

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

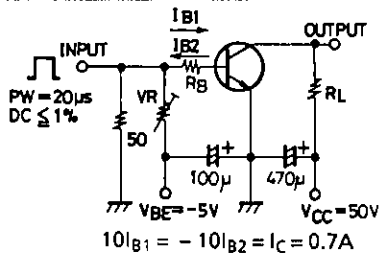
Electrical Characteristics at Ta = 25°C

			min	typ	max	unit
Collector Cutoff Current	I _{CB0}	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
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}	"		(750)		ns
Fall Time	t _f	"		1000		ns
				(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

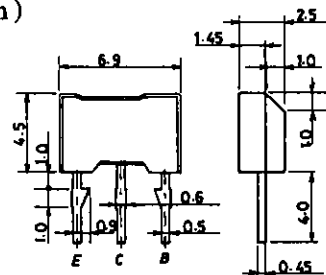


(For PNP, the polarity is reversed.)

Unit(Resistance : Ω , Capacitance : F)

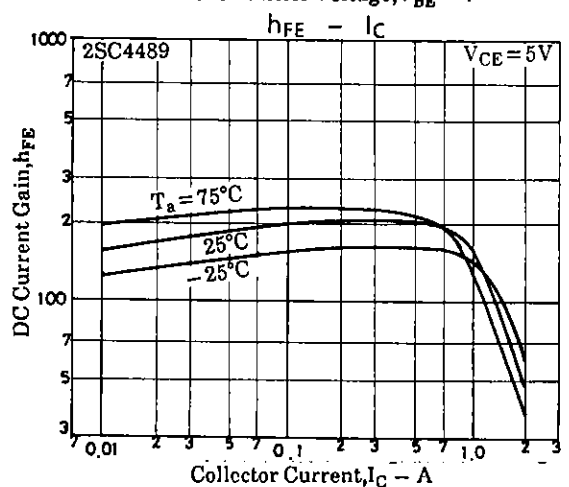
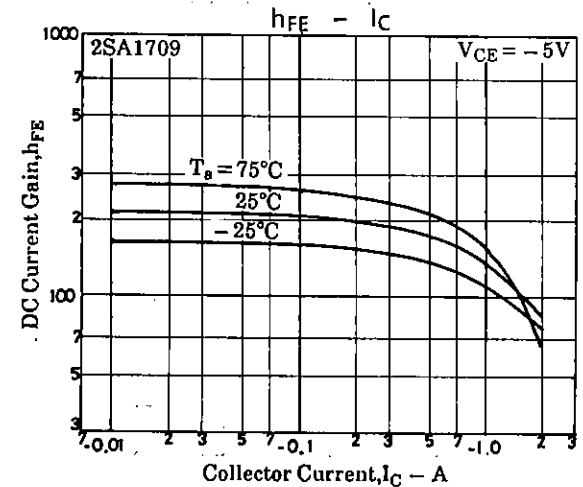
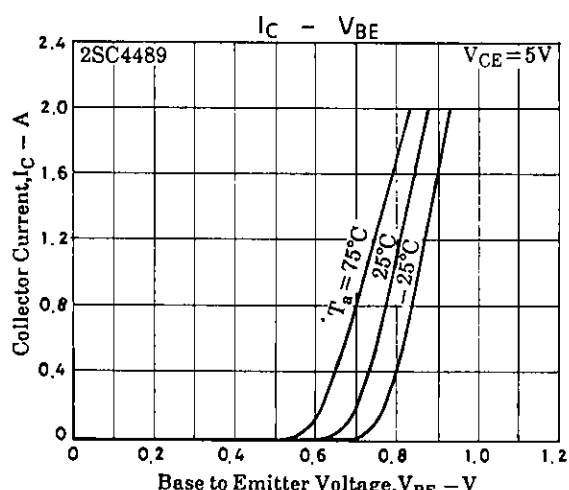
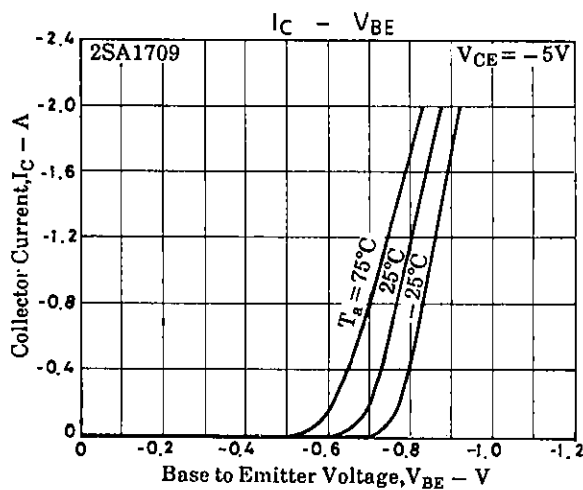
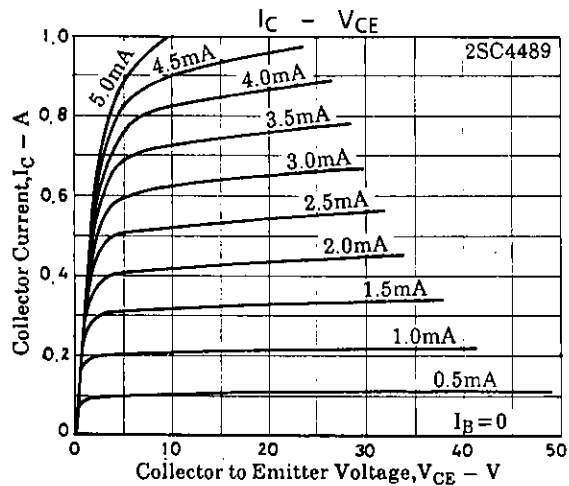
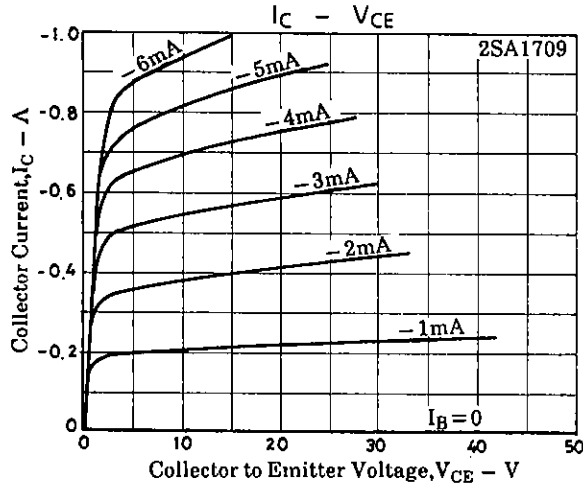
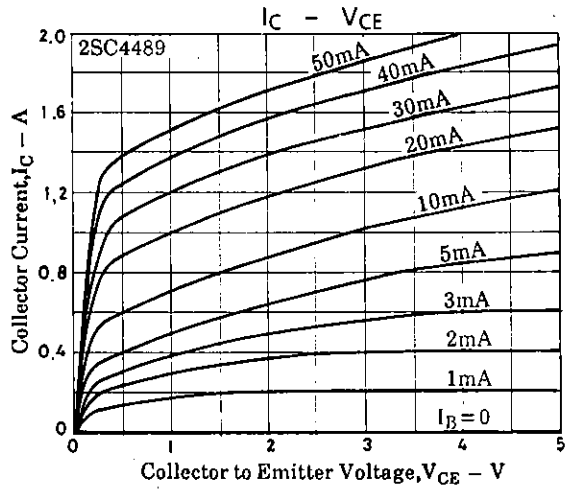
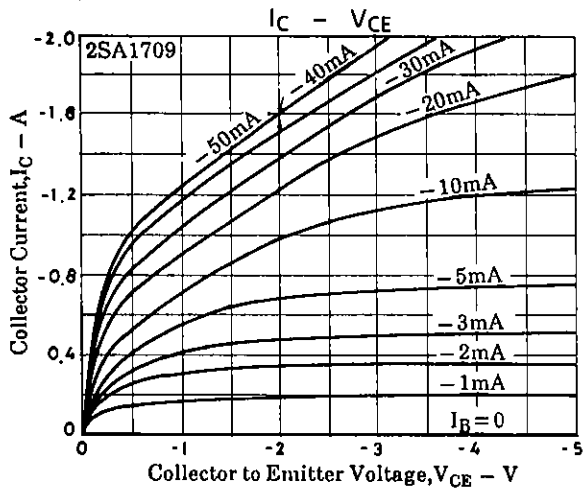
Package Dimensions 2064

(unit: mm)

