

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

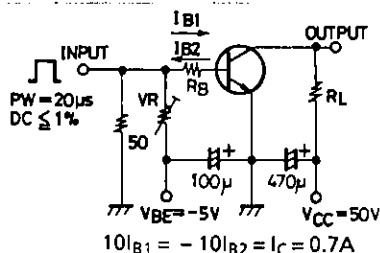
			unit
Collector to Base Voltage	V_{CB0}	(-)120	V
Collector to Emitter Voltage	V_{CE0}	(-)100	V
Emitter to Base Voltage	V_{EB0}	(-)6	V
Collector Current	I_C	(-)2	A
Collector Current(Pulse)	I_{CP}	(-)3	A
Collector Dissipation	P_C	1	W
Junction Temperature	T_J	150	°C
Storage Temperature	T_{stg}	- 55 to + 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
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = (-)1A, I_B = (-)100mA$		0.13	0.4	V
Output Capacitance	c_{ob}	$V_{CB} = (-)10V, f = 1MHz$		(25)16		pF
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
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:

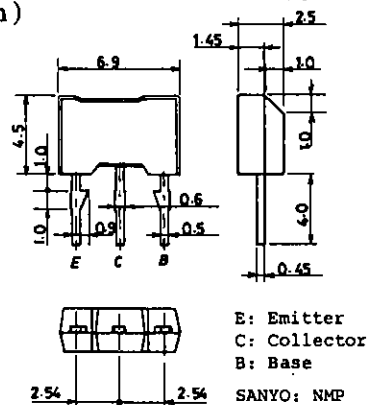
100 R 200	140 S 280	200 T 400
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Switching Time Test Circuit

