

SANYO**2SB1511/2SD2285****30V/20A High-Current Switching Applications****Applications**

- Relay drivers, high-speed inverters, converters.

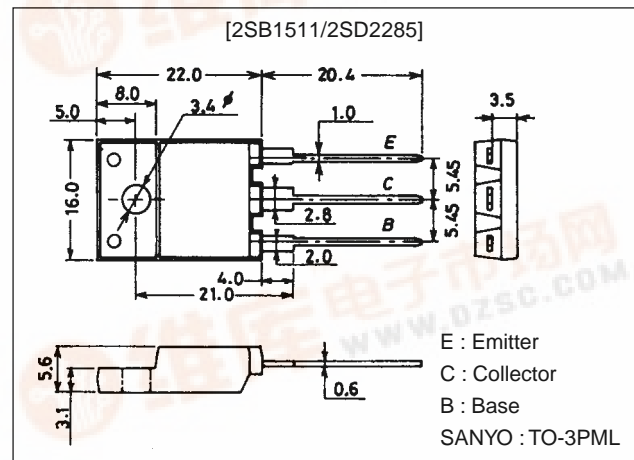
Features

- Low collector-to-emitter saturation voltage :
 $V_{CE(sat)} = -0.5V$ (PNP), $0.4V$ (NPN) max.
- Large current capacity.
- Micaless package facilitating easy mounting.

Package Dimensions

unit:mm

2039A



(): 2SB1511

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		(-60)	V
Collector-to-Emitter Voltage	V_{CEO}		(-30)	V
Emitter-to-Base Voltage	V_{EBO}		(-6)	V
Collector Current	I_C		(-20)	A
Collector Current (Pulse)	I_{CP}		(-40)	A
Collector Dissipation	P_C	$T_c = 25^\circ C$	3.0	W
			40	W
Junction Temperature	T_j		150	$^\circ C$
Storage Temperature	T_{stg}		-55 to $+150$	$^\circ C$

Electrical Characteristics at $T_a = 25^\circ C$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	I_{CBO}	$V_{CB} = (-40V), I_E = 0$			(-0.1)	mA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = (-4V), I_C = 0$			(-0.1)	mA
DC Current Gain	h_{FE1}	$V_{CE} = (-2V), I_C = (-1A)$	70*		280*	
	h_{FE2}	$V_{CE} = (-2V), I_C = (-10A)$	30			
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = (-8A), I_B = (-0.4A)$		(-0.25)	(-0.5)	V
				0.2	0.4	V
Gain-Bandwidth Product	f_T	$V_{CE} = (-5V), I_C = (-1A)$		120		MHz

*: The 2SB1511/2SD2285 are classified by $1A h_{FE}$ as follows :

