

SANYO	No.2511A	2SA1593/2SC4135
		PNP/NPN Epitaxial Planar Silicon Transistors High-Voltage Switching Applications

Applications

- Power supplies, relay drivers, lamp drivers

Features

- Adoption of FBET, MBIT processes
- High breakdown voltage and large current capacity
- Fast switching speed
- Small and slim package permitting 2SA1593/2SC4135-applied sets to be made more compact

(): 2SA1593

Absolute Maximum Ratings at Ta=25°C

			unit
Collector to Base Voltage	V _{CB0}	(-)120	V
Collector to Emitter Voltage	V _{CEO}	(-)100	V
Emitter to Base Voltage	V _{EBO}	(-)6	V
Collector Current	I _C	(-)2	A
Collector Current(Pulse)	I _{CP}	(-)3	A
Collector Dissipation	P _C	1	W
		15	W
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-55 to +150	°C

Electrical Characteristics at Ta=25°C

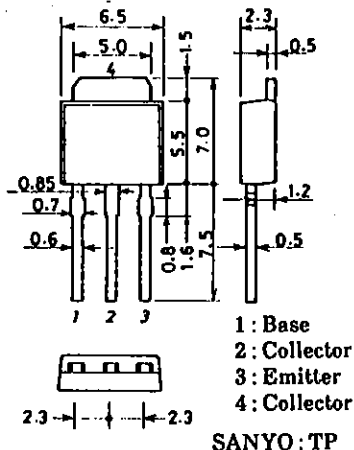
			min	typ	max	unit
Collector Cutoff Current	I _{CBO}	V _{CB} =(-)100V, I _E =0			(-)100	nA
Emitter Cutoff Current	I _{EBO}	V _{EB} =(-)4V, I _C =0			(-)100	nA
DC Current Gain	h _{FE}	V _{CE} =(-)5V, I _C =(-)100mA	100*		400*	
Gain-Bandwidth Product	f _T	V _{CE} =(-)10V, I _C =(-)100mA		120		MHz
Output Capacitance	c _{ob}	V _{CB} =(-)10V, f=1MHz		(25)		pF
				16		pF

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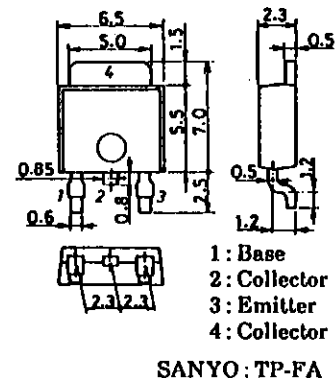
*: The 2SA1593/2SC4135 are classified by 100mA h_{FE} as follows:

100	R	200	140	S	280	200	T	400
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Package Dimensions 2045B
(unit:mm)



Package Dimensions 2044B
(unit:mm)

