

SANYO

No.3511A

2SA1785/2SC46452SA1785:PNP Epitaxial Planar Silicon Transistor
2SC4645:NPN Triple Diffused Planar Silicon Transistor

High Voltage Driver Applications

Features

- Large current capacity ($I_C = 1A$)
- High breakdown voltage ($V_{CEO} \geq 400V$)

(): 2SA1785

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

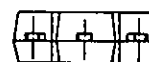
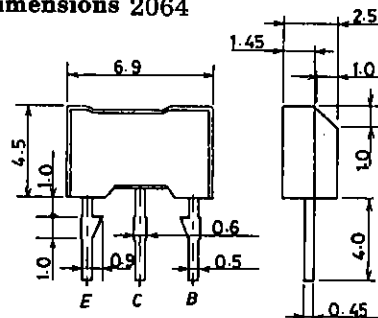
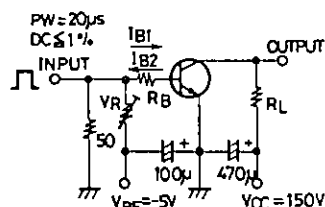
			unit
Collector to Base Voltage	V_{CBO}	(-)400	V
Collector to Emitter Voltage	V_{CEO}	(-)400	V
Emitter to Base Voltage	V_{EBO}	(-)5	V
Collector Current	I_C	(-)1	A
Collector Current(Pulse)	I_{CP}	(-)2	A
Collector Dissipation	P_C	1	W
Junction Temperature	T_j	150	$^\circ C$
Storage Temperature	T_{stg}	-55 to +150	$^\circ C$

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

			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = (-)300V, I_E = 0$			(-)1.0	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = (-)4V, I_C = 0$			(-)1.0	μA
DC Current Gain	h_{FE}	$V_{CE} = (-)10V, I_C = (-)100mA$	40*		200*	
Gain-Bandwidth Product	f_T	$V_{CE} = (-)10V, I_C = (-)50mA$		(50)70		MHz
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = (-)200mA, I_B = (-)20mA$			(-)1.0	V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = (-)200mA, I_B = (-)20mA$			(-)1.0	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-)10\mu A, I_E = 0$	(-)400			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = (-)1mA, R_{BE} = \infty$	(-)400			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = (-)10\mu A, I_C = 0$	(-)5			V
Output Capacitance	C_{ob}	$V_{CB} = (-)30V, f = 1MHz$		(12)8		pF
Turn-ON Time	t_{on}	See specified Test Circuit.	(0.25)0.11			μs
Storage Time	t_{stg}	"	(3.0)4.0			μs
Fall Time	t_f	"	(0.3)0.65			μs

*: The 2SA1785/2SC4645 are classified by 100mA h_{FE} as follows:

40 C 80	60 D 120	100 E 200
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Package Dimensions 2064
(unit: mm)E: Emitter
C: Collector
B: Base
SANYO: NMP**Switching Time Test Circuit**