70	Q	140	100	R	200	140	S	280
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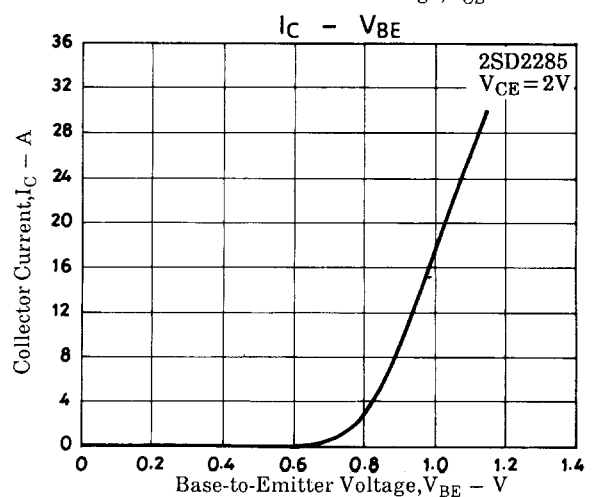
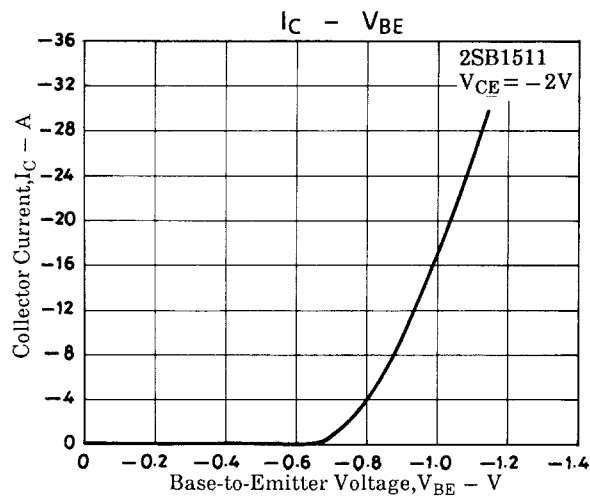
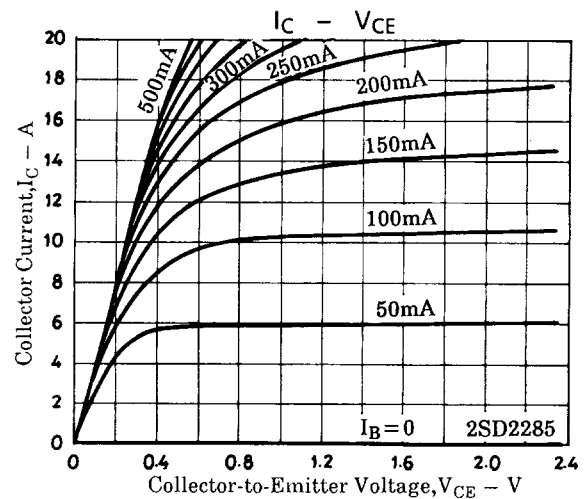
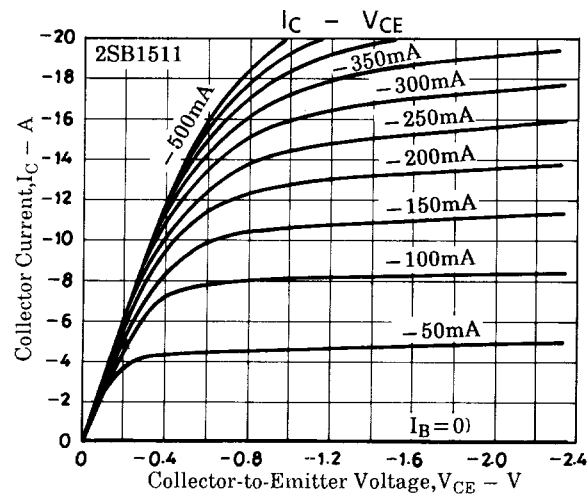
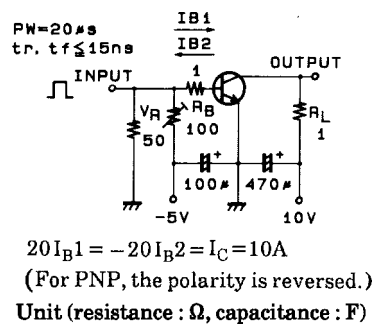
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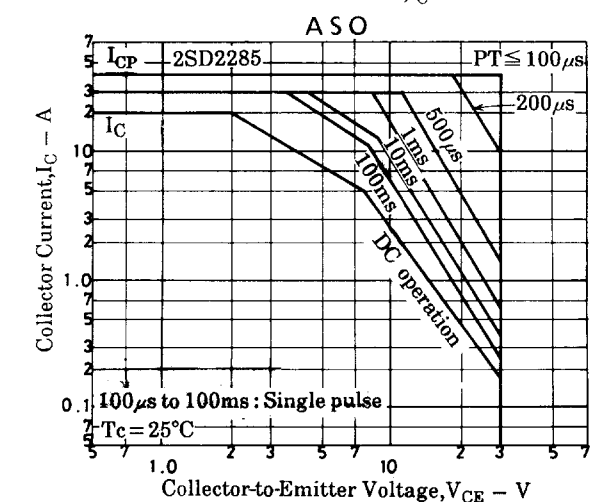
