

SANYO

No.3716

2SB1511/2SD2285

PNP/NPN Epitaxial Planar Silicon Transistors

High-Current Switching Applications

Applications

- Relay drivers, high-speed inverters, converters.

Features

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

() : 2SB1511

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

			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
Peak Collector Current	i_{cp}	(-)40	A
Collector Dissipation	P_C	3.0	W
		40	W
		150	$^\circ\text{C}$
Junction Temperature	T_j	-55 to +150	$^\circ\text{C}$
Storage Temperature	T_{stg}		

 $T_c = 25^\circ\text{C}$ **Electrical Characteristics at $T_a = 25^\circ\text{C}$**

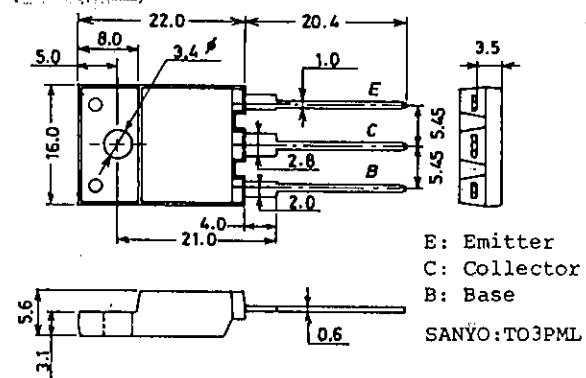
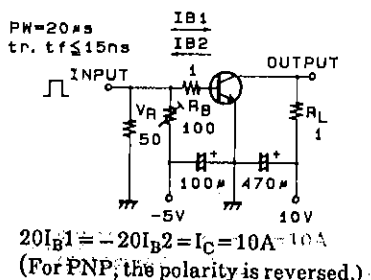
			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = (-)40V, I_E = 0$			(-)0.1	mA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = (-)4V, I_C = 0$			(-)0.1	mA
DC Current Gain	$h_{FE(1)}$	$V_{CE} = (-)2V, I_C = (-)1A$	70*		280*	
	$h_{FE(2)}$	$V_{CE} = (-)2V, I_C = (-)10A$	30			
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = (-)8A, I_B = (-)0.4A$		(- 0.25)	(- 0.5)	V
				0.2	0.4	
Gain-Bandwidth Product	f_T	$V_{CE} = (-)5V, I_C = (-)1A$		120		MHz
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-)1mA, I_E = 0$	(-)60			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = (-)1mA, R_{BE} = \infty$	(-)30			V
E-B 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}	"		(300)600		ns
Fall Time	t_f	"		20		ns

