

SANYO	No.2007A	2SA1419/2SC3649
	PNP/NPN Epitaxial Planar Silicon Transistors High-Voltage Switching Applications	

Features

- . Adoption of FBET, MBIT processes.
- . High breakdown voltage and large current capacity
- . Very small size making it easy to provide high-density hybrid ICs

(): 2SA1419

Absolute Maximum Ratings at Ta=25°C		unit
Collector to Base Voltage	V _{CBO}	(-)180 V
Collector to Emitter Voltage	V _{CEO}	(-)160 V
Emitter to Base Voltage	V _{EBO}	(-)6 V
Collector Current	I _C	(-)1.5 A
Collector Current(Pulse)	I _{CP}	(-)2.5 A
Collector Dissipation	P _C	500 mW
Mounted on ceramic board(250mm ² x0.8mm)		
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} =(-)120V, I _E =0			(-)1	µA
Emitter Cutoff Current	I _{EBO} V _{EB} =(-)4V, I _C =0			(-)1	µA
DC Current Gain	h _{FE} (1) V _{CE} =(-)5V, I _C =(-)100mA	100*		400*	
	h _{FE} (2) V _{CE} =(-)5V, I _C =(-)10mA	80			
Gain-Bandwidth Product	f _T V _{CE} =(-)10V, I _C =(-)50mA		120		MHz
Output Capacitance	c _{ob} V _{CB} =(-)10V, f=1MHz		(22)		pF
			14		pF
C-E Saturation Voltage	V _{CE(sat)} I _C =(-)500mA, I _B =(-)50mA		(-200)	(-500)	mV
			130	450	mV
B-E Saturation Voltage	V _{BE(sat)} I _C =(-)500mA, I _B =(-)50mA		(-)0.85	(-)1.2	V
C-B Breakdown Voltage	V _{(BR)CBO} I _C =10µA, I _E =0	(-)180			V
C-E Breakdown Voltage	V _{(BR)CEO} I _C =(-)1mA, R _{BE} =∞	(-)160			V
E-B Breakdown Voltage	V _{(BR)EBO} I _E =(-)10µA, I _C =0	(-)6			V

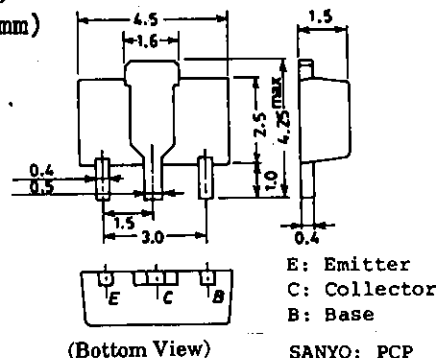
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*: The 2SA1419/2SC3649 are classified by 100mA h_{FE} as follows:

100	R	200	140	S	280	200	T	400
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Marking 2SA1419:AE
2SC3649:CE
h_{FE} rank :R,S,T

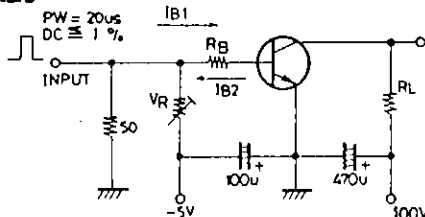
Package Dimensions 2038
(unit:mm)