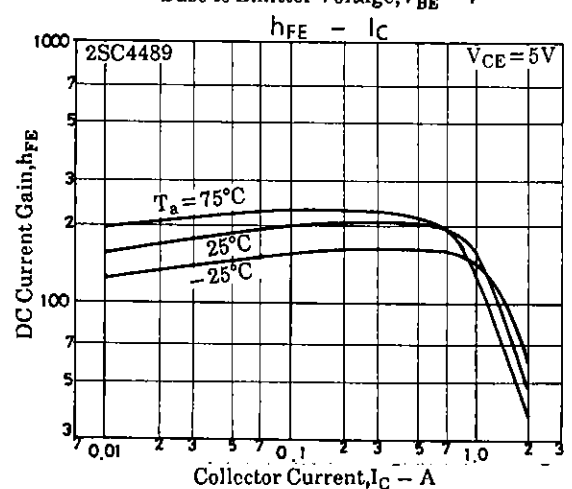
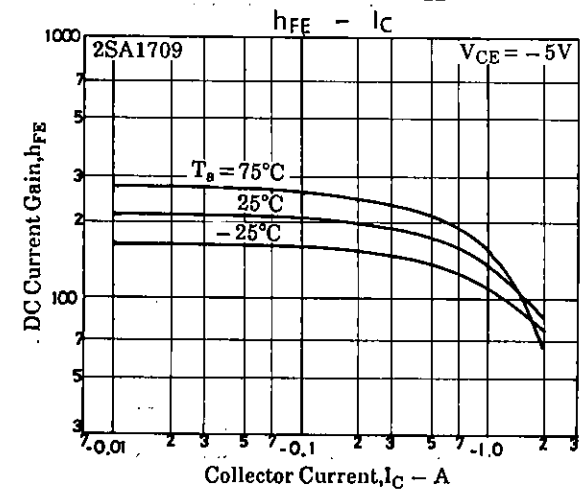
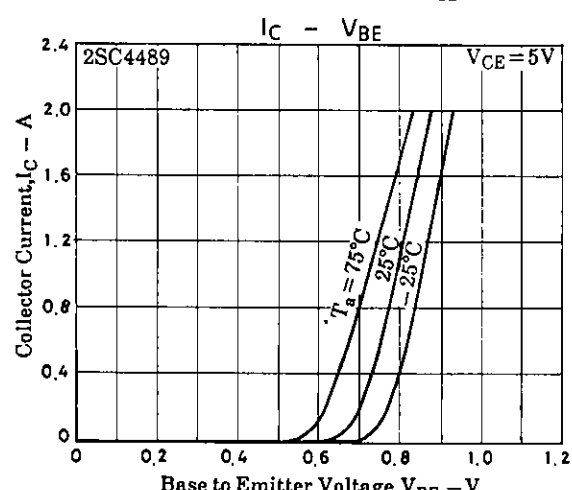
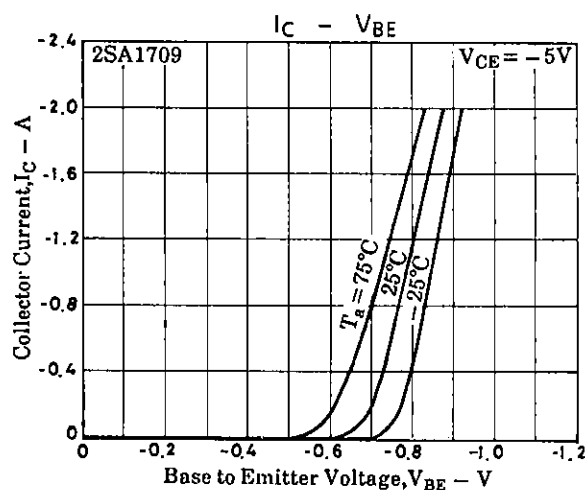
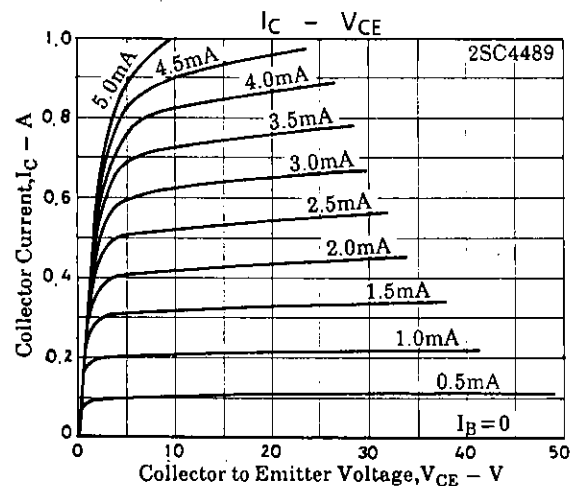
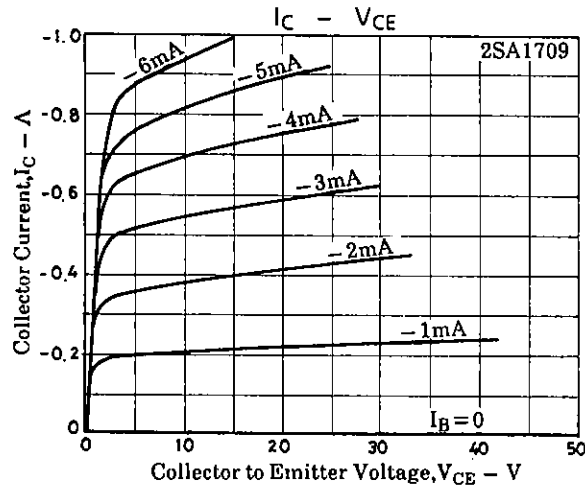
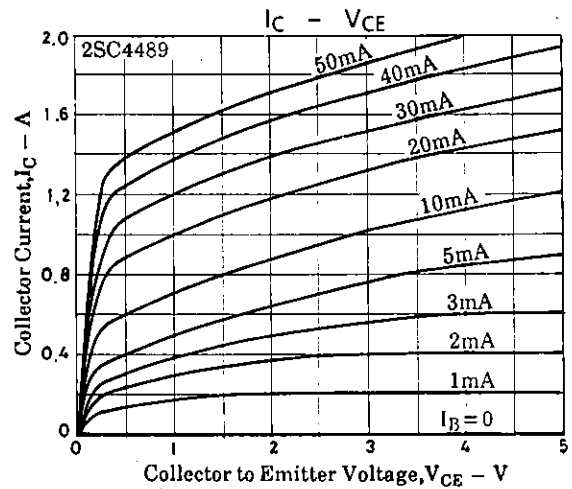
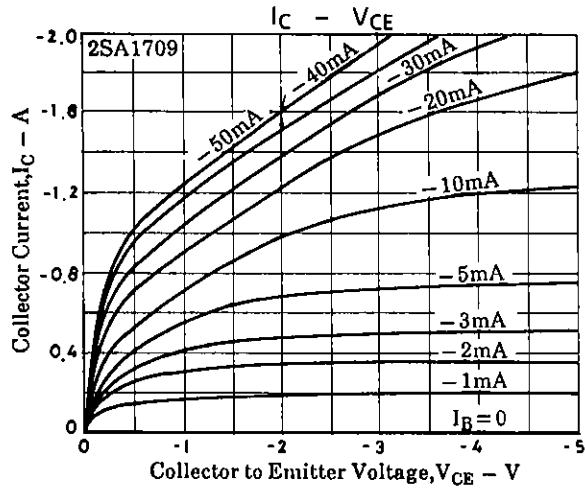
(For PNP, the polarity is reversed.)

