

SANYO

No.3094

2SA1708/2SC4488

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

(): 2SA1708

Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

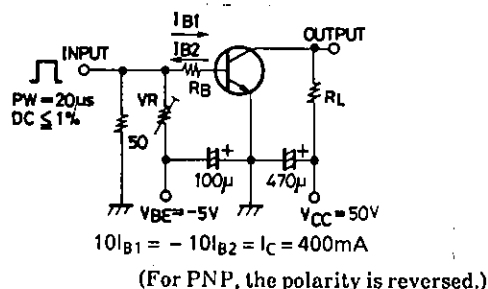
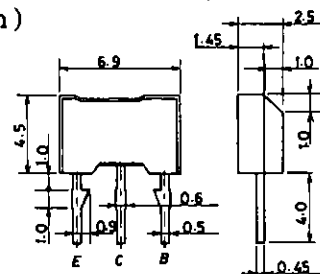
			unit
Collector to Base Voltage	V_{CBO}	(-)120	V
Collector to Emitter Voltage	V_{CEO}	(-)100	V
Emitter to Base Voltage	V_{EBO}	(-)6	V
Collector Current	I_C	(-)1	A
Collector Current(Pulse)	I_{CP}	(-)2	A
Collector Dissipation	P_C	1	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	- 55 to + 150	$^\circ\text{C}$

Electrical Characteristics at $T_a = 25^\circ\text{C}$

			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = (-)100\text{V}, I_E = 0$			(-)100	nA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = (-)4\text{V}, I_C = 0$			(-)100	nA
DC Current Gain	h_{FE}	$V_{CE} = (-)5\text{V}, I_C = (-)100\text{mA}$	100*		400*	
Gain-Bandwidth Product	f_T	$V_{CE} = (-)10\text{V}, I_C = (-)100\text{mA}$		120		MHz
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = (-)400\text{mA}, I_B = (-)40\text{mA}$	(- 0.2)	(- 0.6)		V
			0.1	0.4		
B-E Saturation Voltage	$V_{BE(sat)}$	$I_C = (-)400\text{mA}, I_B = (-)40\text{mA}$	(-)0.85	(-)1.2		V
Output Capacitance	c_{ob}	$V_{CB} = (-)10\text{V}, f = 1\text{MHz}$		(13)8.5		pF
C-B Breakdown Voltage	$V_{(BR)CBO}$	$I_C = (-)10\mu\text{A}, I_E = 0$	(-)120			V
C-E Breakdown Voltage	$V_{(BR)CEO}$	$I_C = (-)1\text{mA}, R_{BE} = \infty$	(-)100			V
E-B Breakdown Voltage	$V_{(BR)EBO}$	$I_E = (-)10\mu\text{A}, I_C = 0$	(-)6			V
Turn-ON Time	t_{on}	See specified Test Circuit.		80		ns
Storage Time	t_{stg}	"		(700)		ns
				850		
Fall Time	t_f	"		(40)50		ns

*: The 2SA1708/2SC4488 are classified by 100mA h_{FE} as follows:

