



## 2SB883/2SD1193

### Driver Applications

#### Applications

- Motor drivers, printer hammer drivers, relay drivers, voltage regulator control.

#### Features

- High DC current gain.
- High current capacity and wide ASO.
- Low saturation voltage.

( ) : 2SB883

#### Specifications

##### Absolute Maximum Ratings at Ta = 25°C

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	$V_{CB0}$		(-)70	V
Collector-to-Emitter Voltage	$V_{CE0}$		(-)60	V
Emitter-to-Base Voltage	$V_{EB0}$		(-)6	V
Collector Current	$I_C$		(-)15	A
Collector Current (Pulse)	$I_{CP}$		(-)20	A
Collector Dissipation	$P_C$	$T_c=25^\circ\text{C}$	70	W
Junction Temperature	$T_J$		150	°C
Storage Temperature	$T_{stg}$		-55 to +150	°C

##### Electrical Characteristics at Ta = 25°C

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	$I_{CB0}$	$V_{CB}=-40\text{V}, I_E=0$			(-)0.1	mA
Emitter Cutoff Current	$I_{EB0}$	$V_{EB}=-5\text{V}, I_C=0$			(-)3	mA
DC Current Gain	$h_{FE}$	$V_{CE}=-2\text{V}, I_C=-7\text{mA}$	2000	5000		
Gain-Bandwidth Product	$f_T$	$V_{CE}=-5\text{V}, I_C=-7\text{mA}$		20		MHz
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-7\text{mA}, I_B=-14\text{mA}$		0.9	(-)1.5	V
				(-)1.0		V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=-7\text{mA}, I_B=-14\text{mA}$			(-)2.0	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=-5\text{mA}, I_E=0$	(-)70			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=-50\text{mA}, R_{BE}=\infty$	(-)60			V

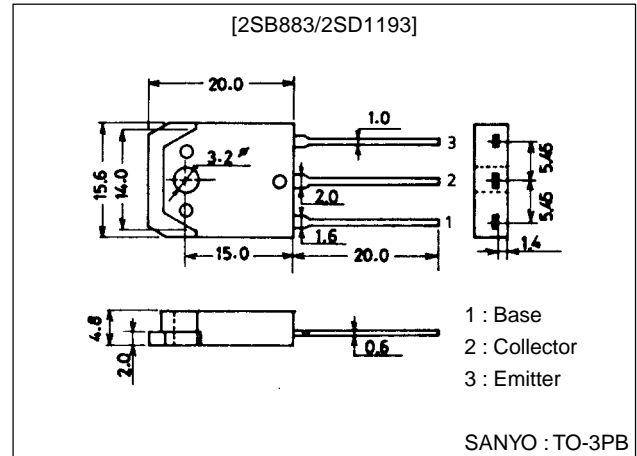
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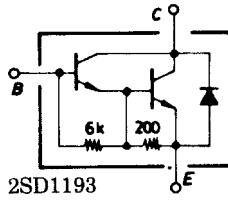
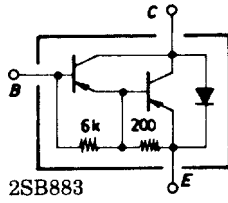
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unit:mm

