



2SB881/2SD1191

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.

() : 2SB881

Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		(-)-70	V
Collector-to-Emitter Voltage	V_{CEO}		(-)-60	V
Emitter-to-Base Voltage	V_{EBO}		(-)-6	V
Collector Current	I_C		(-)-7	A
Collector Current (Pulse)	I_{CP}		(-)-10	A
Collector Dissipation	P_C	$T_c=25^\circ\text{C}$	1.75	W
			35	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}	$V_{CB} = (-)40\text{V}, I_E = 0$			(-)-0.1	mA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = (-)5\text{V}, I_C = 0$			(-)-3.0	mA
DC Current Gain	h_{FE}	$V_{CE} = (-)2\text{V}, I_C = (-)3.5\text{A}$	2000	5000		
Gain-Bandwidth Product	f_T	$V_{CE} = (-)5\text{V}, I_C = (-)3.5\text{A}$		20		MHz
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = (-)3.5\text{A}, I_B = (-)7\text{mA}$		0.9	(-)-1.5	V
				(-)-1.0		V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = (-)3.5\text{A}, I_B = (-)7\text{mA}$			(-)-2.0	V

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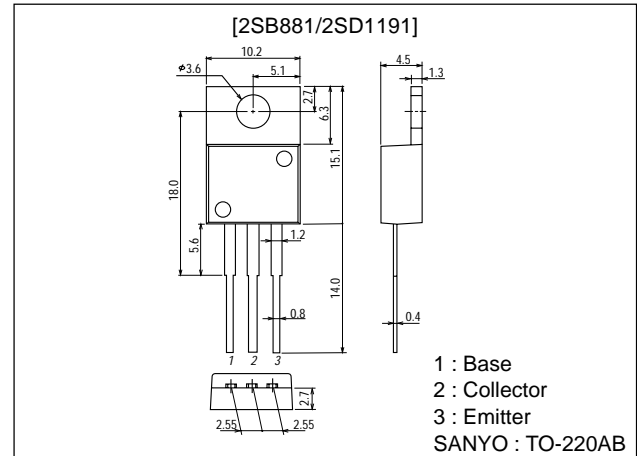
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Package Dimensions

unit:mm

2010C



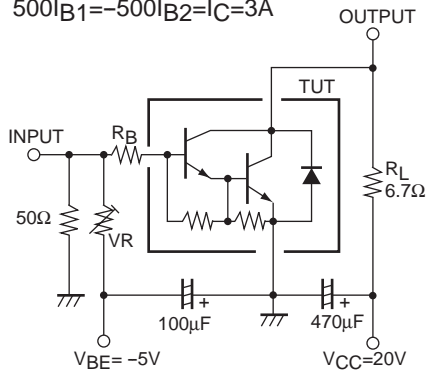
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=(-)5mA, I_E=0$	(-)70			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=(-)50mA, R_{BE}=\infty$	(-)60			V
Turn-ON Time	t_{on}	See specified Test Circuit		(0.5)		μs
				0.6		μs
Storage Time	t_{stg}	See specified Test Circuit		(1.5)		μs
				3.0		μs
Fall Time	t_f	See specified Test Circuit		(1.4)		μs
				1.7		μs