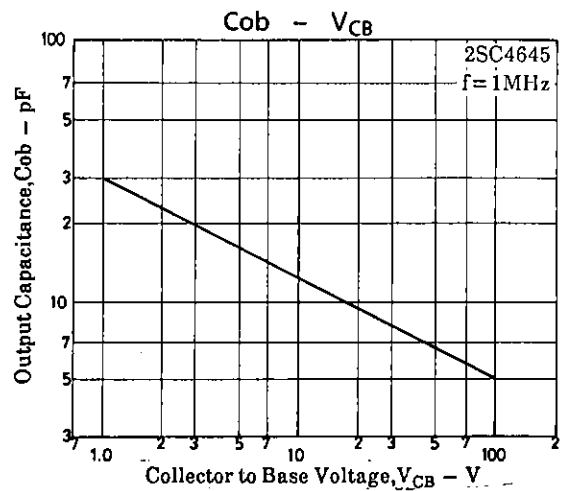
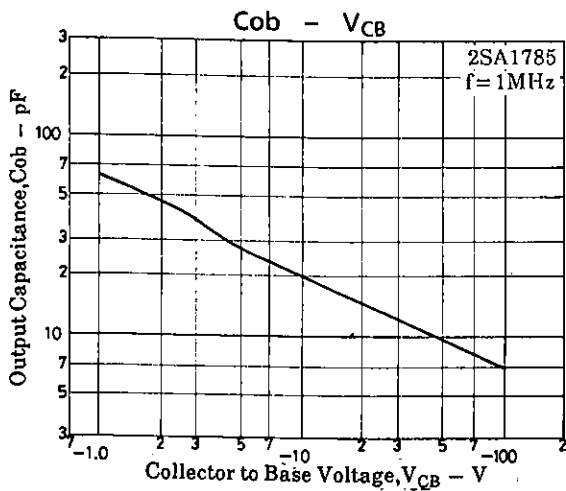
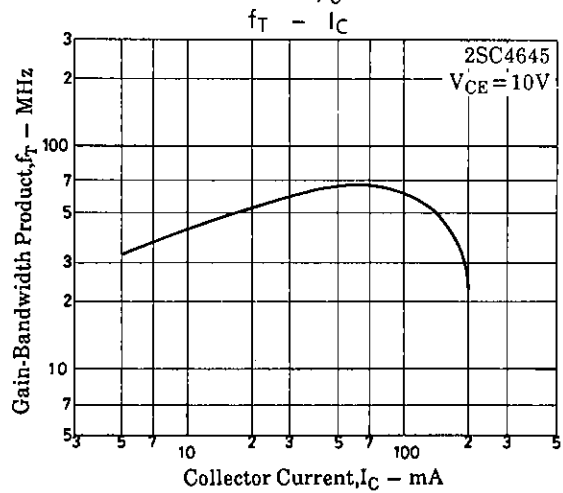
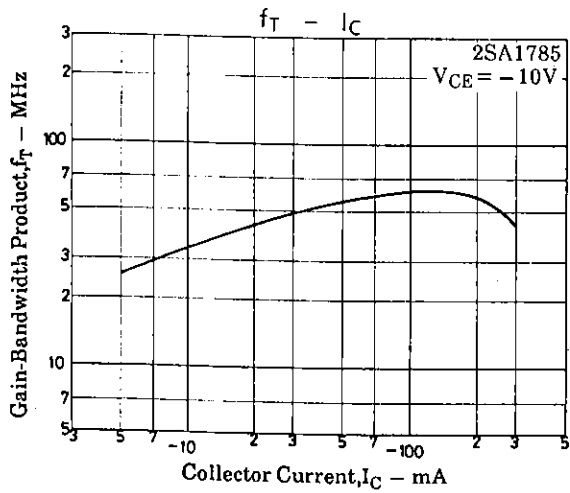
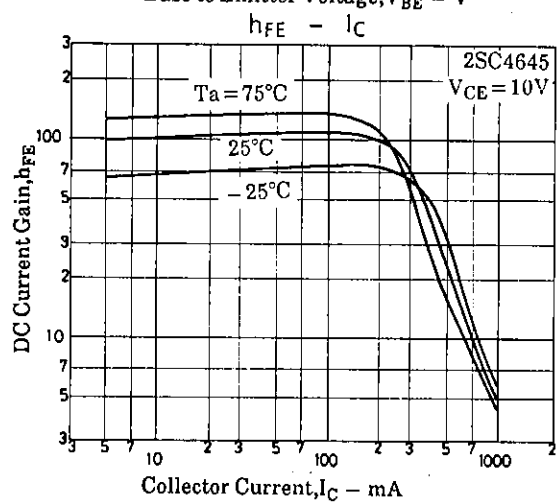
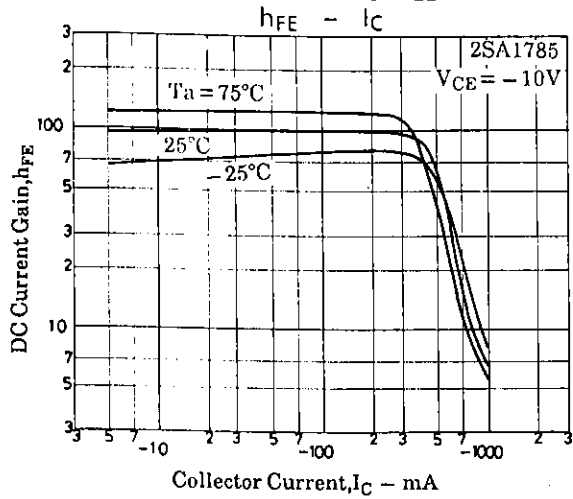