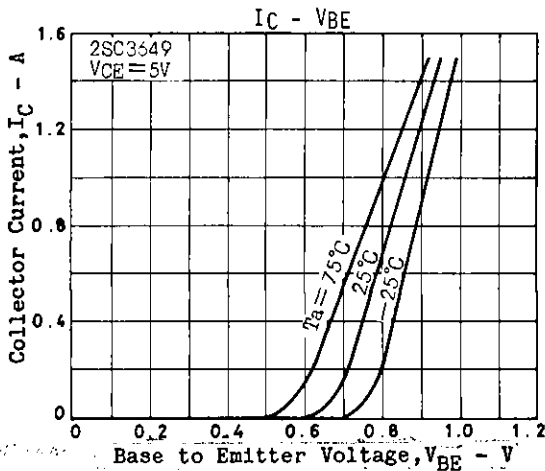
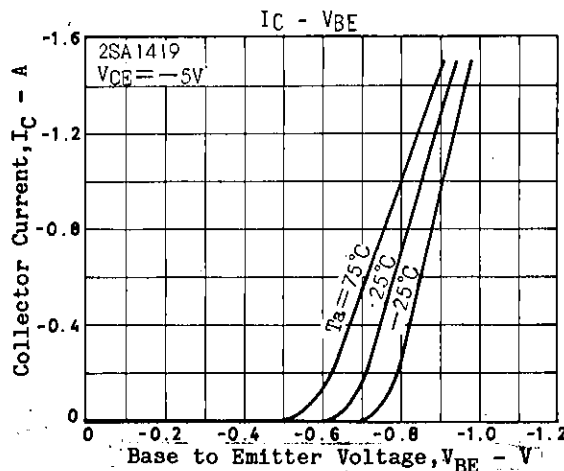
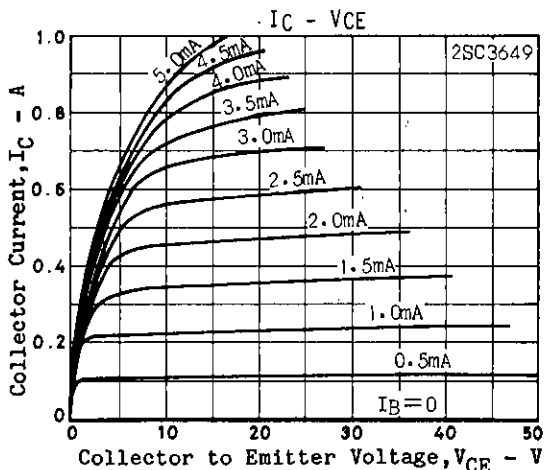
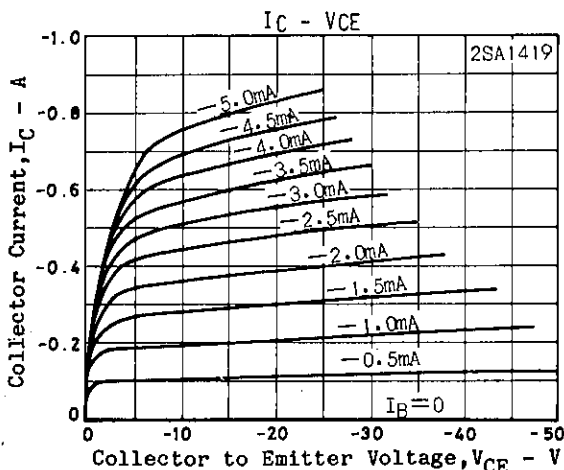
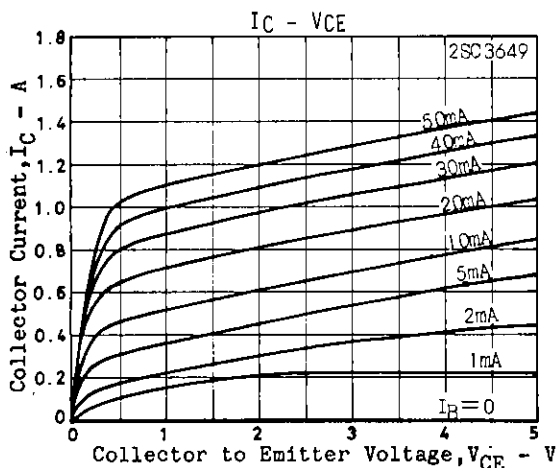
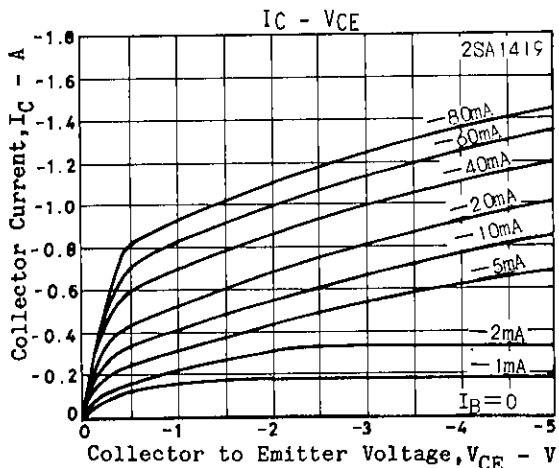
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			min	typ	max	unit
Turn-on Time	t_{on}	See specified Test Circuit.		(40)		ns
				40		ns
Storage Time	t_{stg}			(0.7)		μ s
				1.2		μ s
Fall Time	t_f			(40)		ns
				80		ns

