

No.924E

2SB880/2SD1190

Silicon PNP/NPN Epitaxial Planar Type
Darlington Transistor
FOR VARIOUS DRIVERS

Applications

- Motor drivers, printer hammer drivers, relay drivers, voltage regulators

Features

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

(): 2SB880

Absolute Maximum Ratings/ $T_a=25^\circ\text{C}$

			unit
Collect-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	(-)4	A
Peak Collector Current	i_{cp}	(-)6	A
Collector Dissipation	P_C	1.75	W
		$T_c=25^\circ\text{C}$	30
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

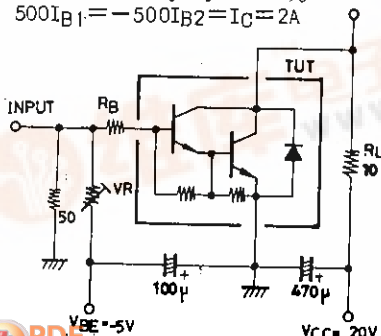
Electrical Characteristics/ $T_a=25^\circ\text{C}$

			min	typ	max	unit
Collector Cut-off Current	I_{CB0}	$V_{CB}=(-)40, I_E=0$			(-)0.1	mA
Emitter Cut-off Current	I_{EB0}	$V_{EB}=(-)5V, I_C=0$			(-)3.0	mA
DC Current Gain	h_{FE}	$V_{CE}=(-)2V, I_C=(-)2A$	2000	5000		
Gain Band-width Product	f_T	$V_{CE}=(-)5V, I_C=(-)2A$		20		MHz
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)2A, I_B=(-)4mA$		0.9	(-)1.5	V
				(-1.0)		
Base to Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=(-)2A, I_B=(-)4mA$			(-)2.0	V
Collector to Base Breakdown Voltage	$V_{(BR)CB0}$	$I_C=(-)5mA, I_E=0$	(-)70			V
Collector to Emitter Breakdown Voltage	$V_{(BR)CE0}$	$I_C=(-)50mA, R_{BE}=\infty$	(-)60			V
Turn-on Time	t_{on}	At Specified Test Circuit		(0.5)0.6		μs
Storage Time	t_{stg}	"		(1.4)2.7		μs
Fall Time	t_f	"		(1.2)1.6		μs

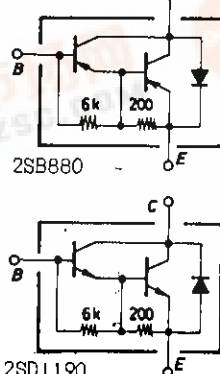
Specified Test Circuit

(For PNP, the polarity is reversed.)

$PW=50\mu\text{s}, \text{Duty Cycle} \leq 1\%$
 $500I_{B1} = -500I_{B2} = I_C = 2A$