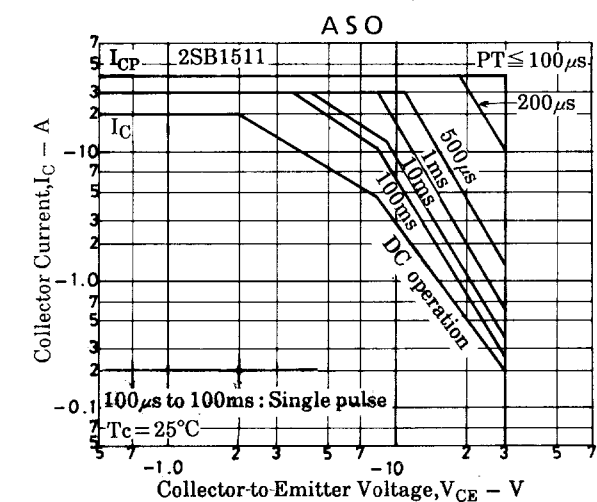
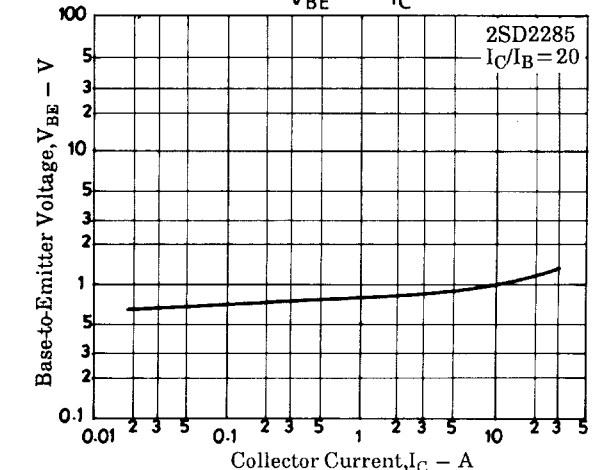
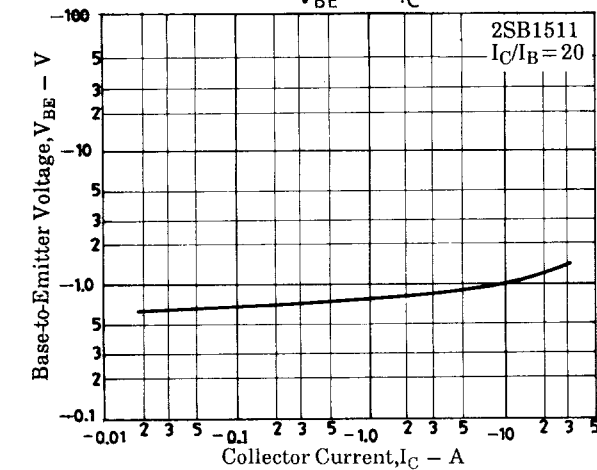
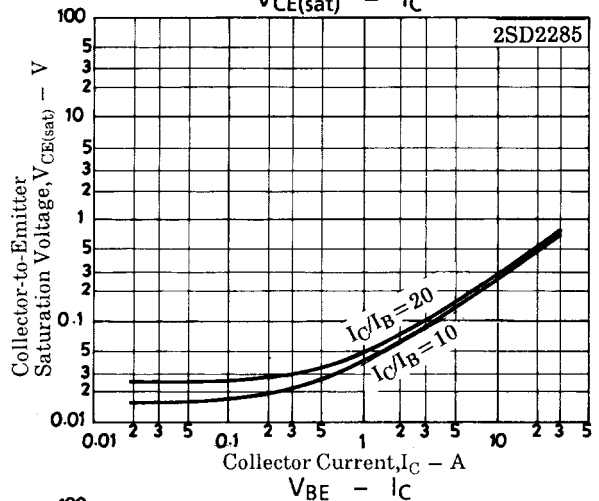
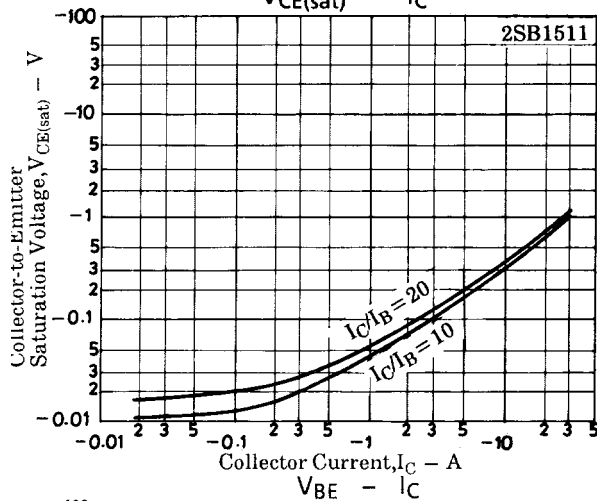
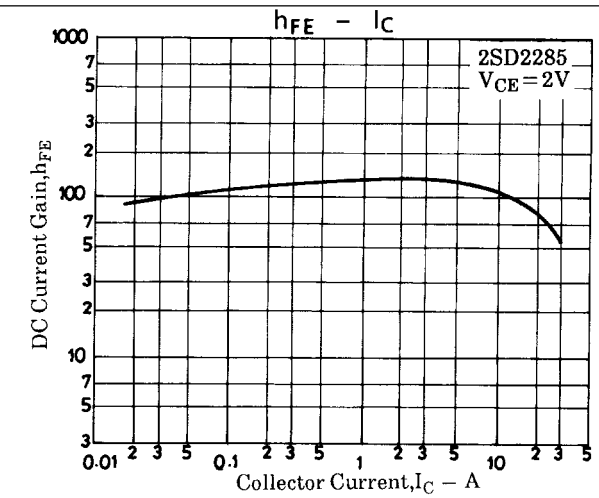
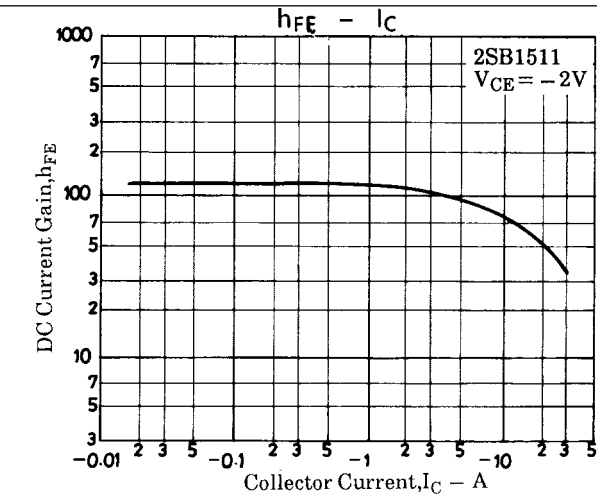
2SB1511/2SD2285

