

**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_{CB0}	$V_{CB}=20V, I_E=0$			1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=8V, I_C=0$			1	μA
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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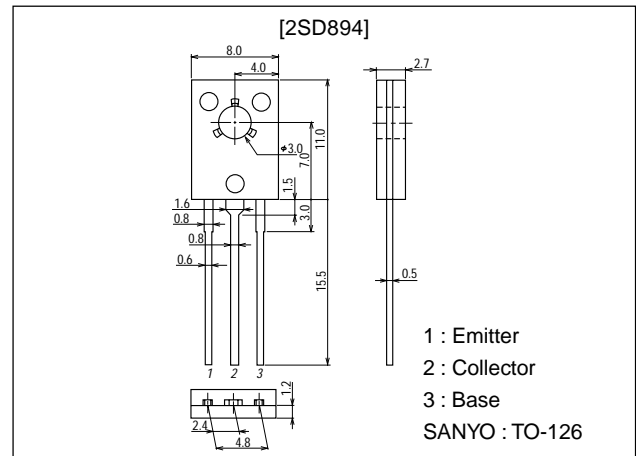
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21599TH (KT)/5257KI/6082KI, TS No.590-1/3

Package Dimensions

unit:mm

2009A

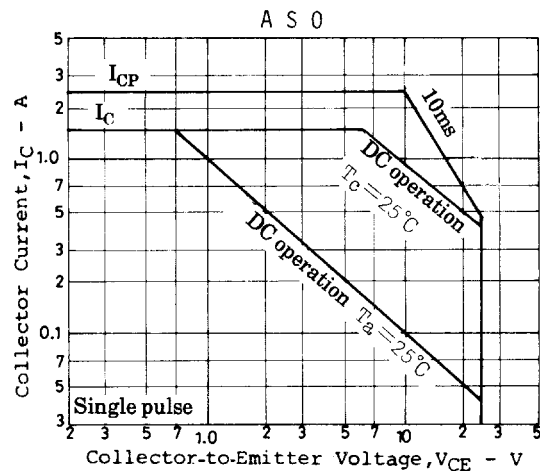
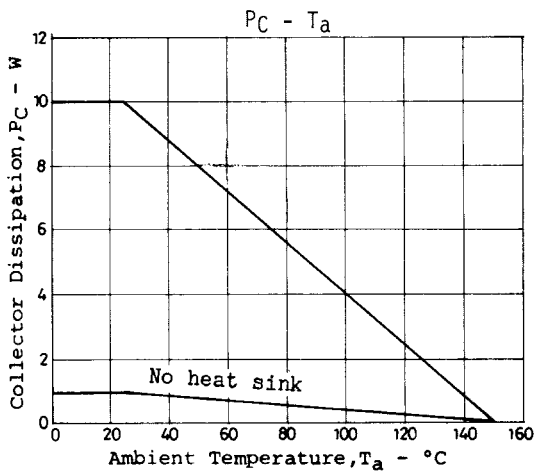
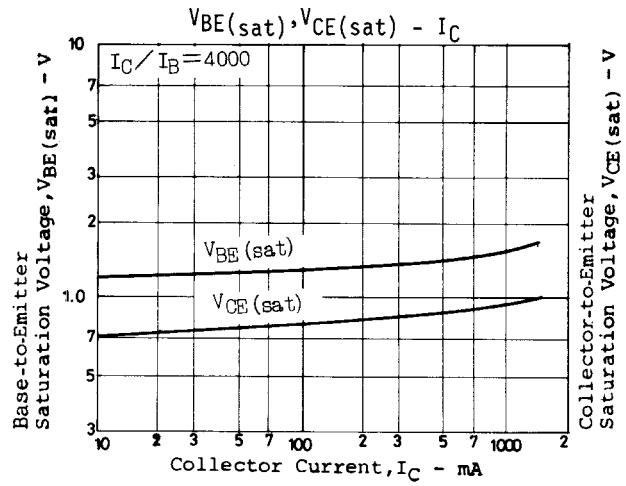
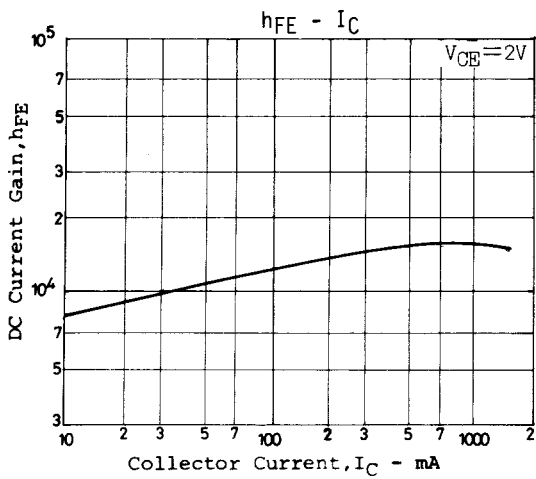
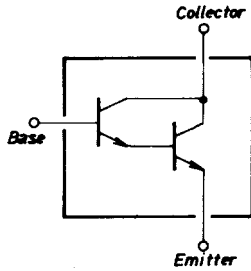


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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0$	30			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=1mA, R_{BE}=\infty$	25			V
Emitter-to-Base Breakdown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

Equivalent Circuit



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