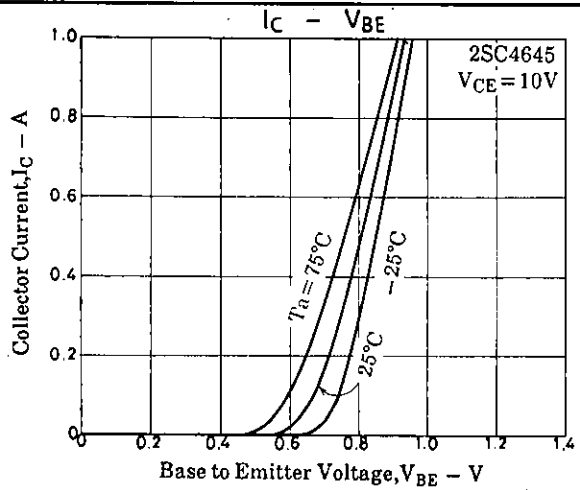
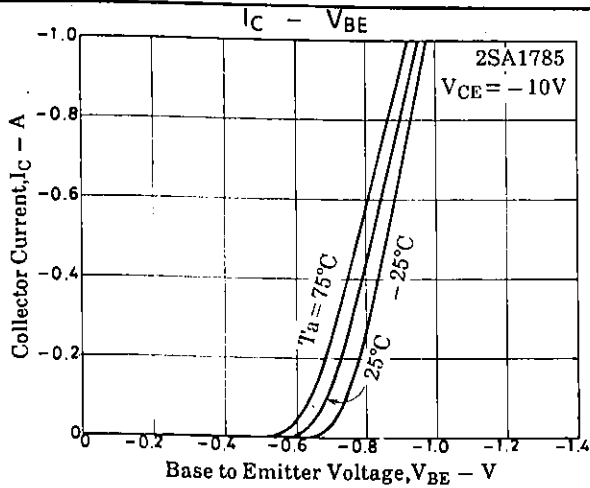
$10I_{B1} = -10I_{B2} = I_C = 200mA$
 $R_L = 750\Omega, R_B = 50\Omega$, at $I_C = 200mA$
 (For PNP, the polarity is reversed.)