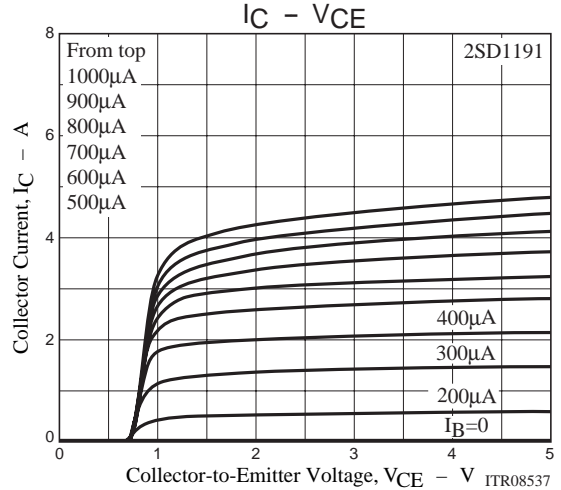
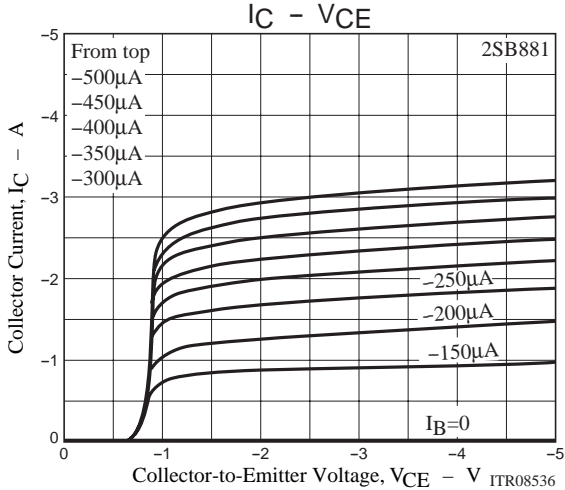
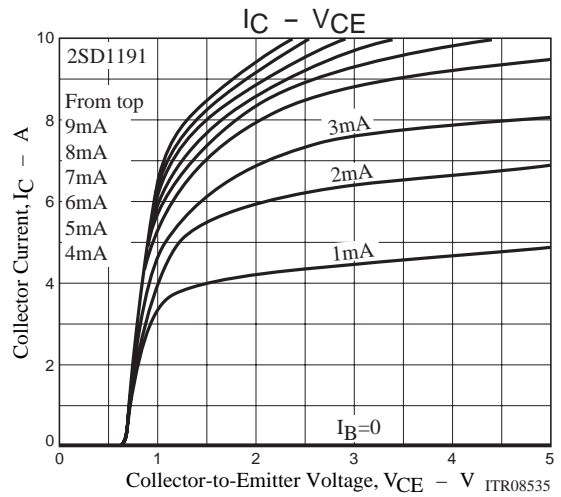
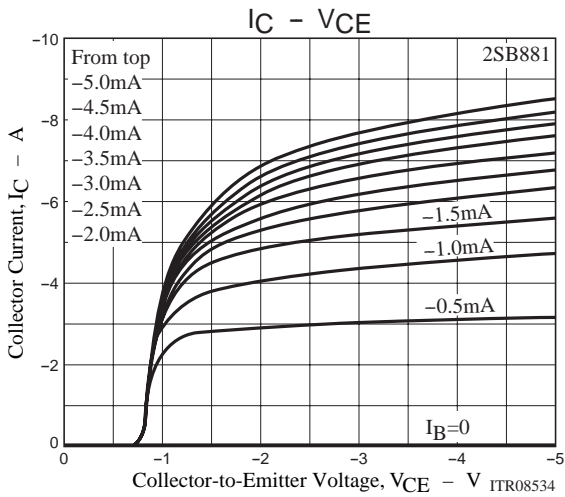
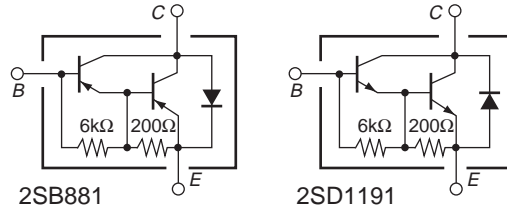
Switching Time Test Circuit