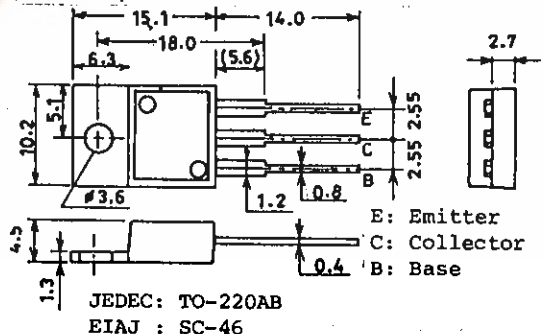


Electrical Connection



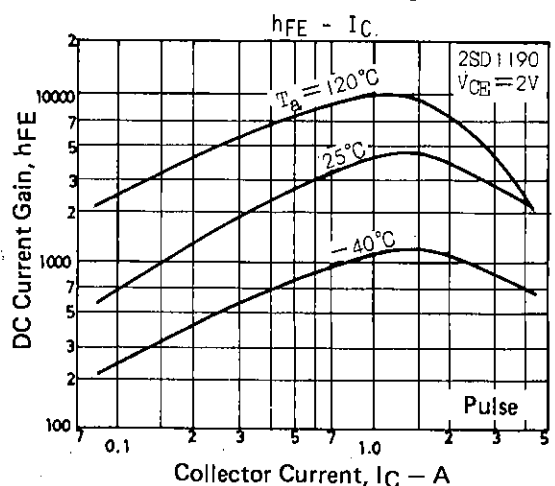
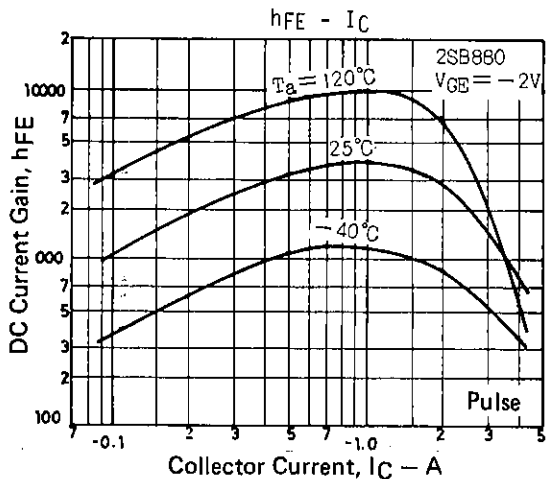
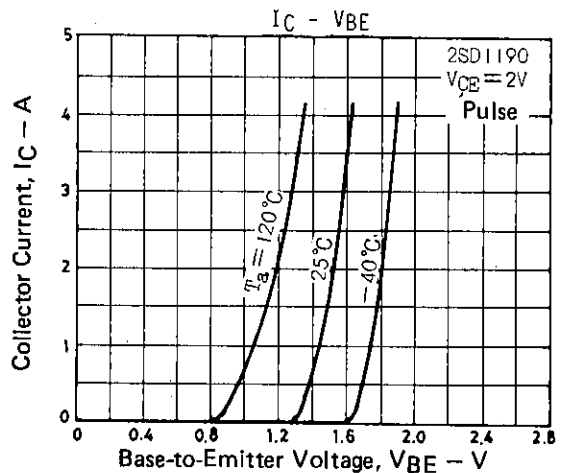