Unit(Resistance: Ω , Capacitance: F)

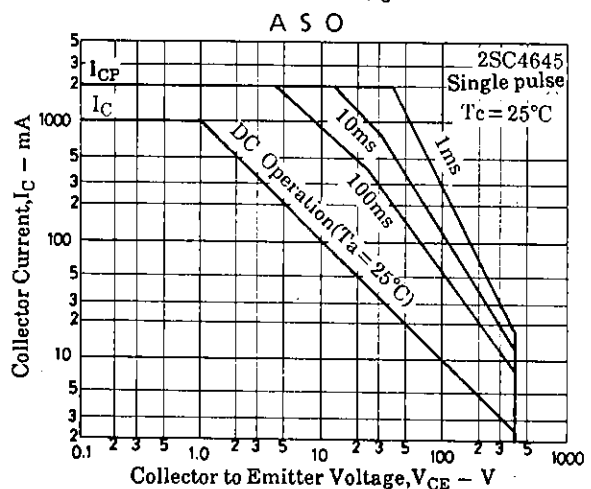
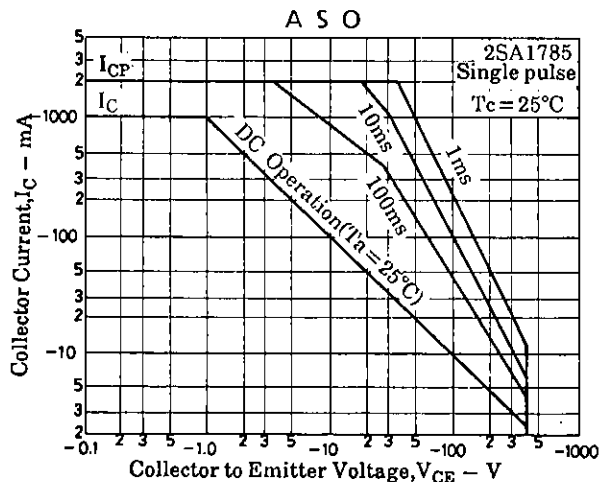
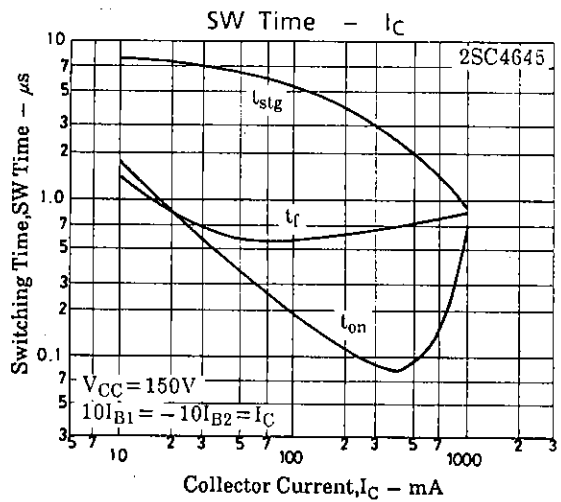
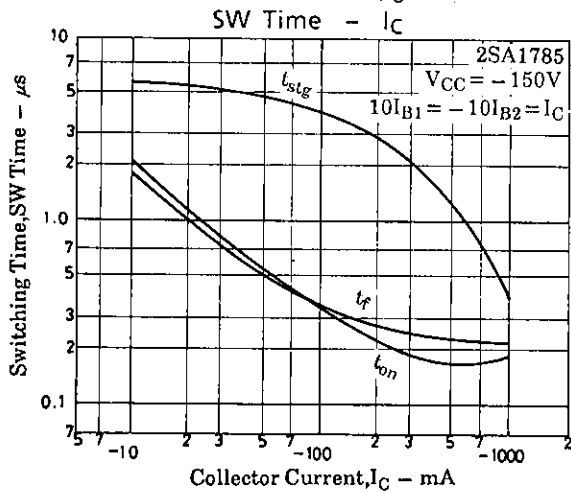
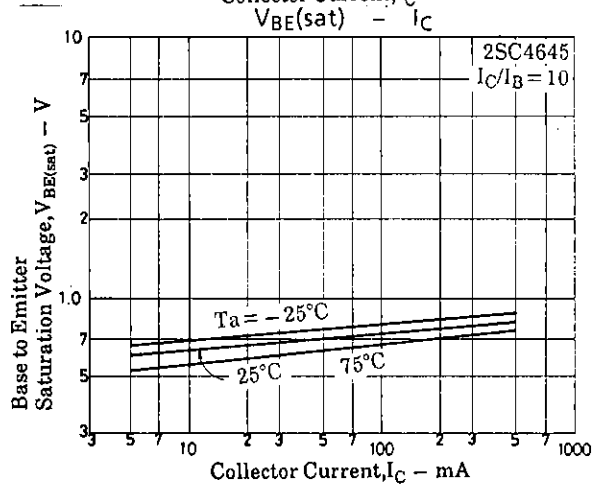
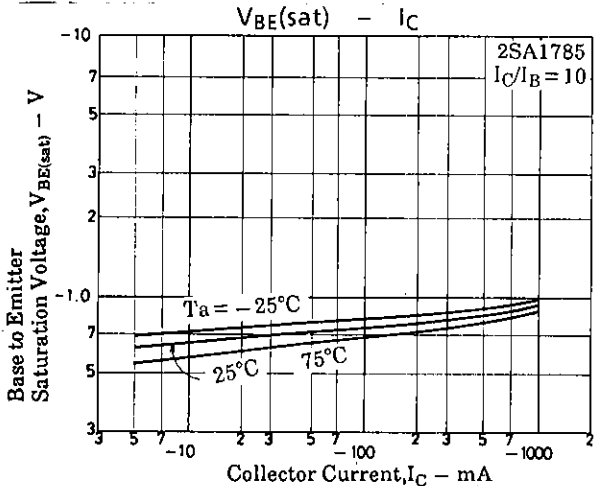