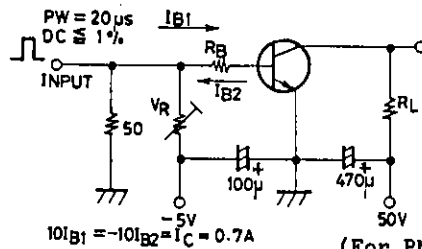


2SA1593/2SC4135

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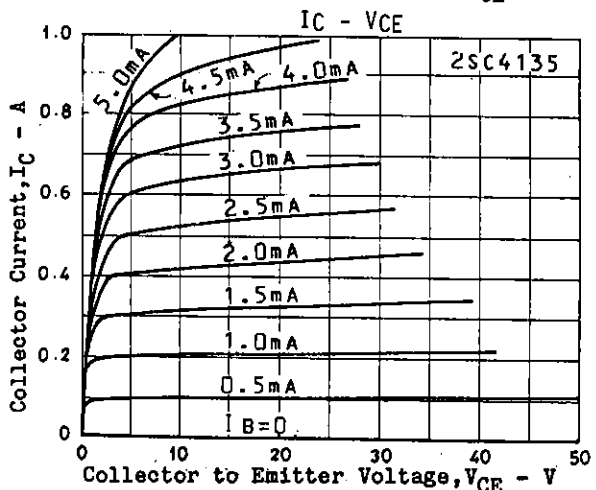
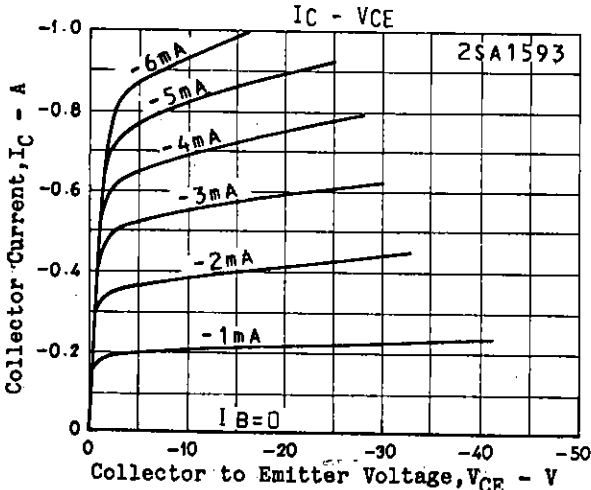
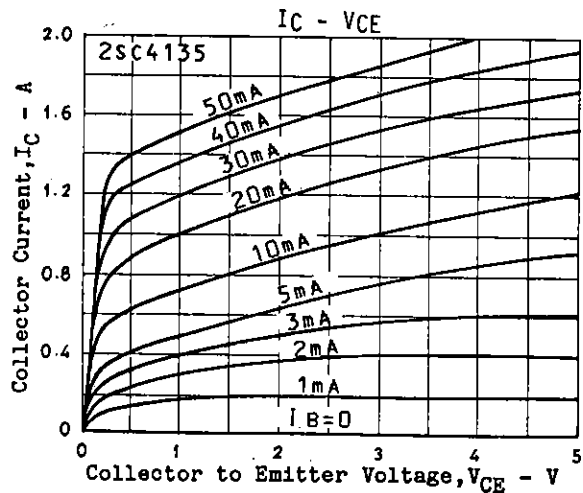
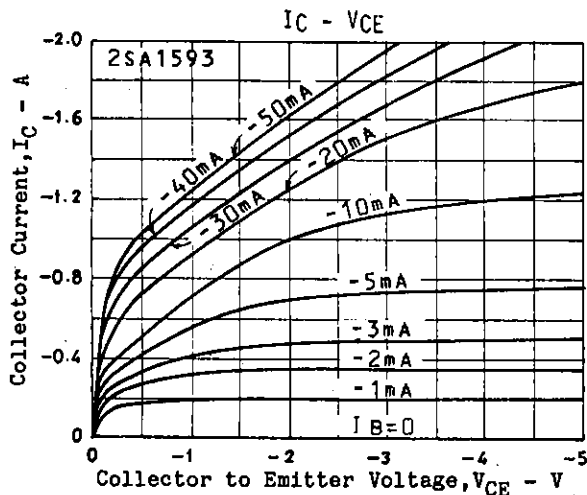
			min	typ	max	unit
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = (-)1A, I_B = (-)100mA$		(-0.22)	(-0.6)	V
				0.13	0.4	V
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = (-)1A, I_B = (-)100mA$		$(-)0.85$	$(-)1.2$	V
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-)10\mu A, I_E = 0$	$(-)120$			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = (-)1mA, R_{BE} = \infty$	$(-)100$			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = (-)10\mu A, I_C = 0$	$(-)6$			V
Turn-on Time	t_{on}	See specified Test Circuit.		(80)		ns
				"	80	ns
Storage Time	t_{stg}			"	(750)	ns
				"	1000	ns
Fall Time	t_f			"	(40)	ns
				"	50	ns