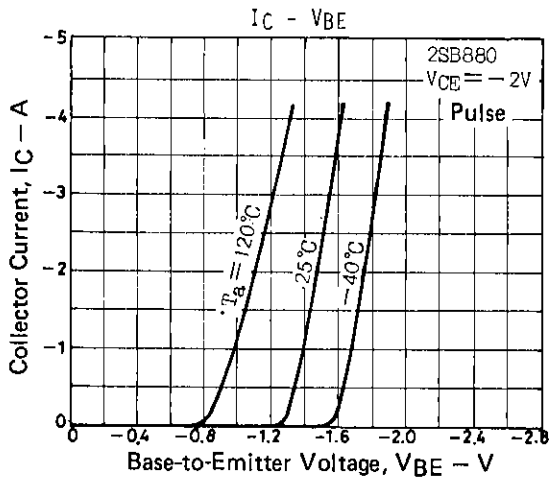
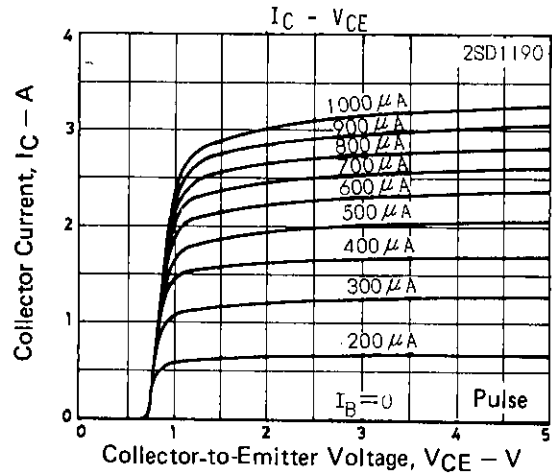
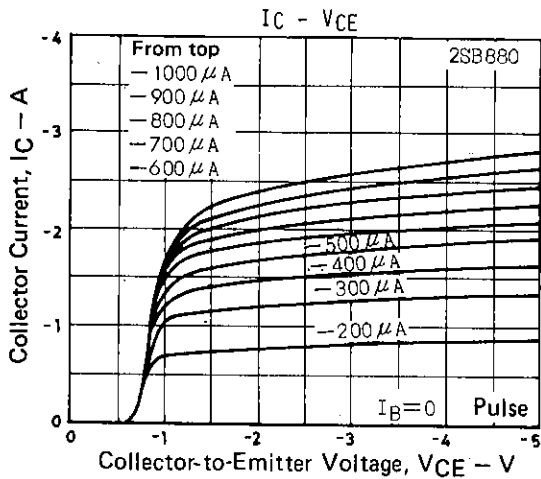
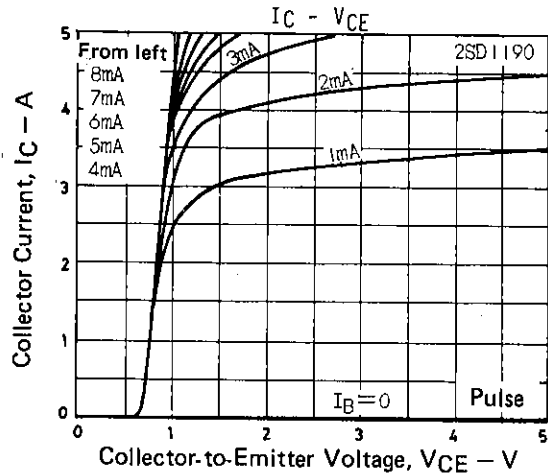
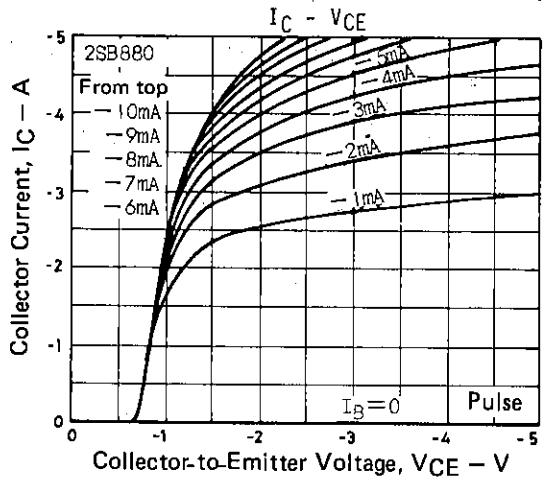
Package Dimensions 2010B