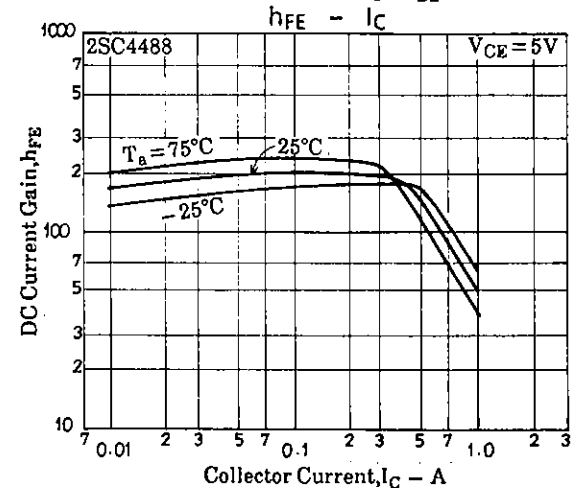
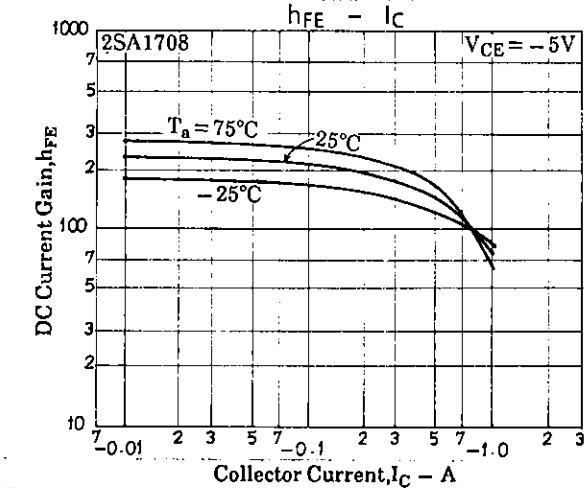
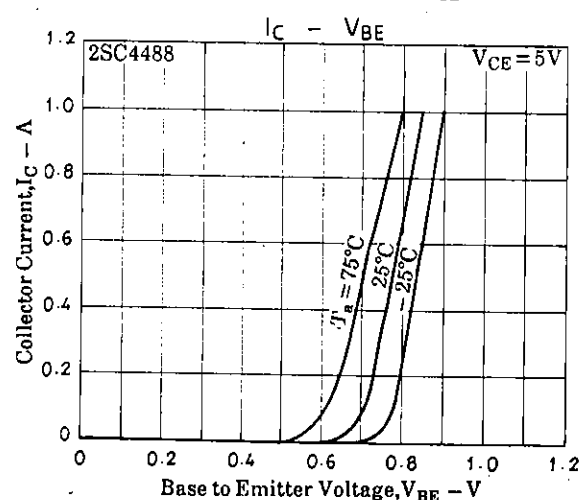
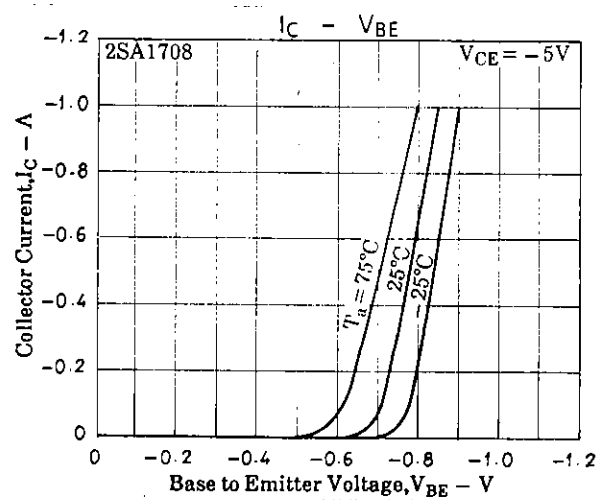
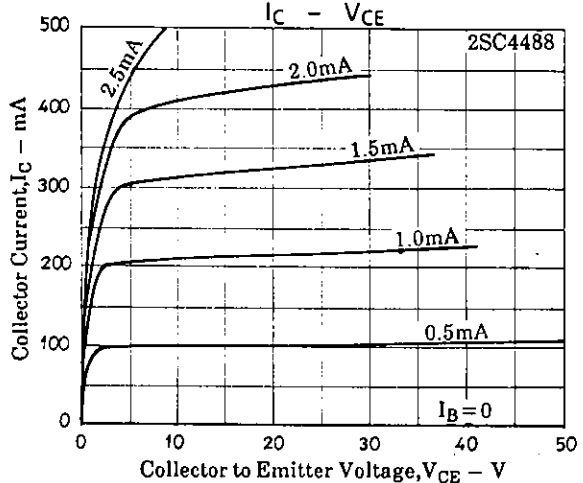