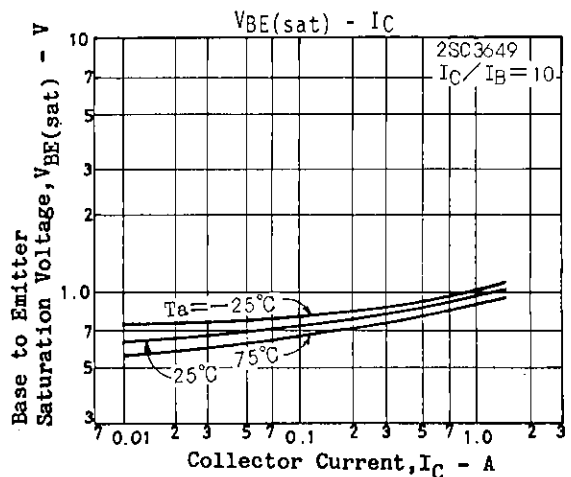
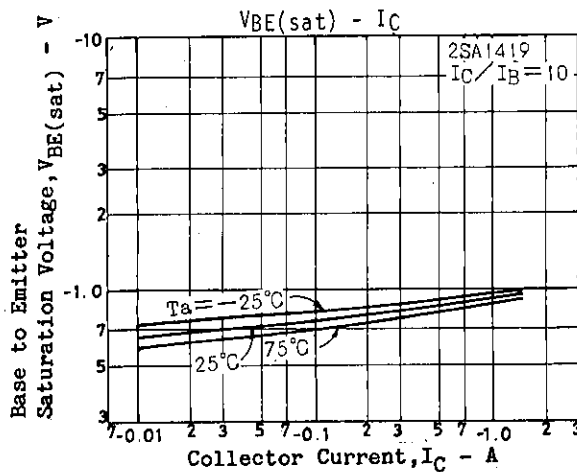
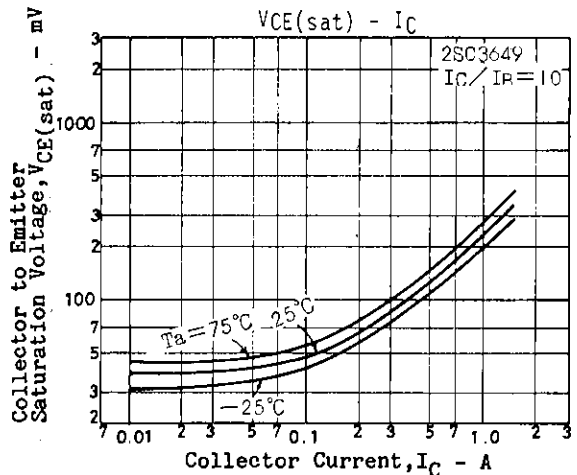
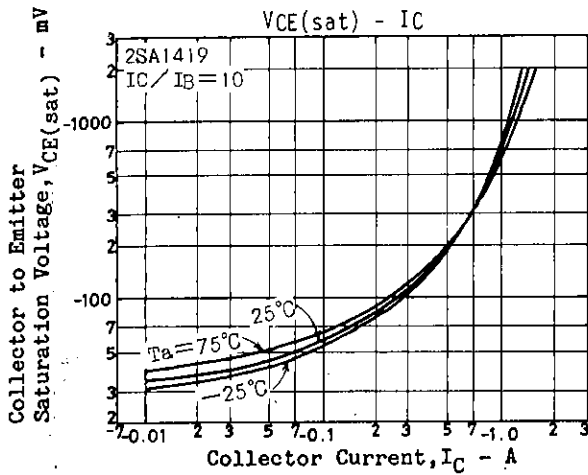
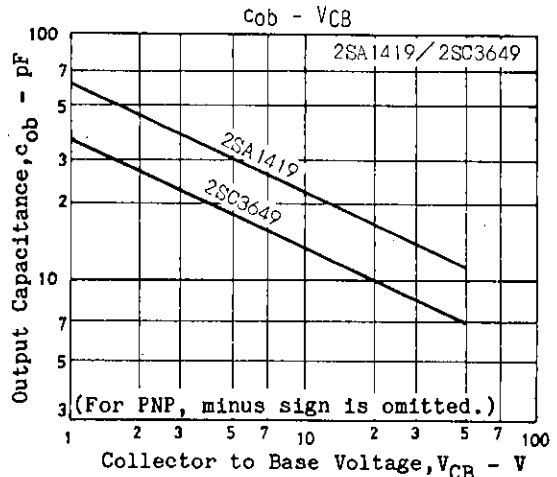
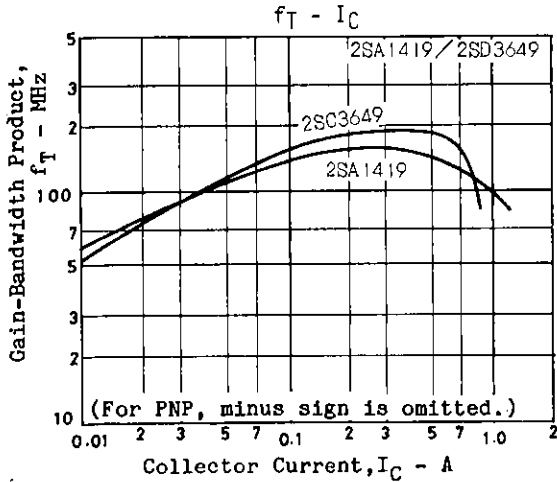
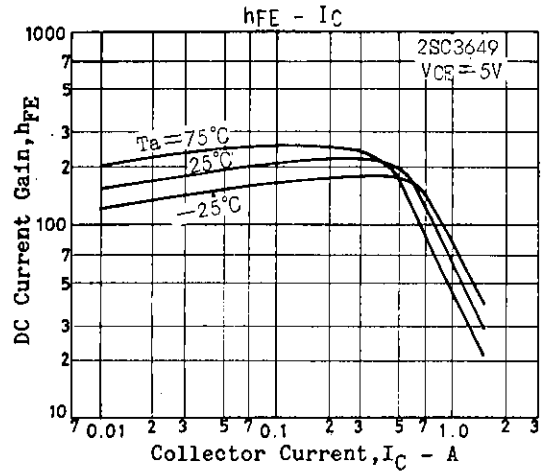
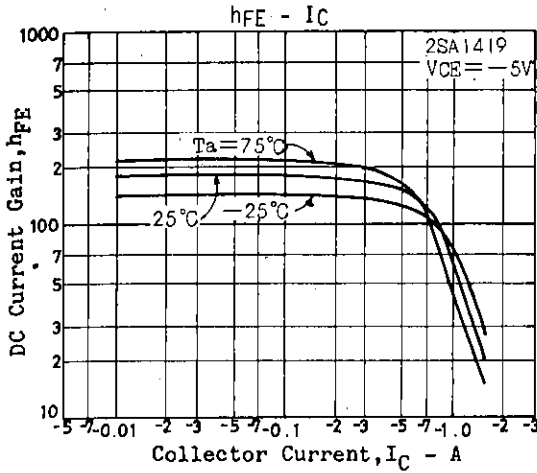
Switching Time Test Circuit