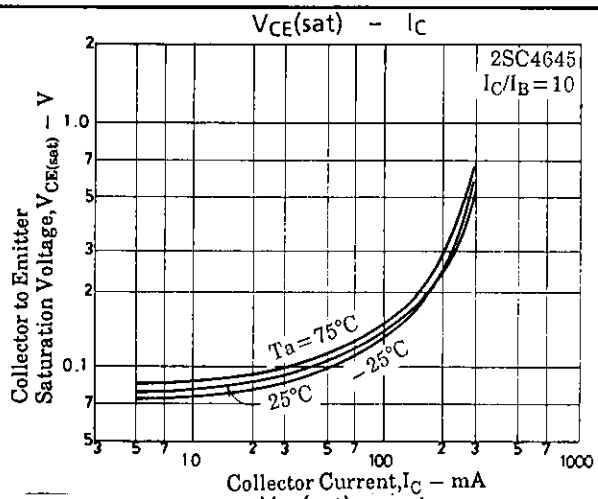
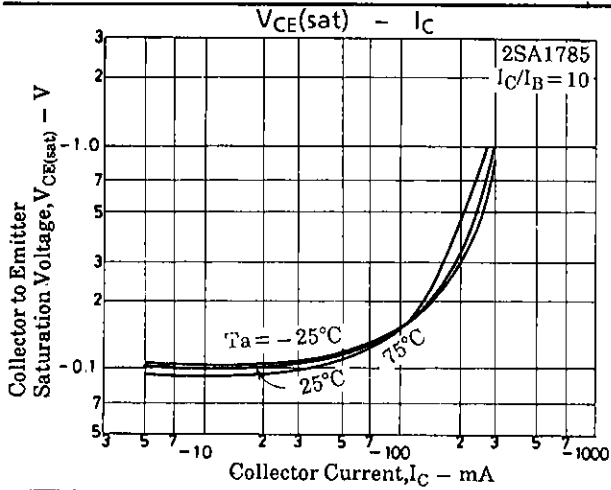
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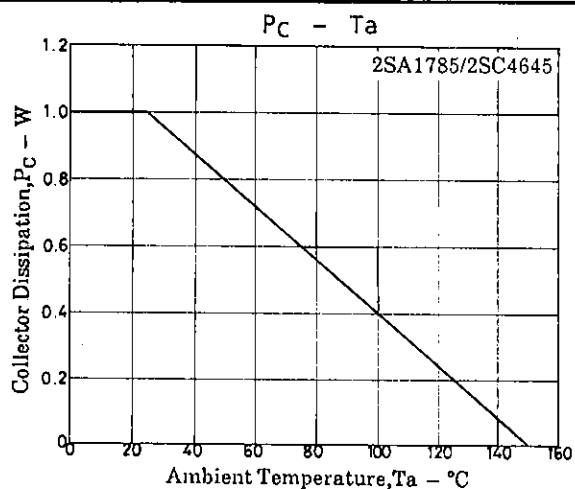
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2SA1785/2SC4645



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