

SANYO

No.3096

2SA1709/2SC4489

PNP/NPN Epitaxial Planar Silicon Transistors

High-Voltage Switching Applications

Features

- Adoption of FBET, MBIT processes
- High breakdown voltage, large current capacity
- Fast switching speed

() : 2SA1709

Absolute Maximum Ratings at Ta = 25°C

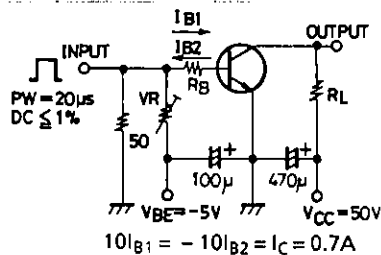
			unit
Collector to Base Voltage	V _{CB0}	(-)	120 V
Collector to Emitter Voltage	V _{CEO}	(-)	100 V
Emitter to Base Voltage	V _{EBO}	(-)	6 V
Collector Current	I _C	(-)	2 A
Collector Current(Pulse)	I _{CP}	(-)	3 A
Collector Dissipation	P _C		1 W
Junction Temperature	T _j		150 °C
Storage Temperature	T _{stg}		-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
C-E Saturation Voltage	V _{CE(sat)}	I _C = (-)1A, I _B = (-)100mA	(-)	0.22	(-)	0.6 V
				0.13		0.4
B-E Saturation Voltage	V _{BE(sat)}	I _C = (-)1A, I _B = (-)100mA	(-)	0.85	(-)	1.2 V
Output Capacitance	C _{ob}	V _{CB} = (-)10V, f = 1MHz		(25)	16	pF
C-B Breakdown Voltage	V _{(BR)CBO}	I _C = (-)10μA, I _E = 0	(-)	120		V
C-E Breakdown Voltage	V _{(BR)CEO}	I _C = (-)1mA, R _{BE} = ∞	(-)	100		V
E-B Breakdown Voltage	V _{(BR)EBO}	I _E = (-)10μA, I _C = 0	(-)	6		V
Turn-ON Time	t _{on}	See specified Test Circuit.		80		ns
Storage Time	t _{stg}	"		(75)		ns
				1000		
Fall Time	t _f	"		(40)	50	ns

※: The 2SA1709/2SC4489 are classified by 100mA h_{FE} as follows:

100 R 200	140 S 280	200 T 400
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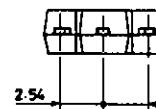
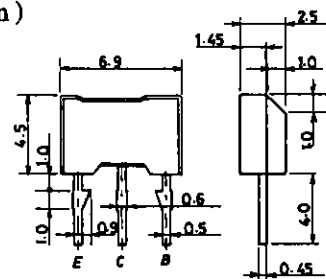
Switching Time Test Circuit

(For PNP, the polarity is reversed.)

Unit(Resistance : Ω, Capacitance : F)

Package Dimensions 2064

(unit: mm)