Switching Time Test Circuit

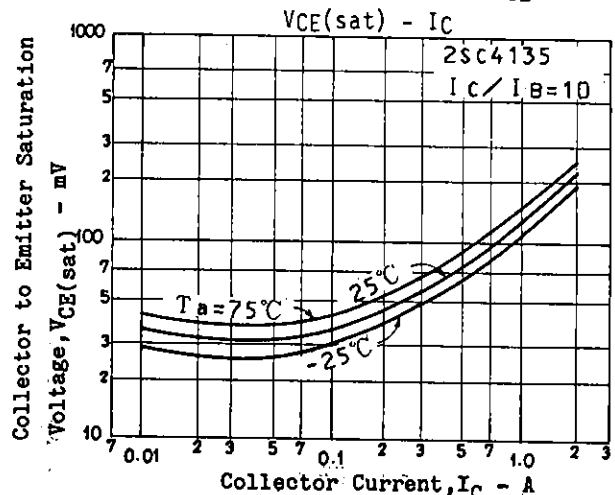
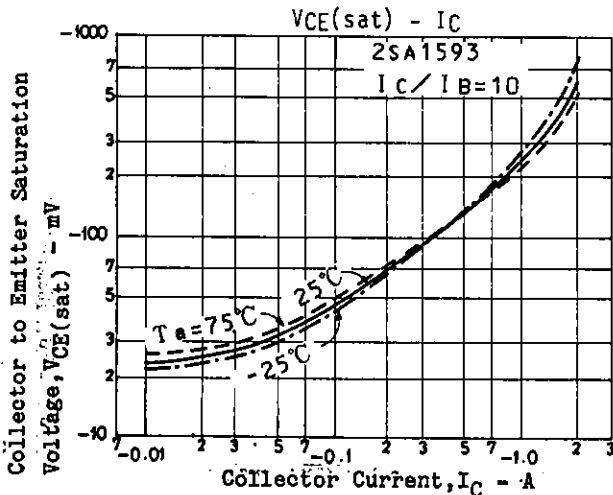
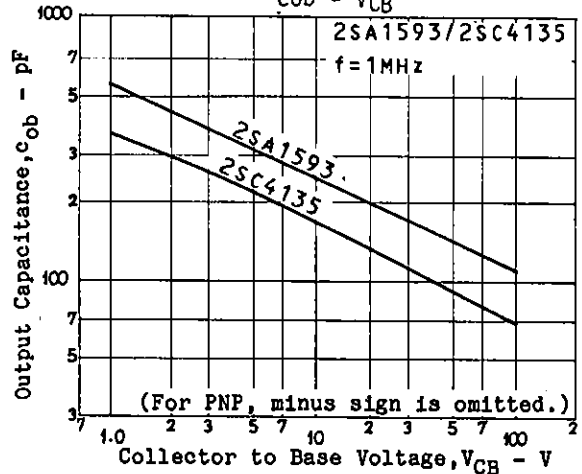
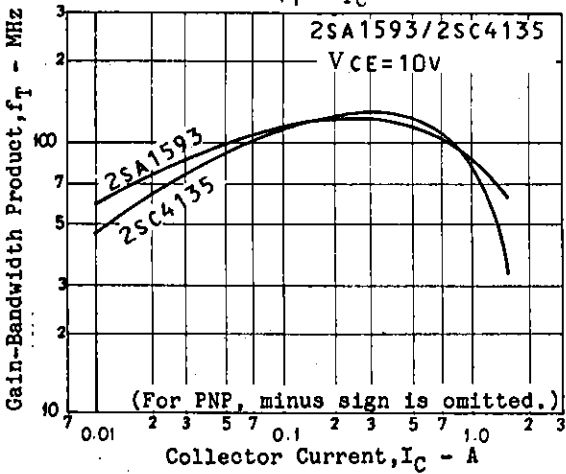