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

70	Q	140	100	R	200	140	S	280
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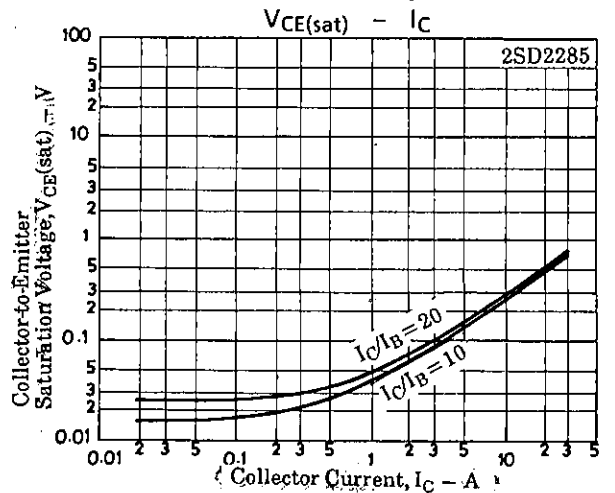
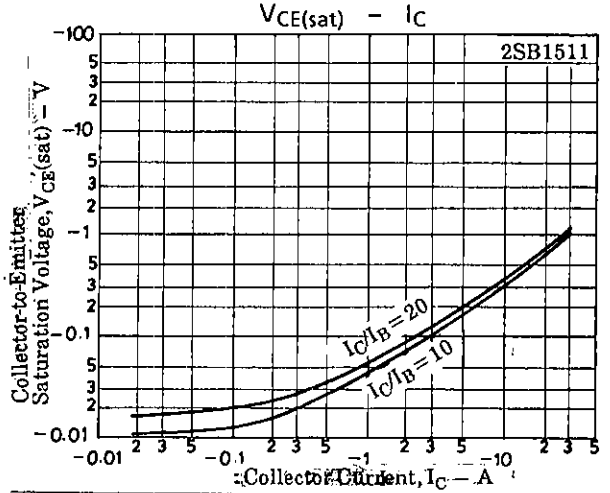
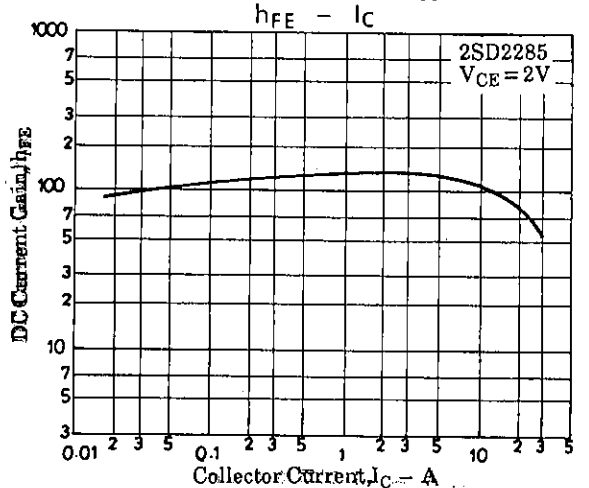