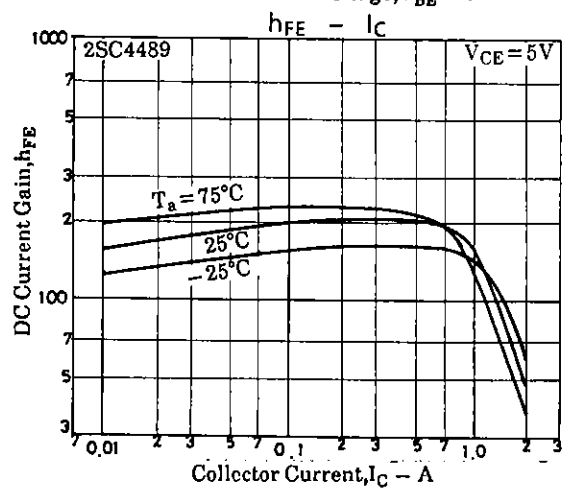
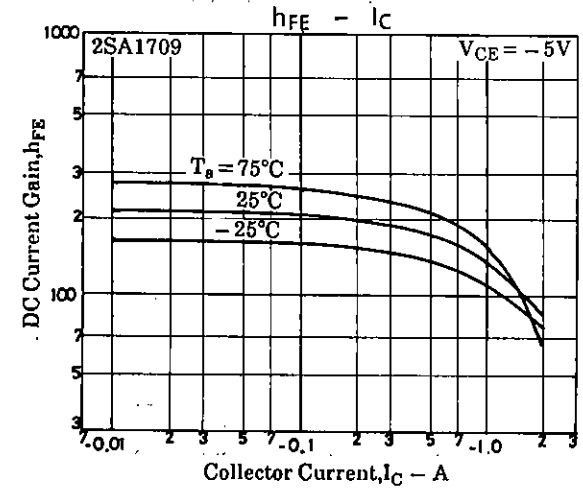
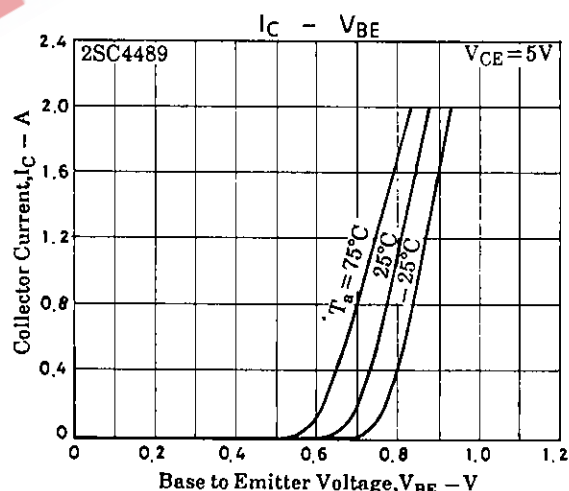
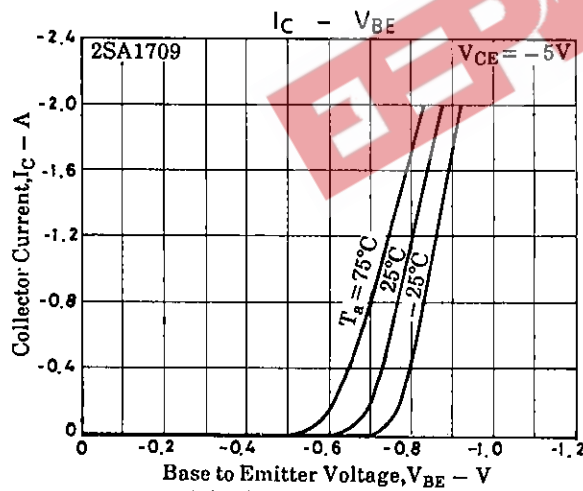