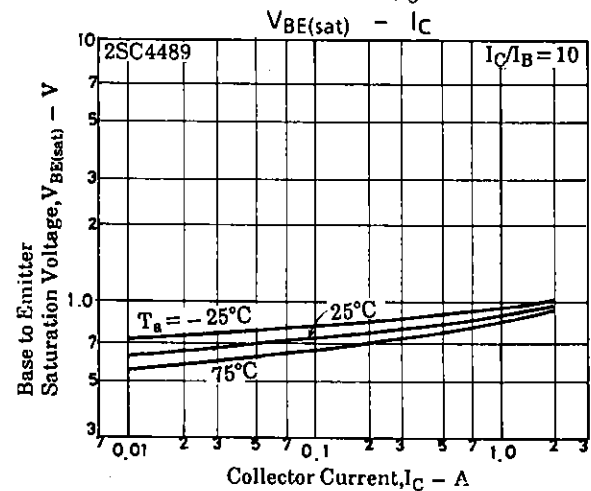
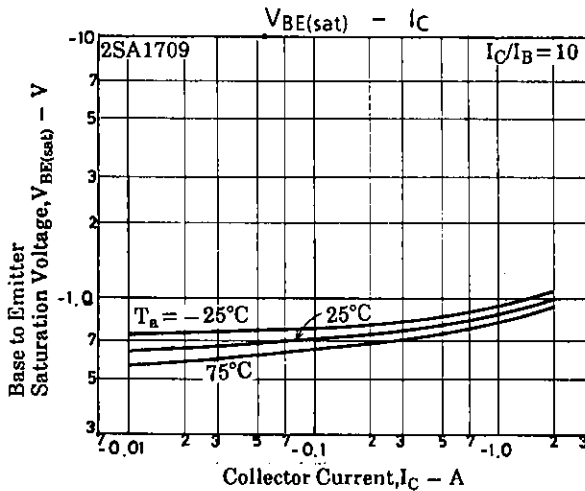
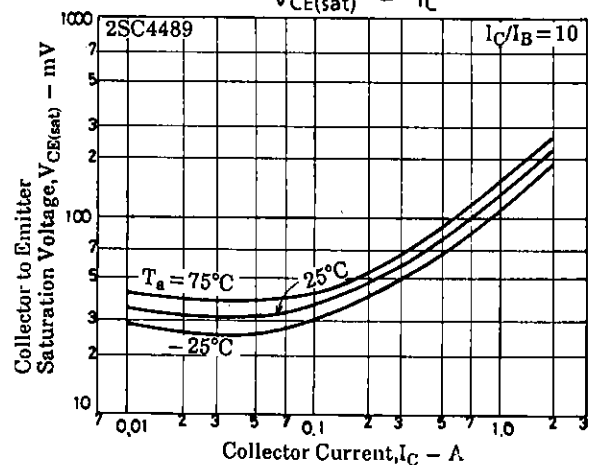
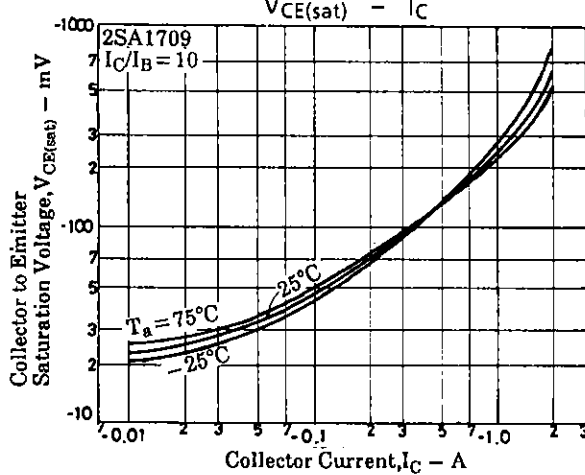
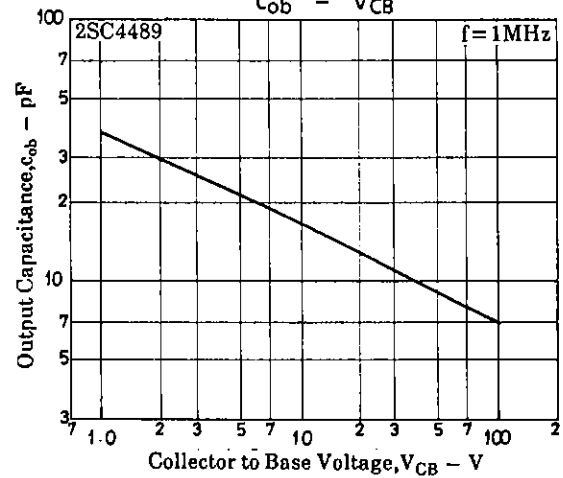
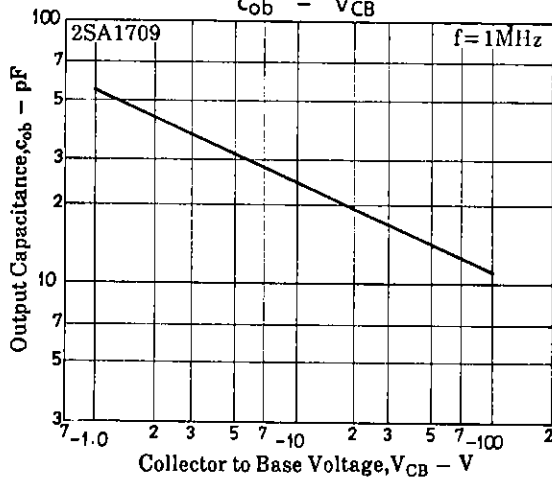
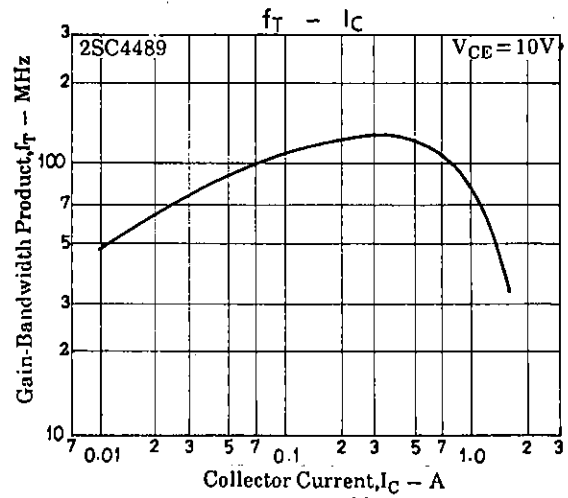
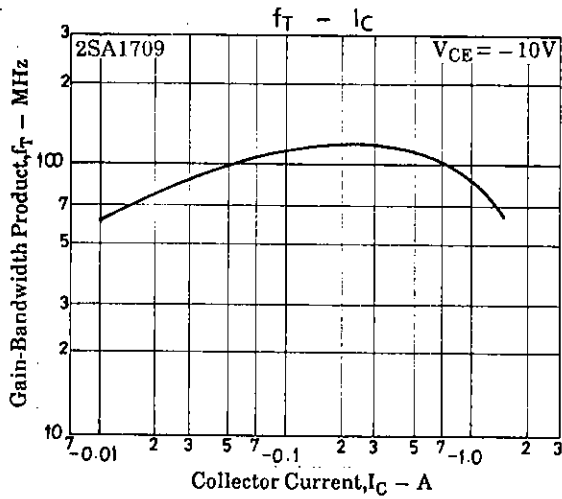
Unit(Resistance : Ω , Capacitance : F)**Package Dimensions 2064**