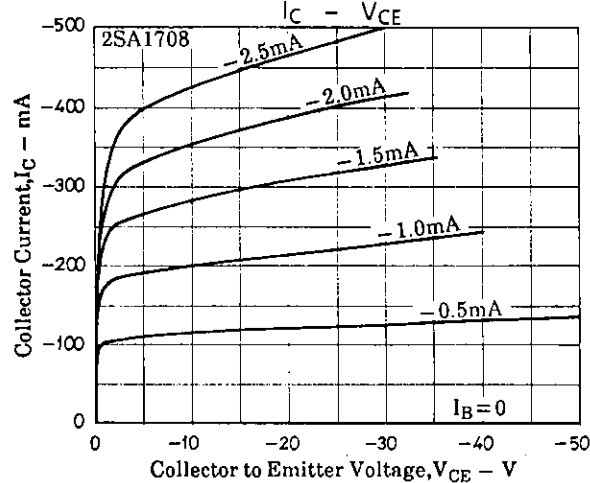
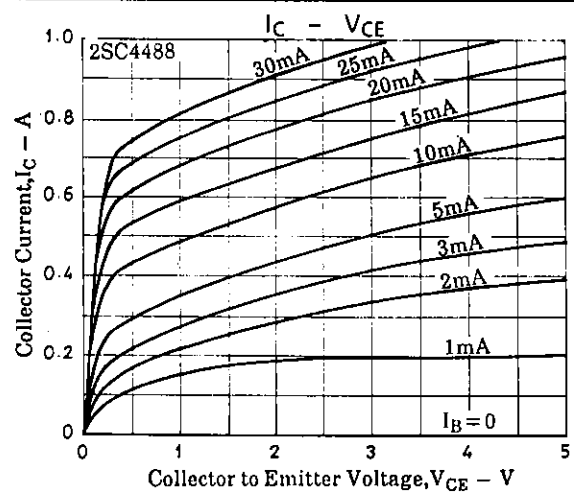
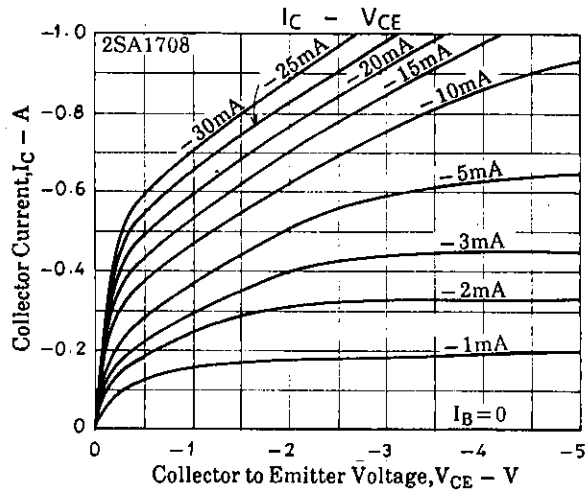
100 R 200	140 S 280	200 T 400
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