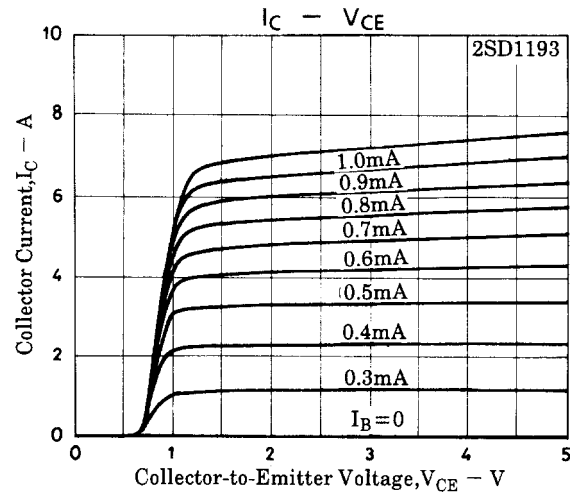
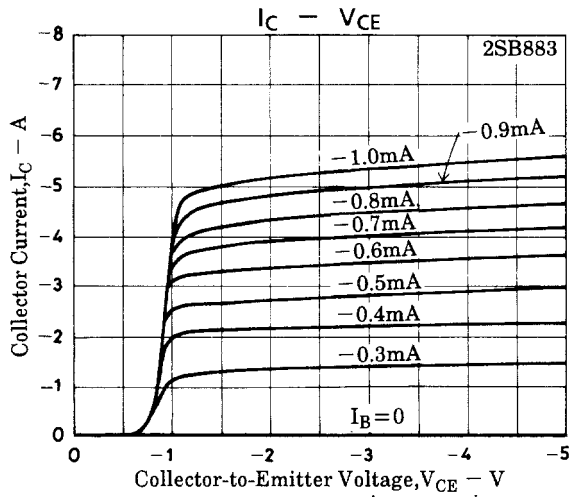
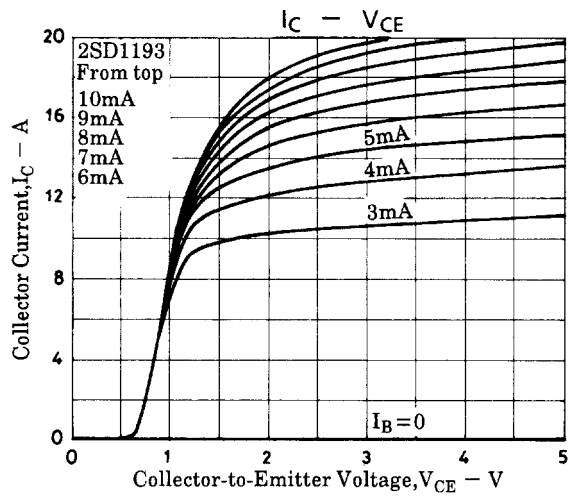
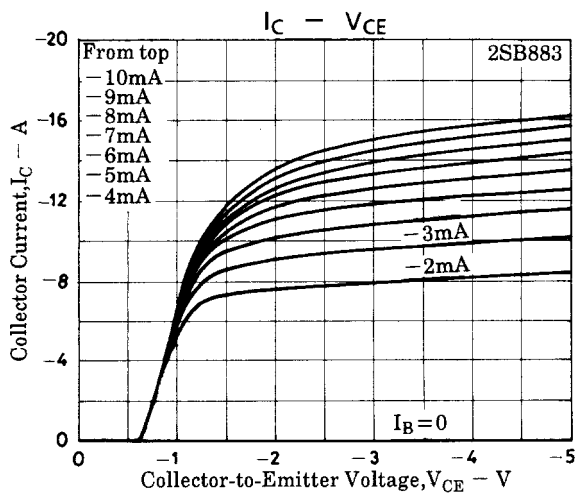
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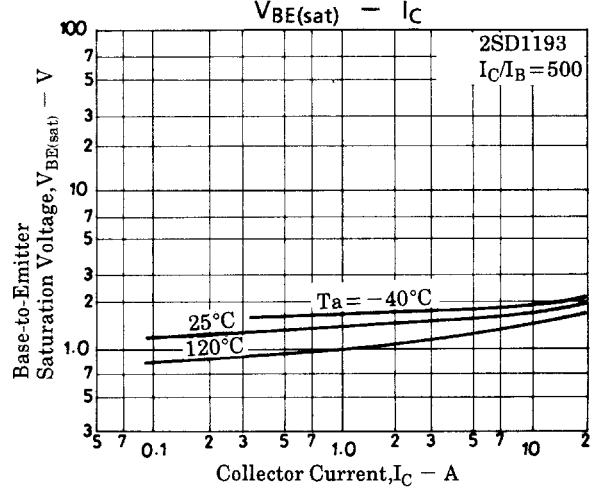
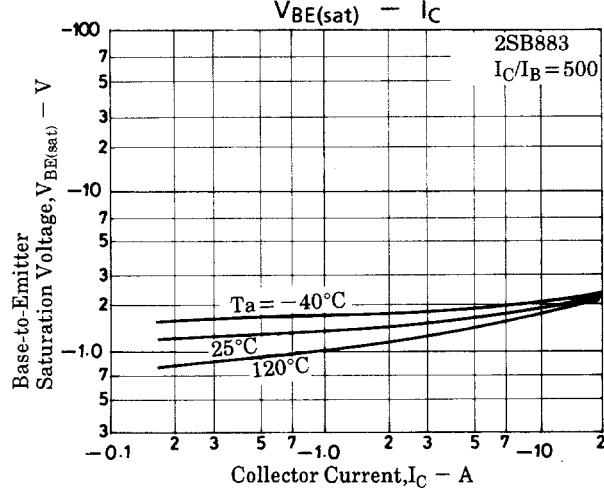