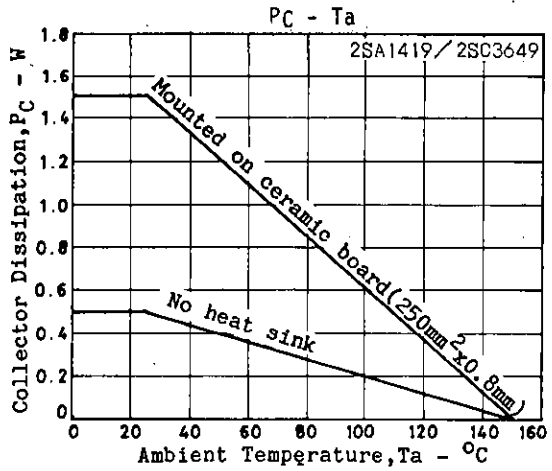
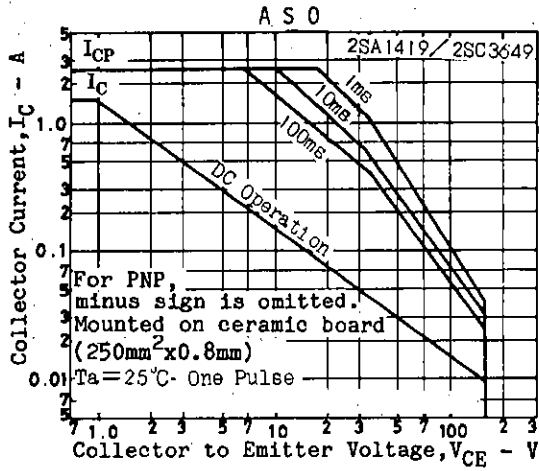


$I_C = 10I_{B1} = -10I_{B2} = 0.7A$ (For PNP, the polarity is reversed.)
Unit (Resistance: Ω , Capacitance: F)



2SA1419/2SC3649





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