PW=50 μs , Duty Cycle \leq 1%
 $500I_{B1}=-500I_{B2}=I_C=3A$

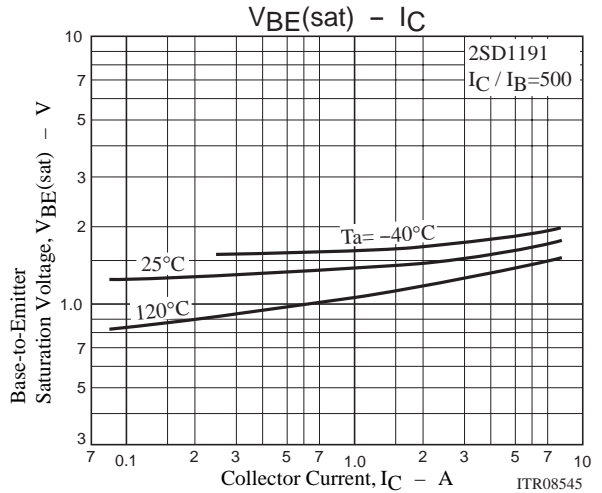
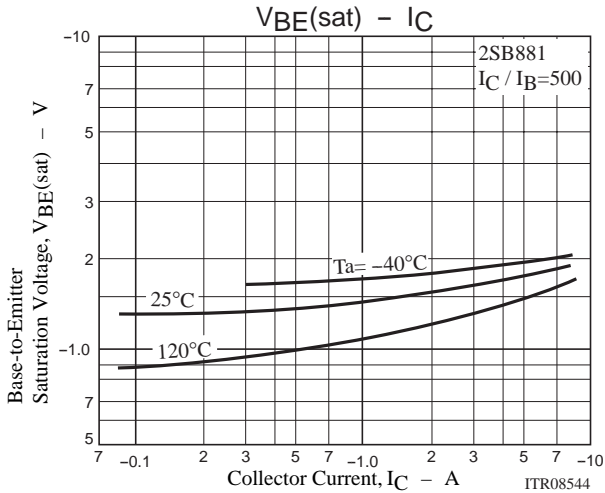
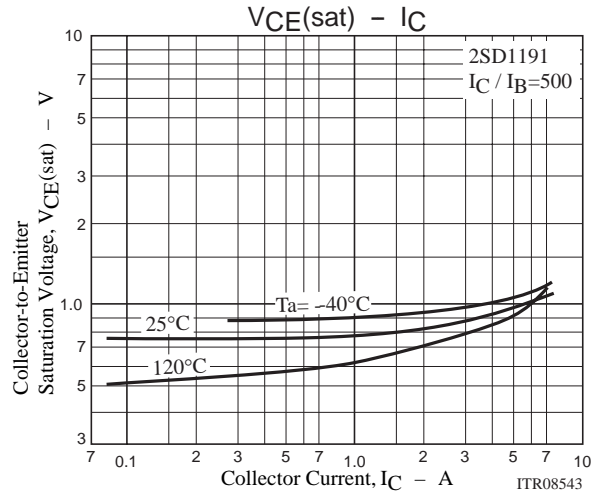
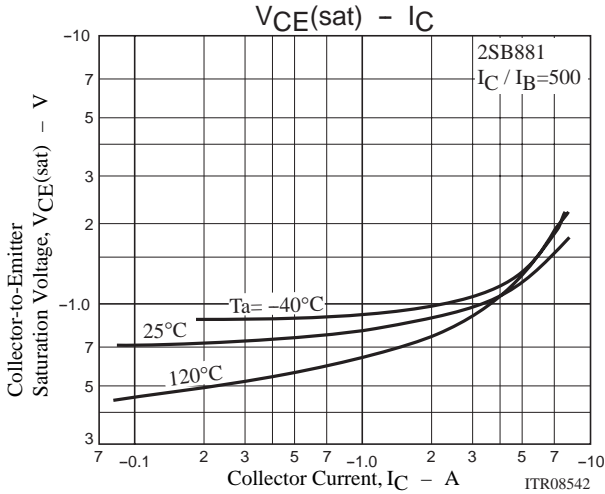
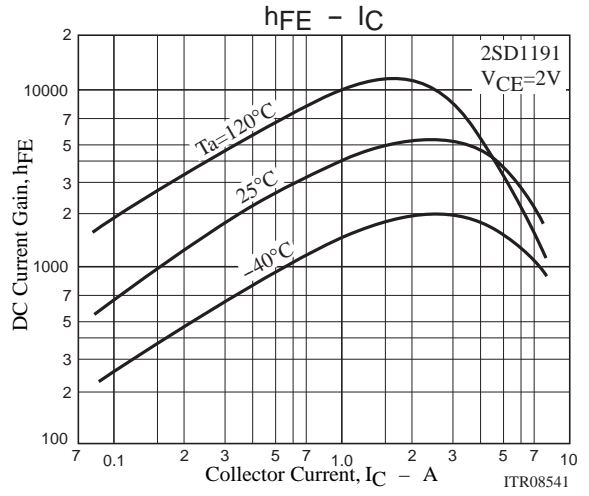
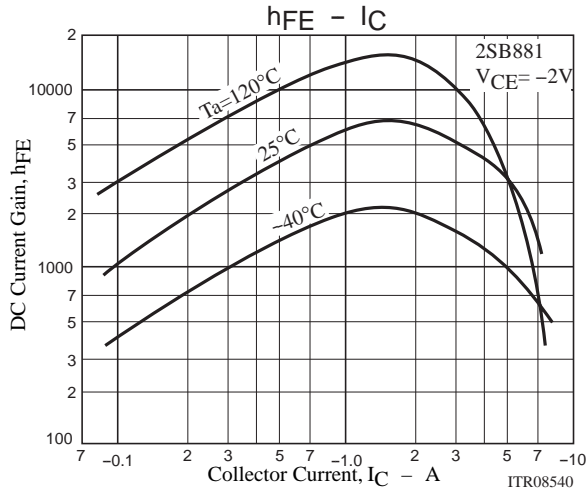
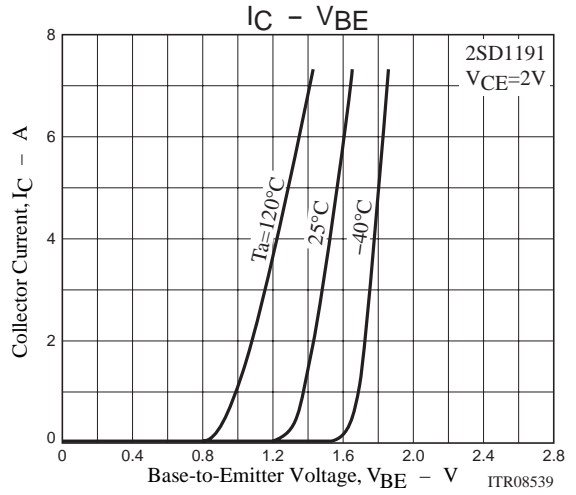
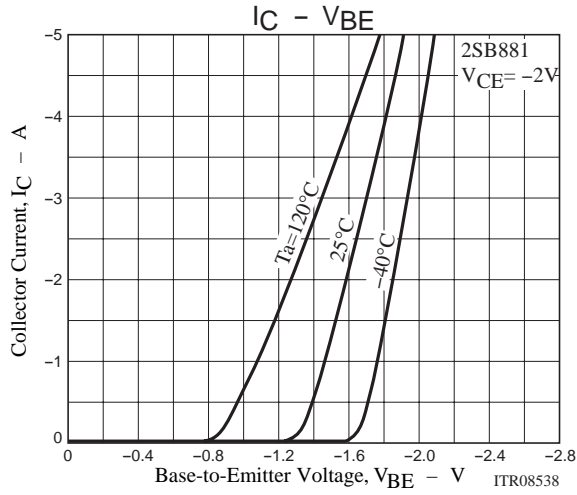