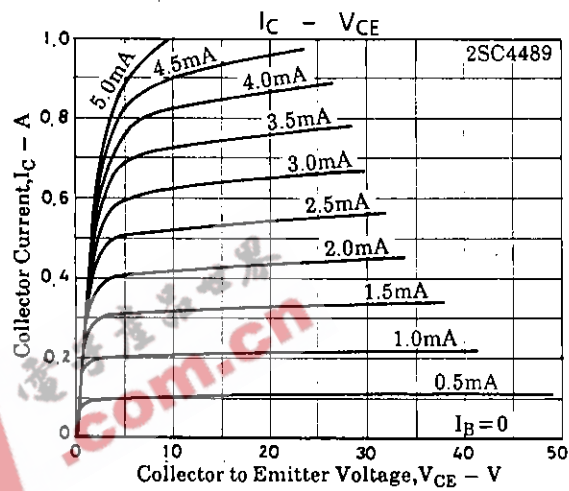
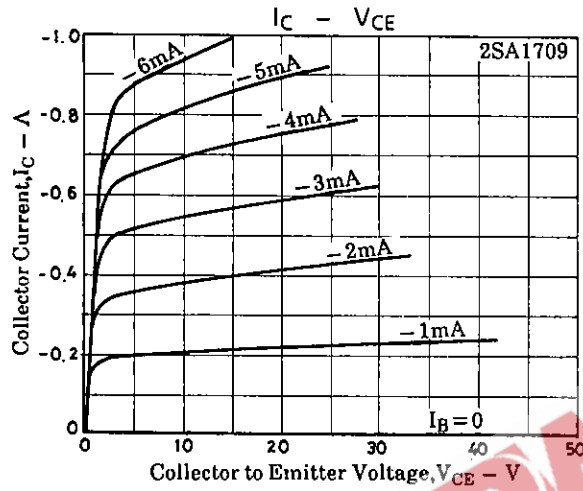
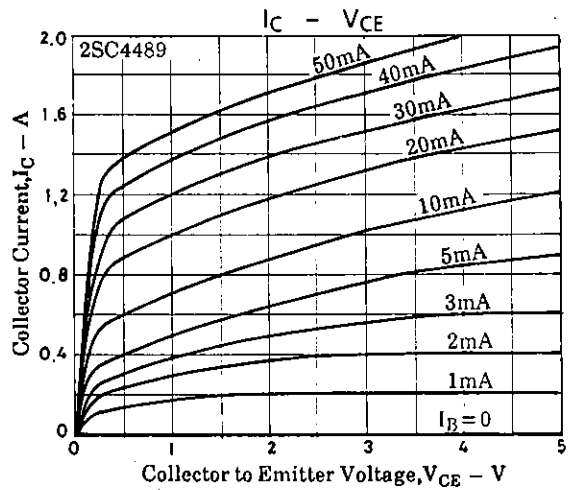
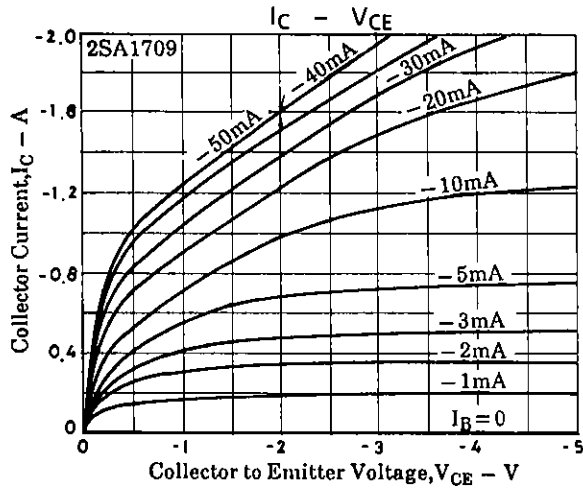
E: Emitter
C: Collector
B: Base