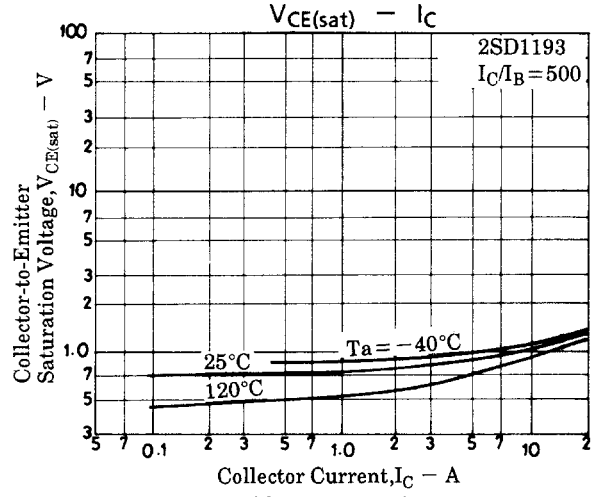
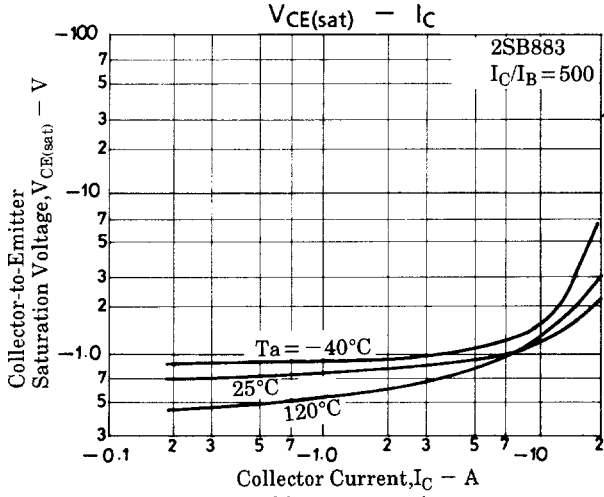
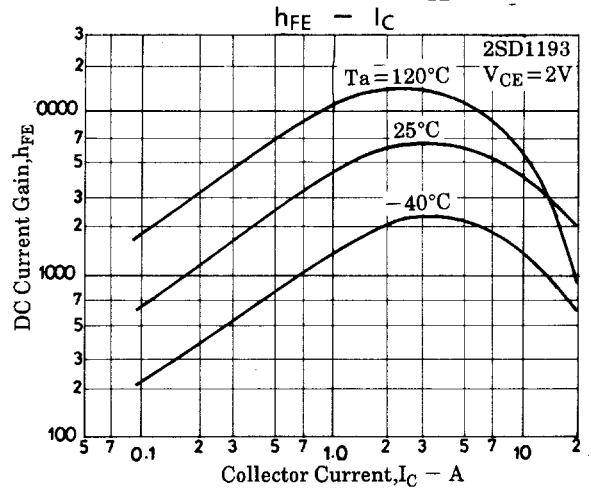
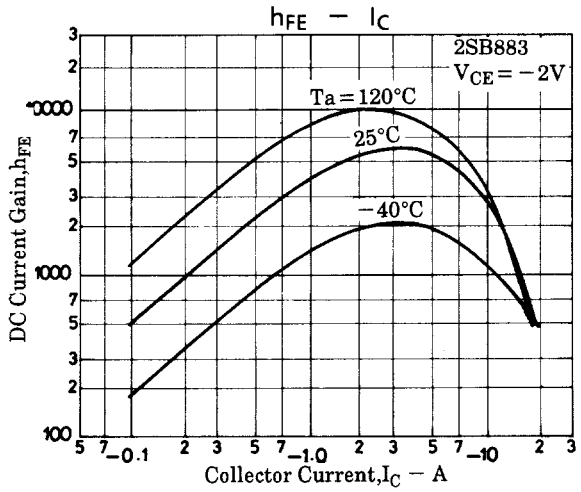
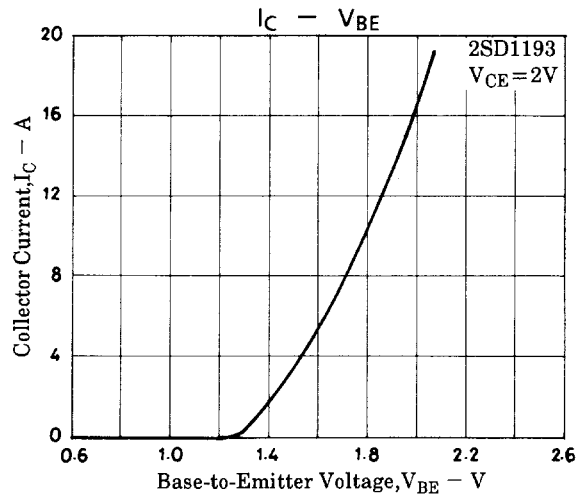
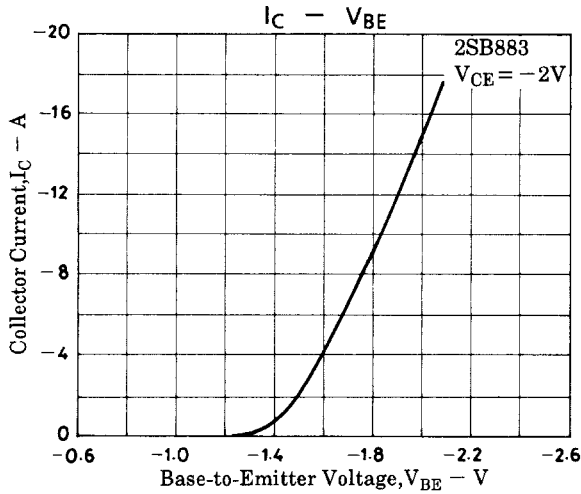
Electrical Connection



