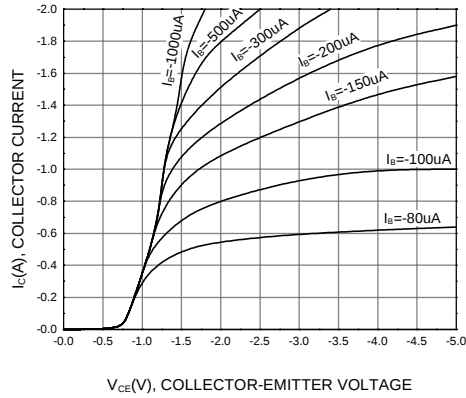


Figure 1. Static Characteristic

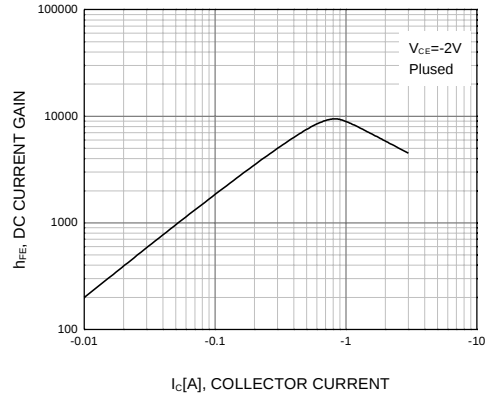


Figure 2. DC current Gain

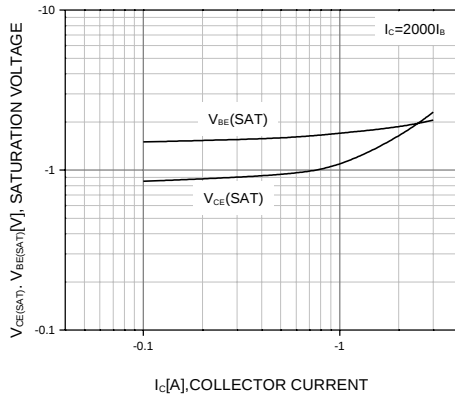


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

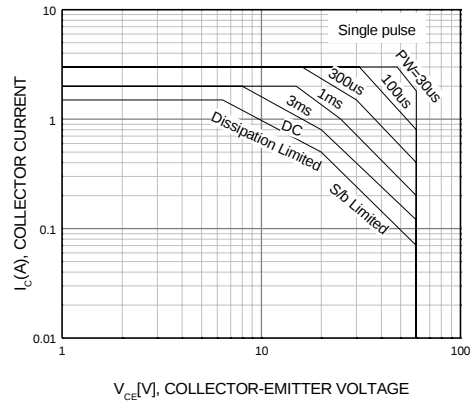


Figure 4. Safe Operating Area

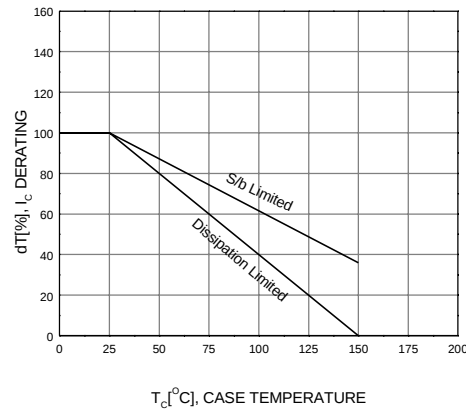


Figure 5. Derating Curve of Safe Operating Area

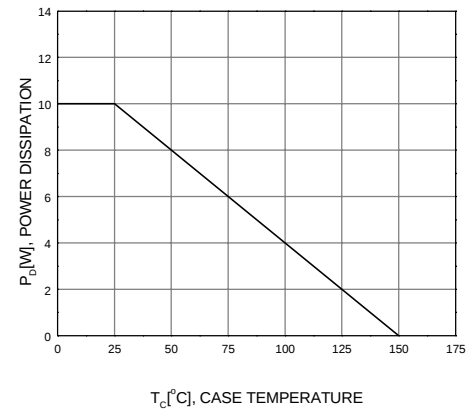
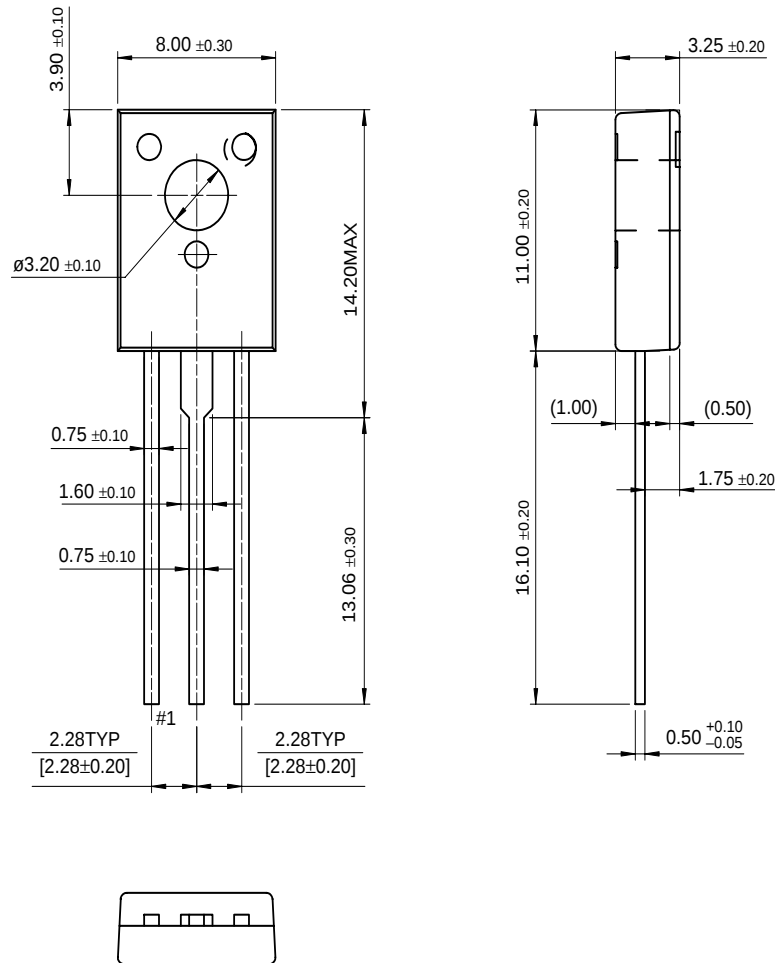


Figure 6. Power Derating

Package Dimensions

TO-126



Dimensions in Millimeters

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E ² CMOS™	LittleFET™	QT Optoelectronics™	TinyLogic™
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FACT Quiet Series™	OPTOLOGIC™	SMART START™	VCX™

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