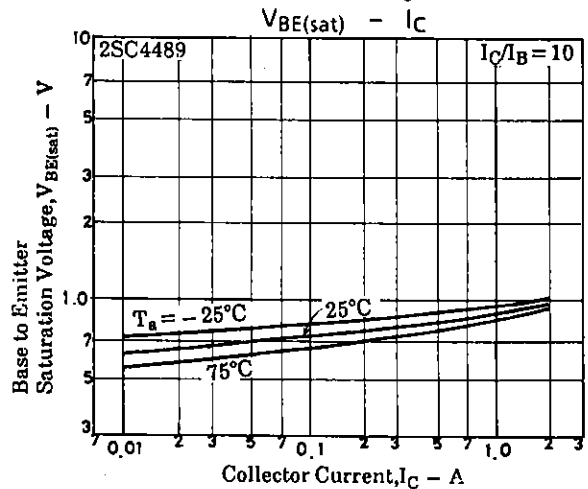
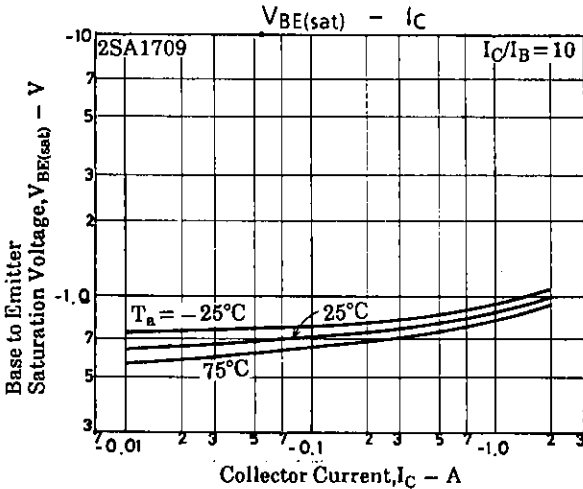
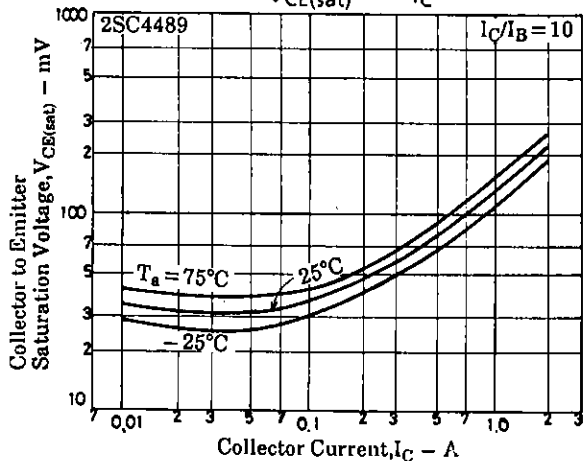
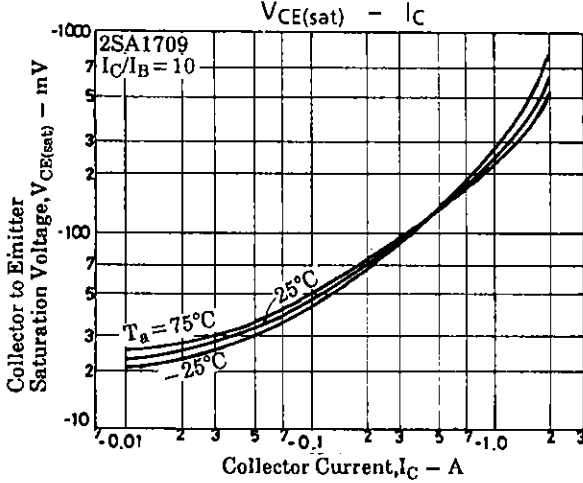
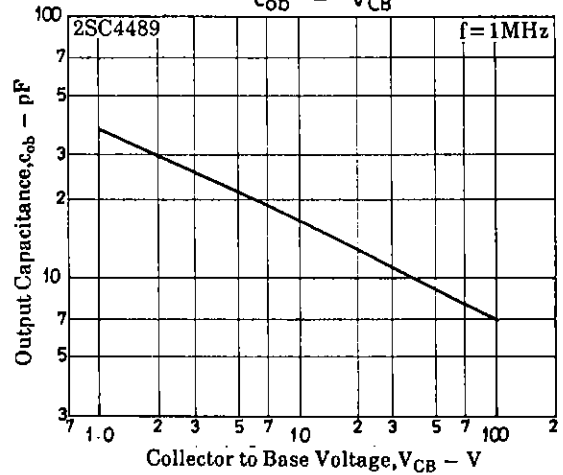
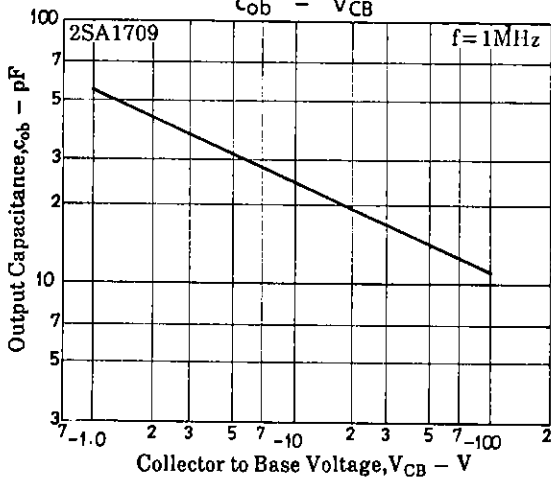
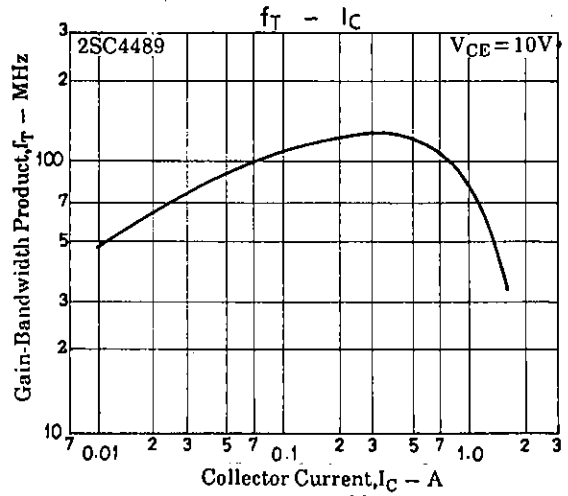
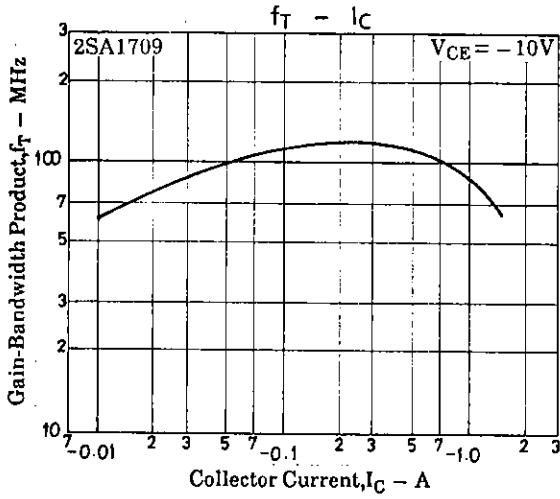