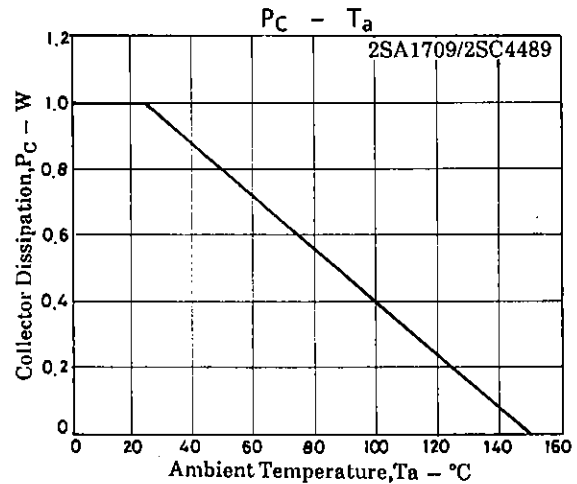
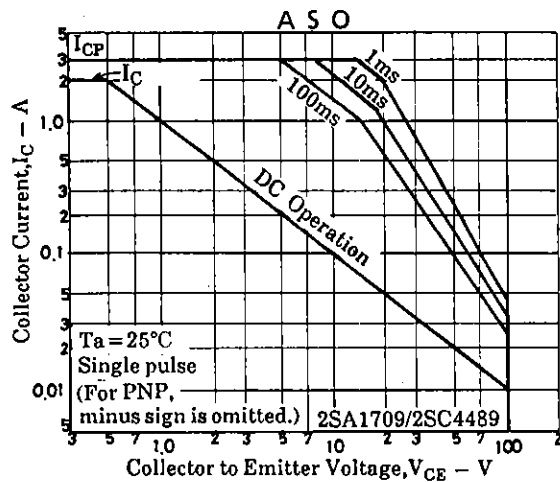
(unit: mm)



SANYO Electric Co., Ltd. Semiconductor Business Headquarters
 TOKYO OFFICE Tokyo Bldg., 1-10, 1 Chome, Ueno, Taito-ku, TOKYO, 110 JAPAN







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