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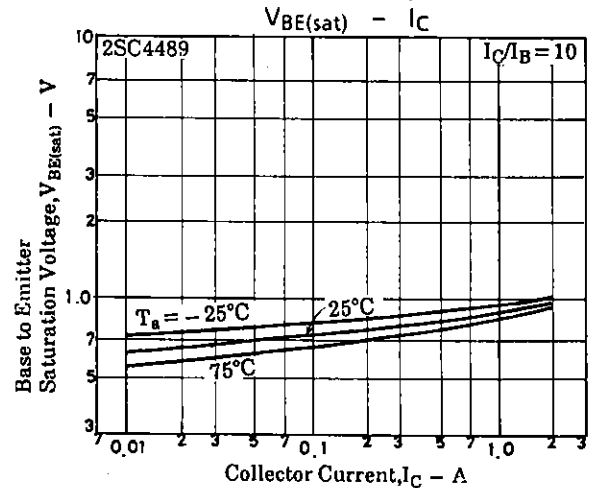
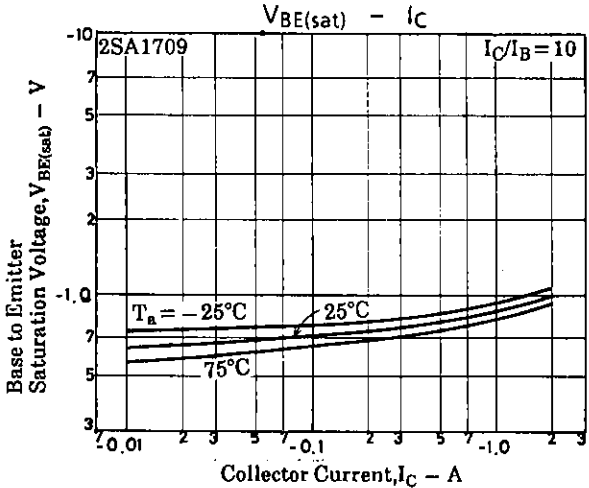
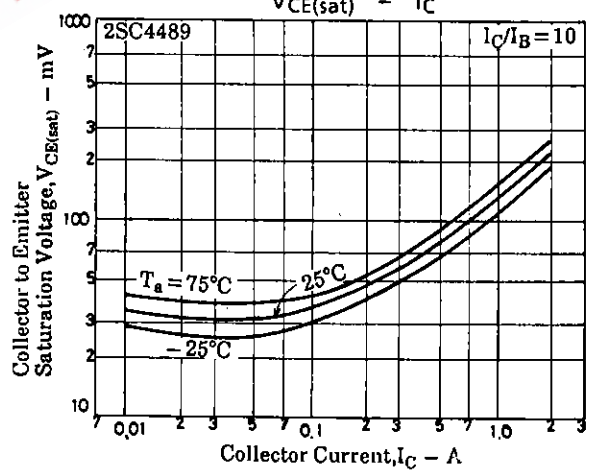
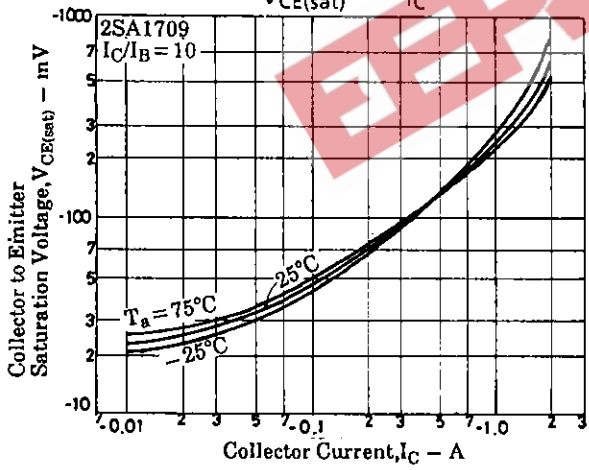
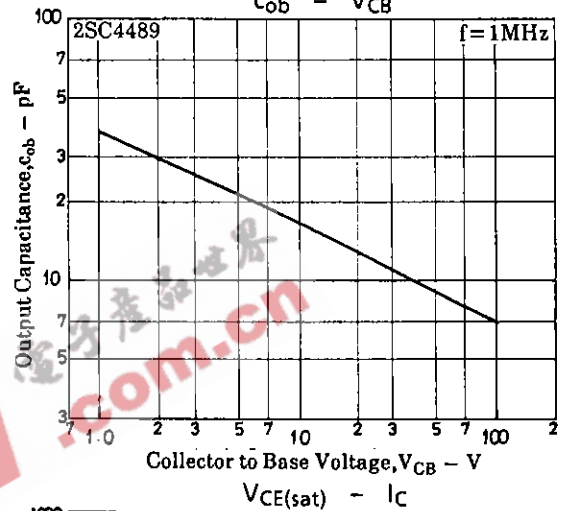
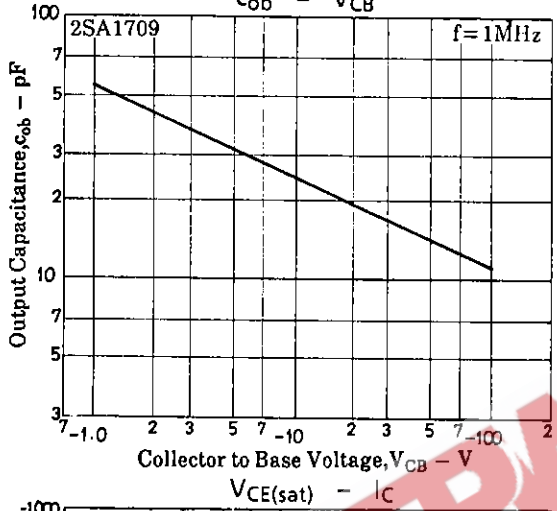