(unit: mm)

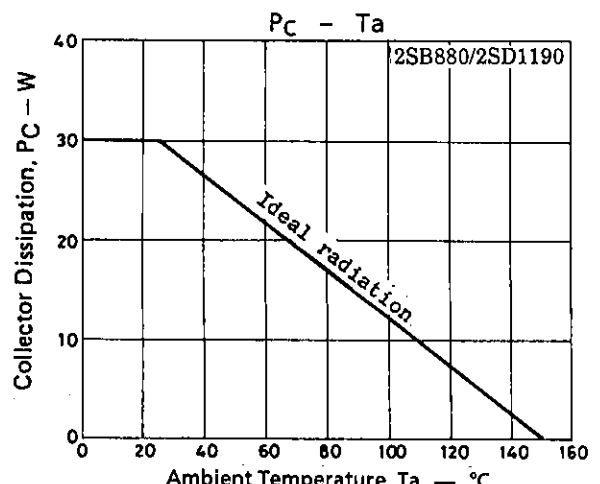
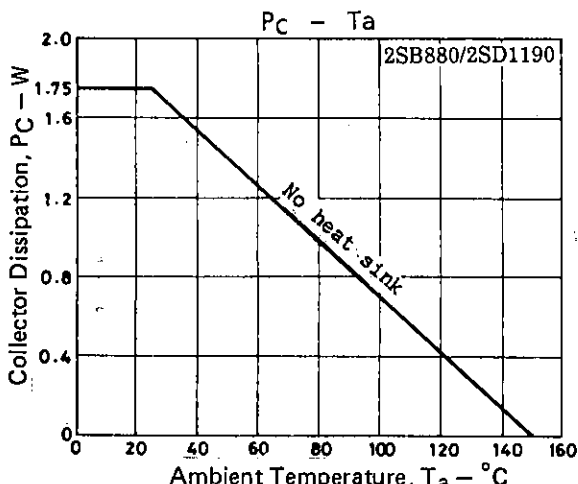
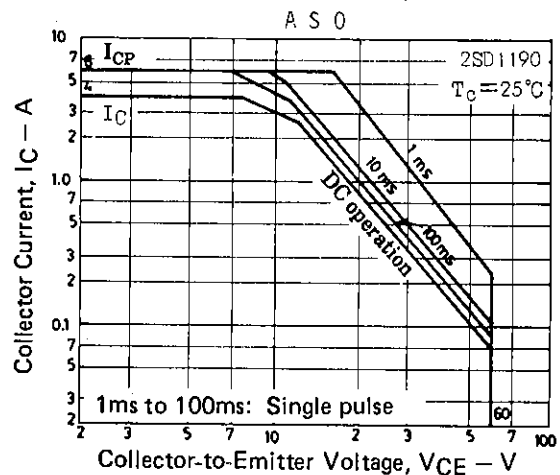
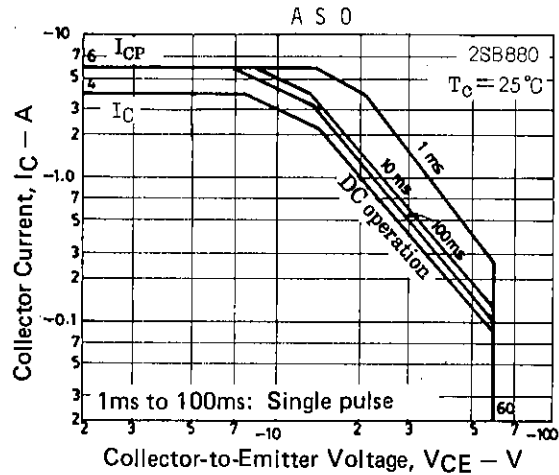
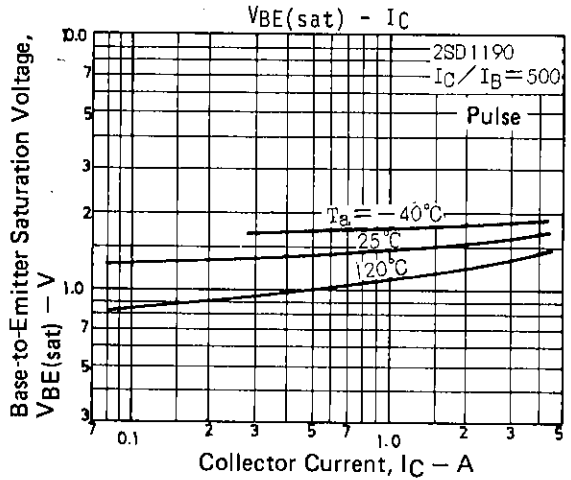
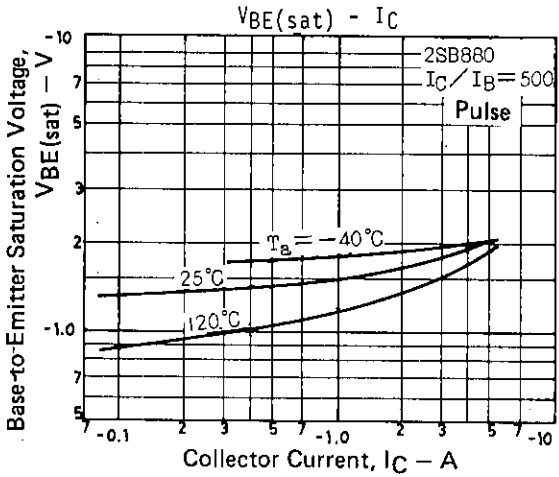
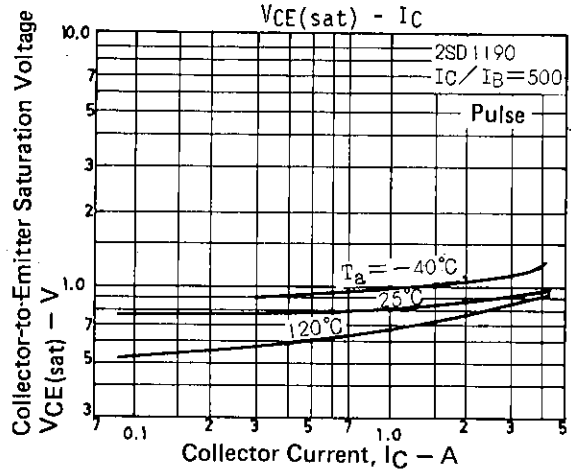
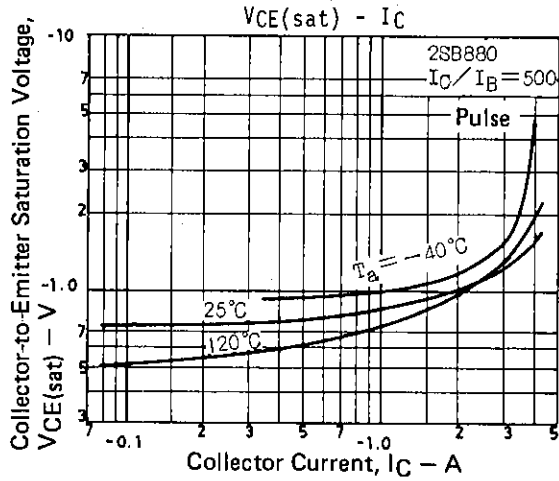


Unit (resistance: Ω , capacitance: F)

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