

**2SD894****25V/1.5A Driver Applications****Use**

- Motor drive, printer hummer drive, relay drive, voltage regulator controller.

**Features**

- High DC Current Gain (not less than 4000).
- Wide ASO.
- Low saturation voltage (1.5V max).
- Large power rating ( $P_C=10W$ ).

**Specifications****Absolute Maximum Ratings at  $T_a = 25^\circ\text{C}$** 

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	$V_{CB0}$		30	V
Collector-to-Emitter Voltage	$V_{CEO}$		25	V
Emitter-to-Base Voltage	$V_{EBO}$		10	V
Collector Current	$I_C$		1.5	A
Collector Current (Pulse)	$I_{CP}$		2.5	A
Collector Dissipation	$P_C$		1	W
		$T_c=25^\circ\text{C}$	10	W
Junction Temperature	$T_j$		150	$^\circ\text{C}$
Storage Temperature	$T_{stg}$		-55 to +150	$^\circ\text{C}$

**Electrical Characteristics at  $T_a = 25^\circ\text{C}$** 

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=20V, I_E=0$			1	$\mu\text{A}$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=8V, I_C=0$			1	$\mu\text{A}$
DC Current Gain	$h_{FE1}$	$V_{CE}=2V, I_C=500\text{mA}$	4000			
	$h_{FE2}$	$V_{CE}=2V, I_C=10\text{mA}$	3000			
Gain-Bandwidth Product	$f_T$	$V_{CE}=10V, I_C=50\text{mA}$		120		MHz
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=600\text{mA}, I_B=0.15\text{mA}$			1.5	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=600\text{mA}, I_B=0.15\text{mA}$			2.0	V

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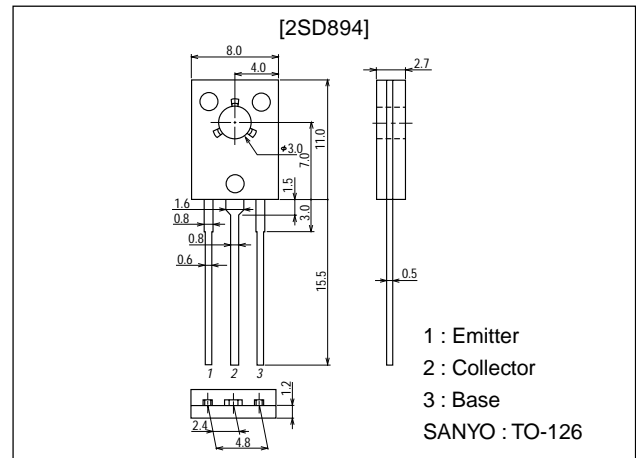
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21599TH (KT)/5257KI/6082KI, TS No.590-1/3

**Package Dimensions**

unit:mm

2009A

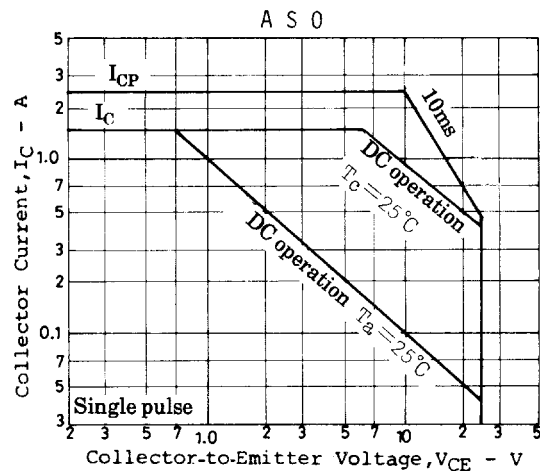
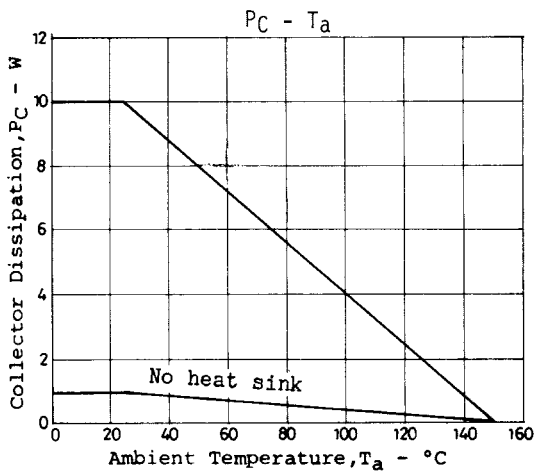
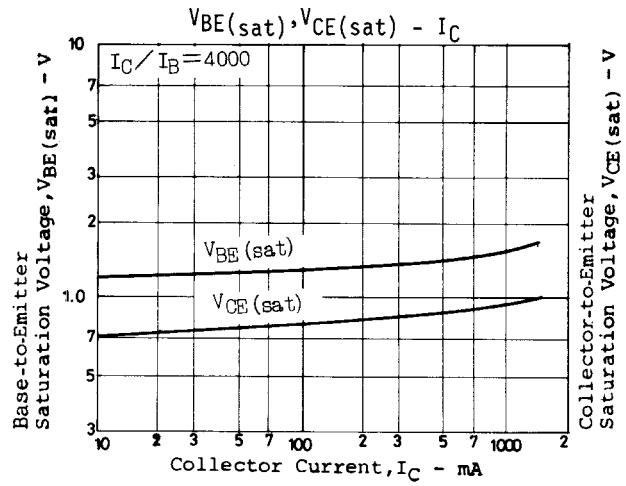
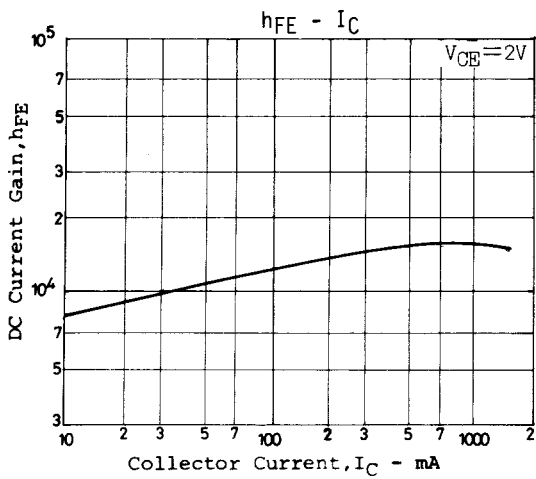
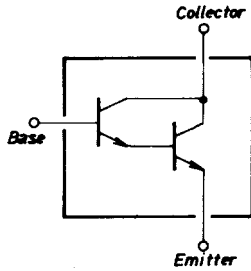


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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0$	30			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=1mA, R_{BE}=\infty$	25			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=10\mu A, I_C=0$	10			V

## Equivalent Circuit



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