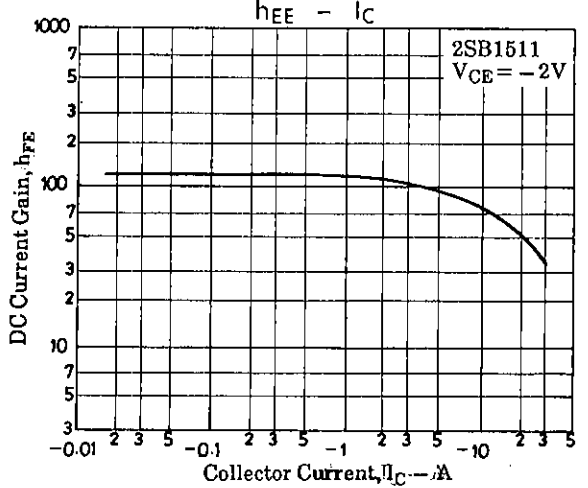
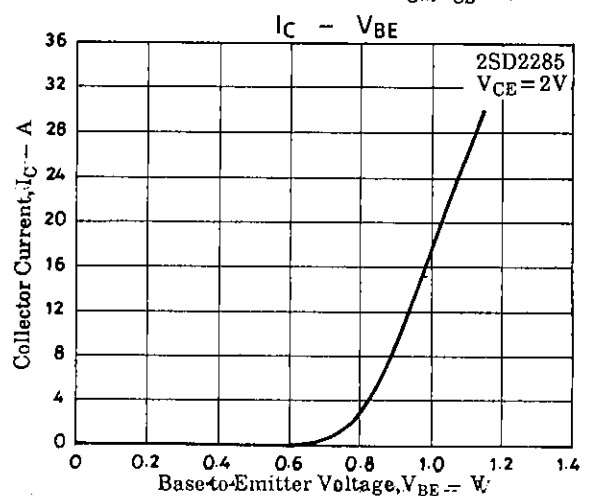
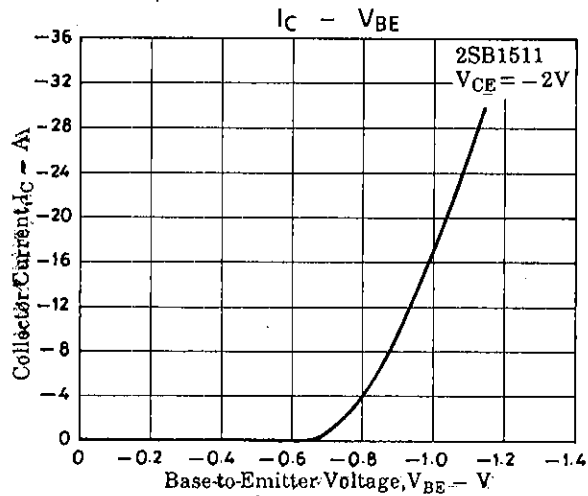
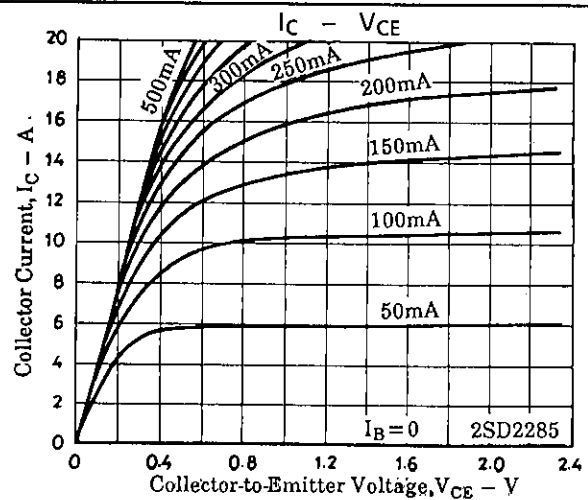
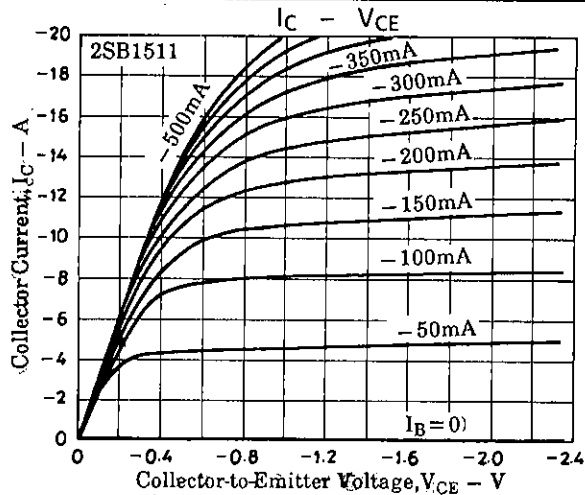
Package Dimensions 2039A