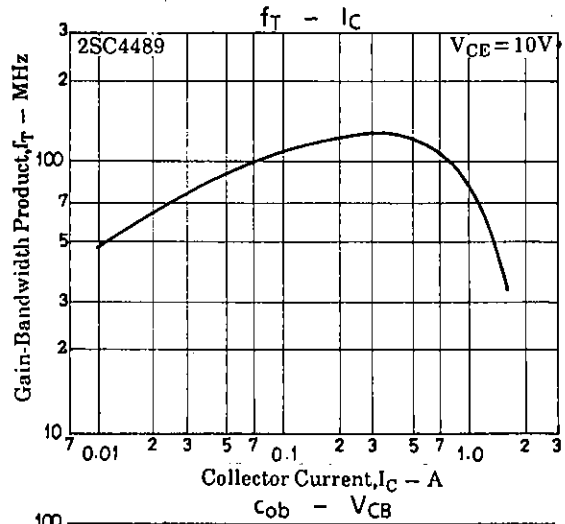
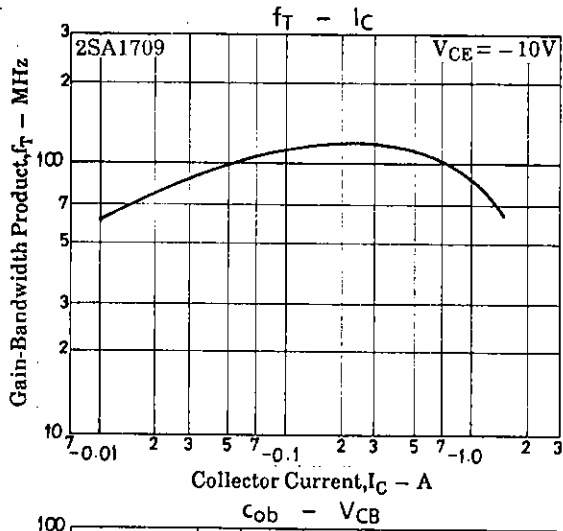
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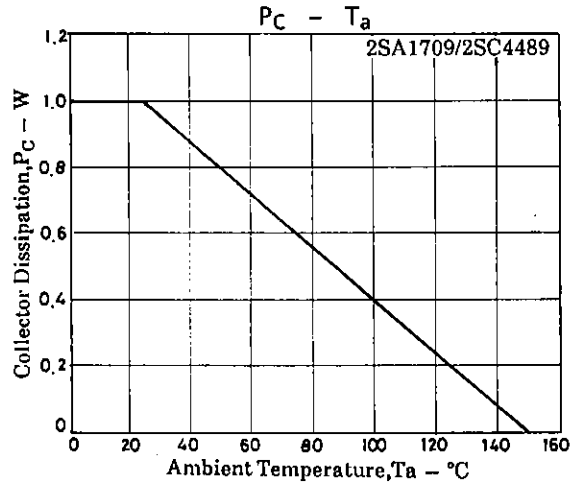
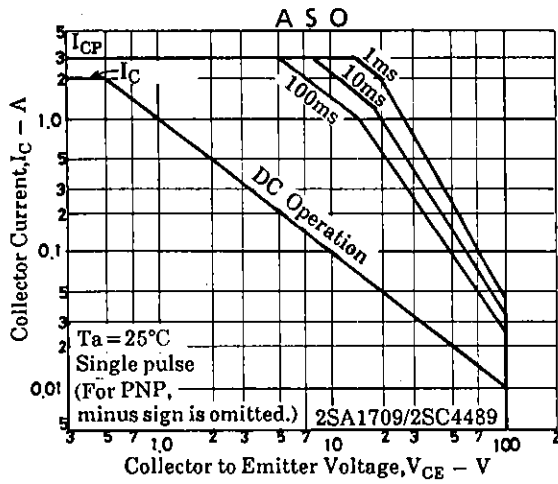
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