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=(-)1mA, I_E=0$	(-)60			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=(-)1mA, R_{BE}=\infty$	(-)30			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=(-)1mA, I_C=0$	(-)6			V
Turn-ON Time	t_{on}	See specified test circuit.		300		ns
Storage Time	t_{stg}	See specified test circuit.		(300)		ns
				600		ns
Fall Time	t_f	See specified test circuit.		20		ns

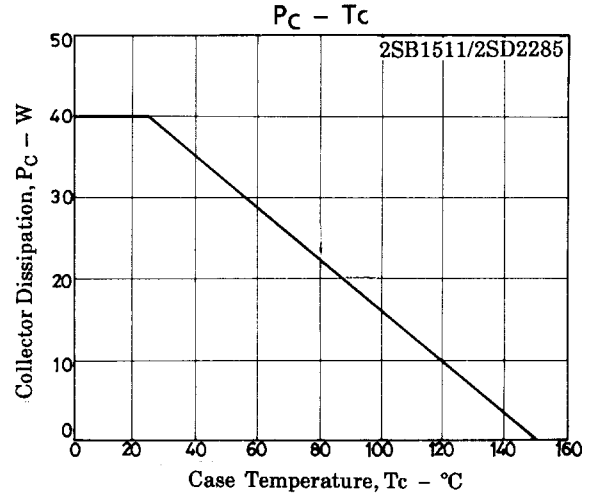
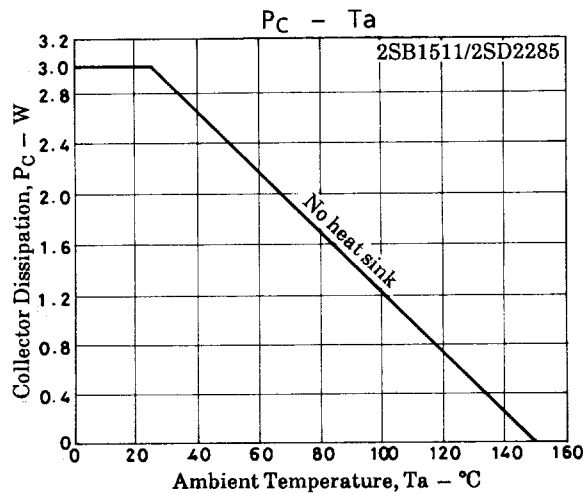
Switching Time Test Circuit



2SB1511/2SD2285



2SB1511/2SD2285



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