(unit : mm)

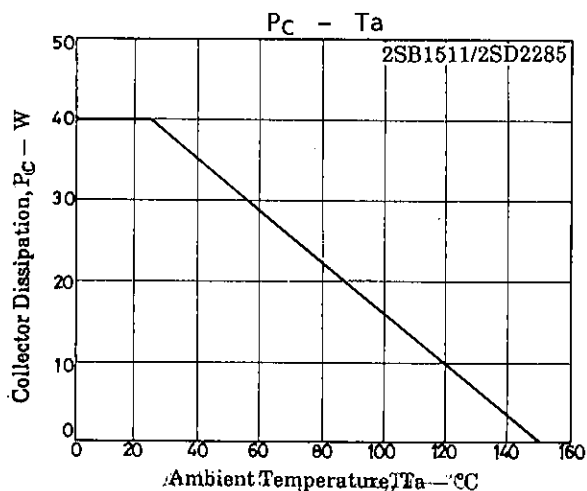
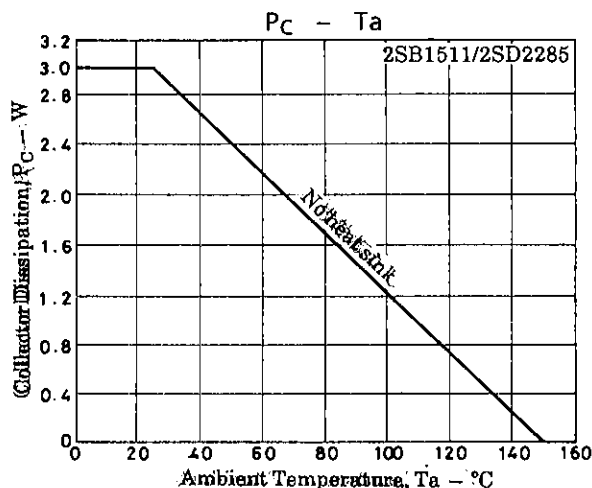
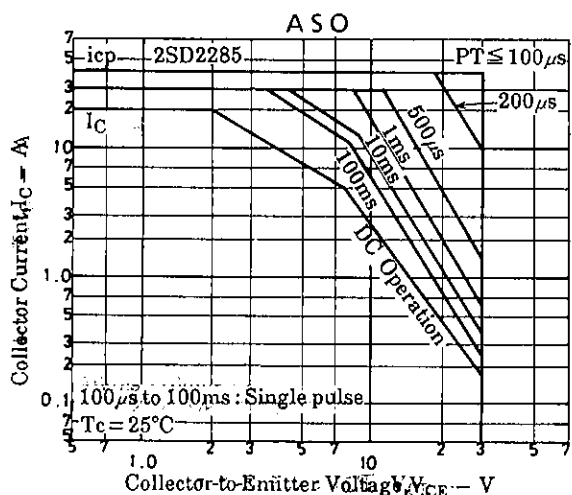
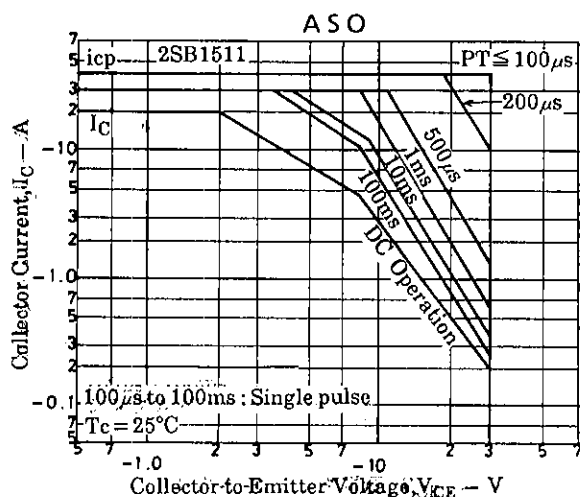
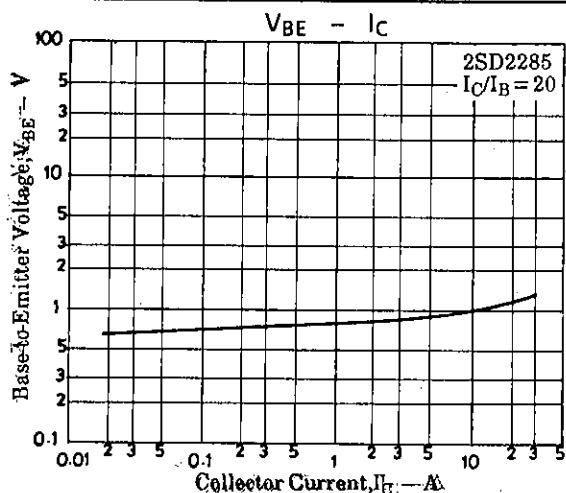
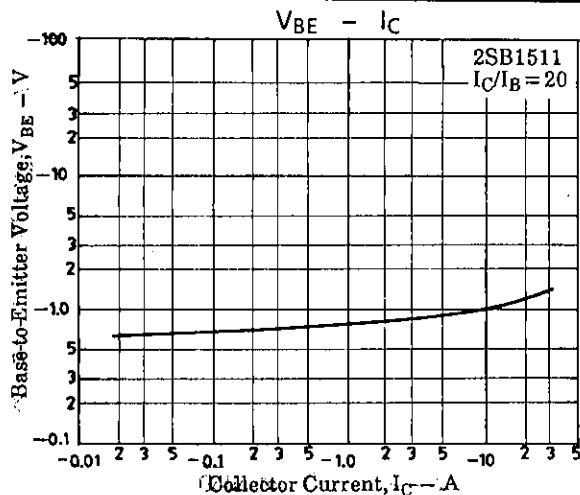
**Switching Time Test Circuit**Unit (resistance : Ω , capacitance : F)**SANYO Electric Co., Ltd. Semiconductor Business Headquarters**

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2SB1511/2SD2285



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