(For PNP, the polarity is reversed.)

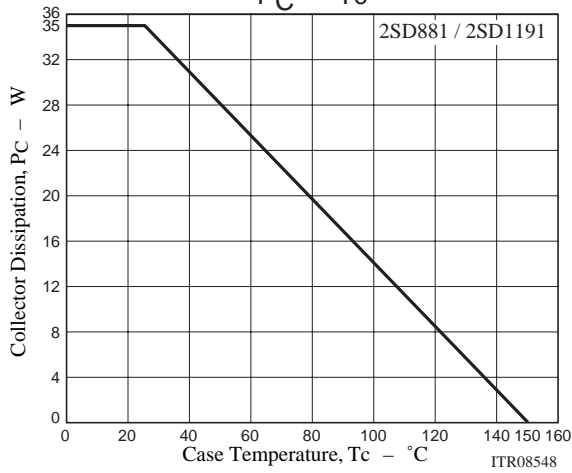
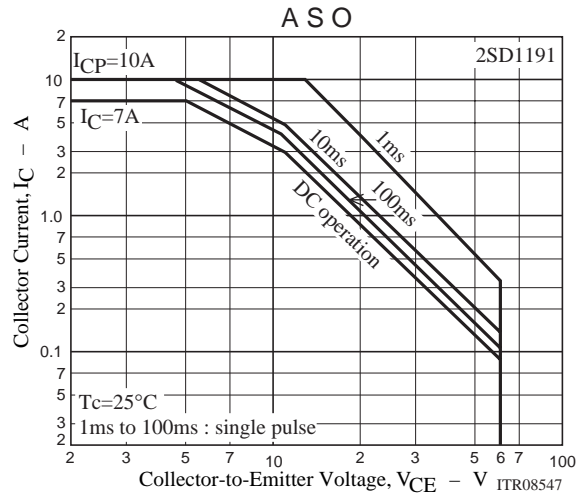
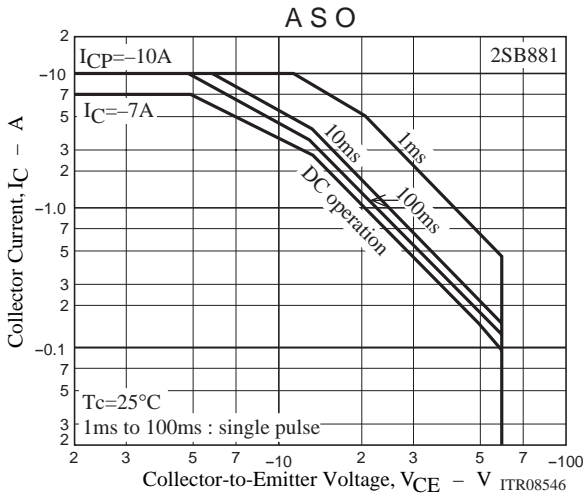
Electrical Connection



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