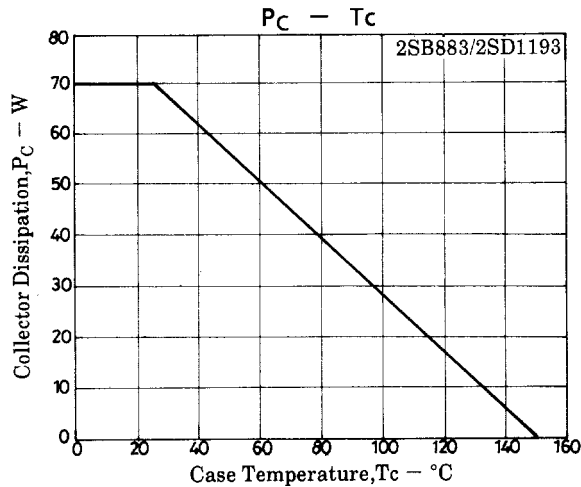
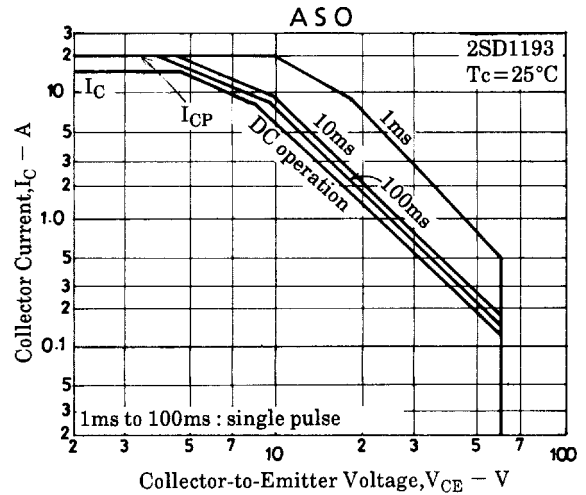
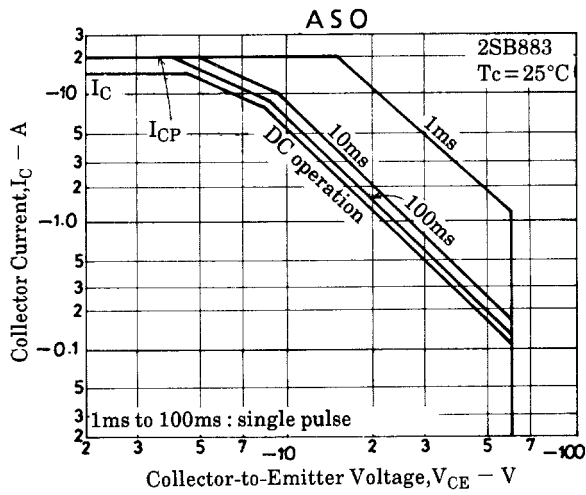
Unit (resistance :  $\Omega$ )



# 2SB883/2SD1193



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