E: Emitter
C: Collector
B: Base
SANYO: NMP

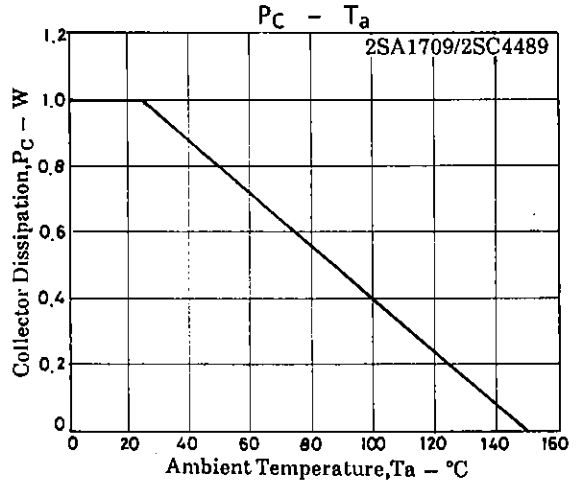
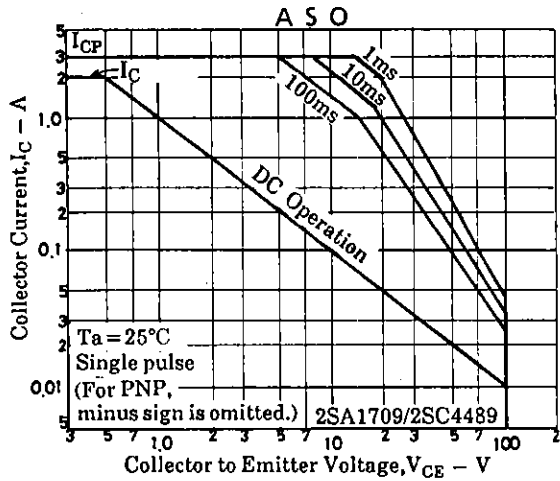
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