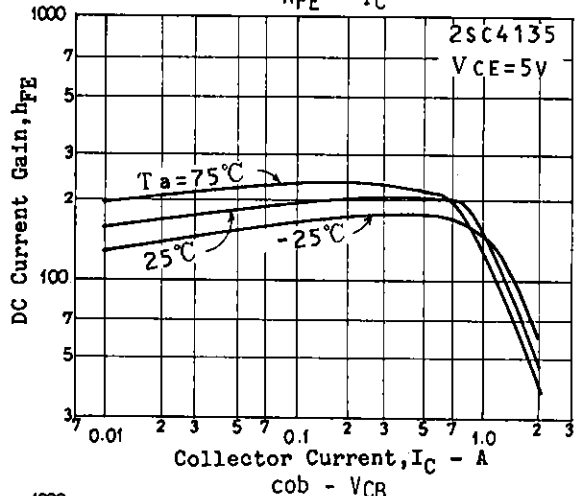
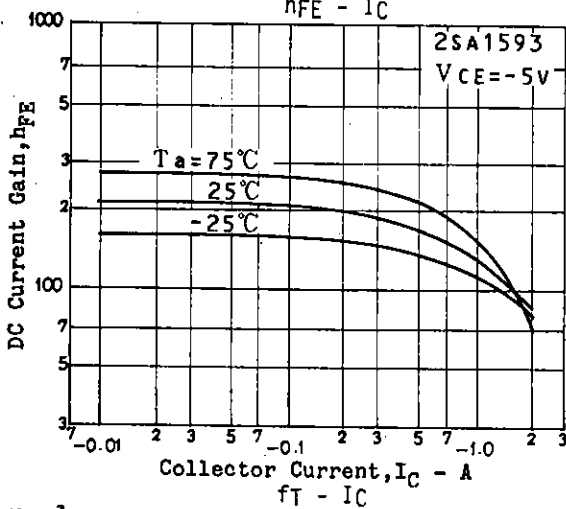
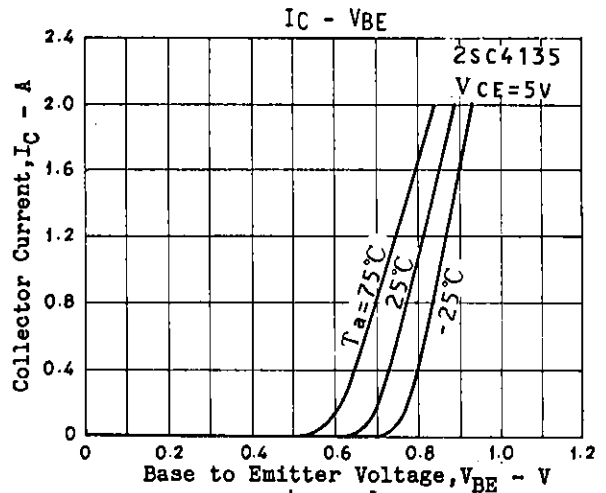
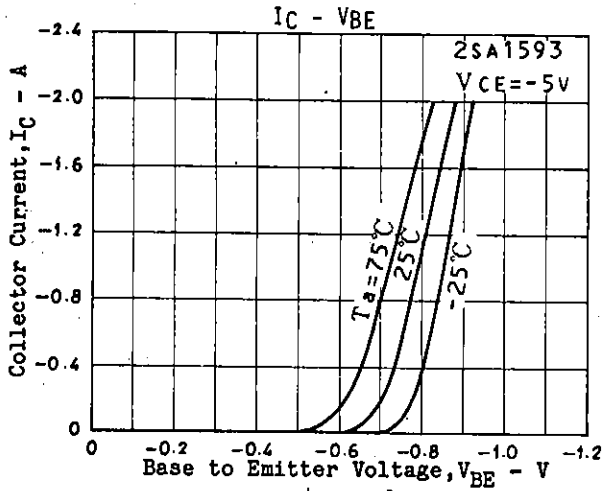


Unit (Resistance : Ω , Capacitance : F)

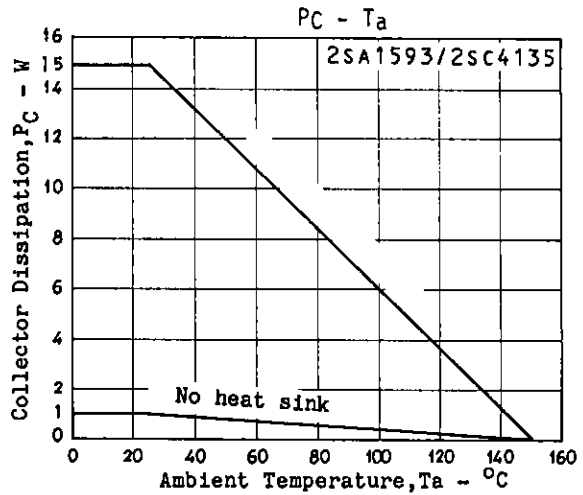
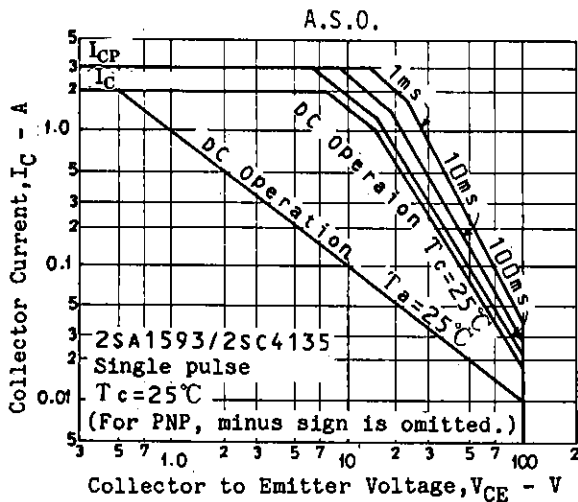
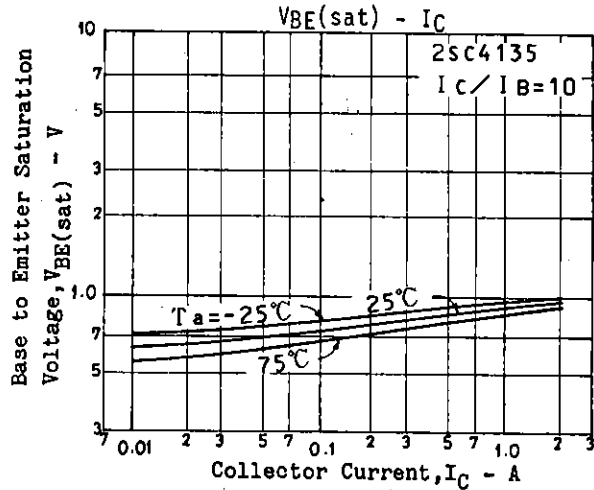
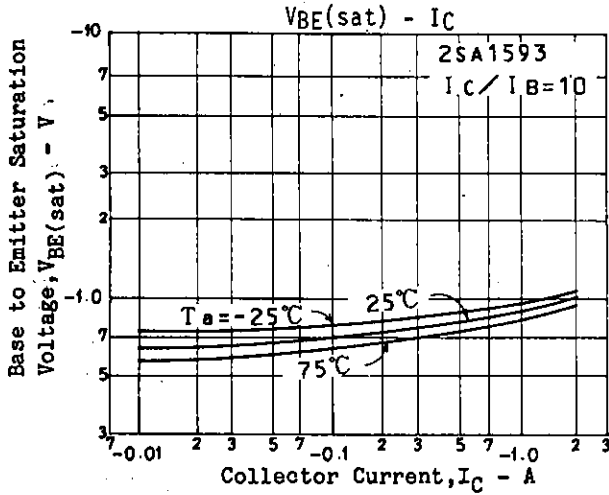
(For PNP, the polarity is reversed.)



2SA1593/2SC4135



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