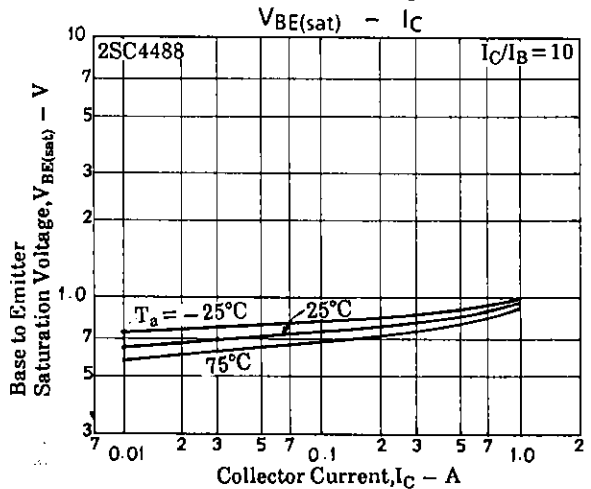
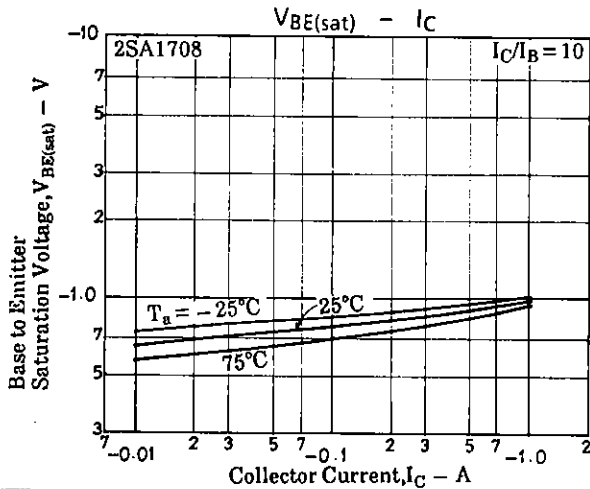
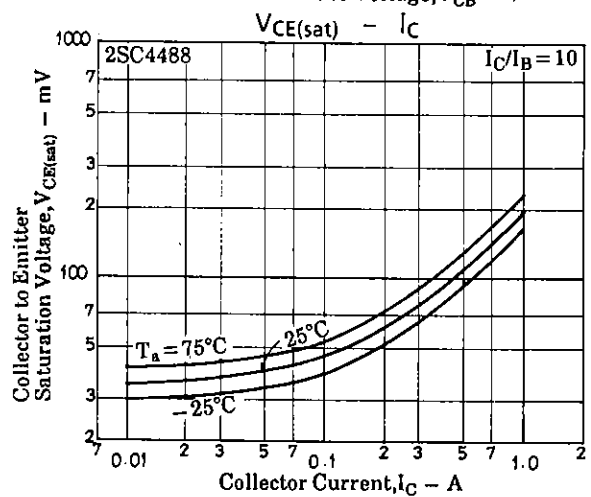
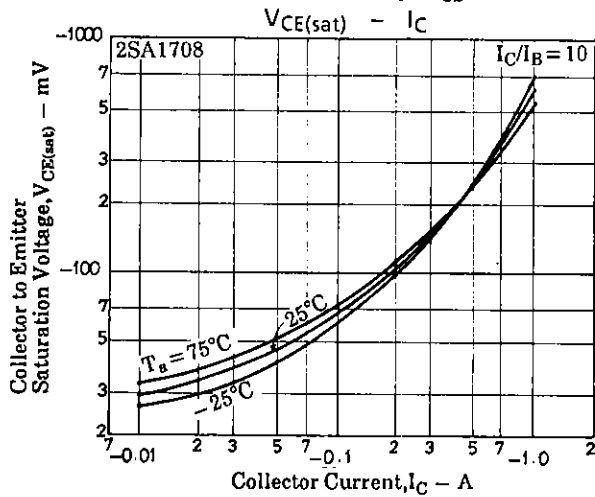
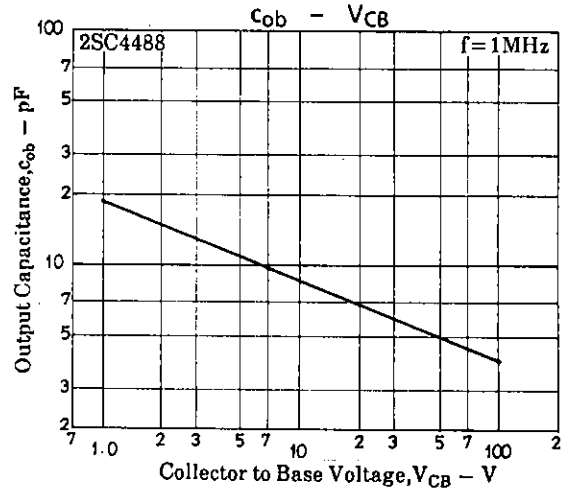
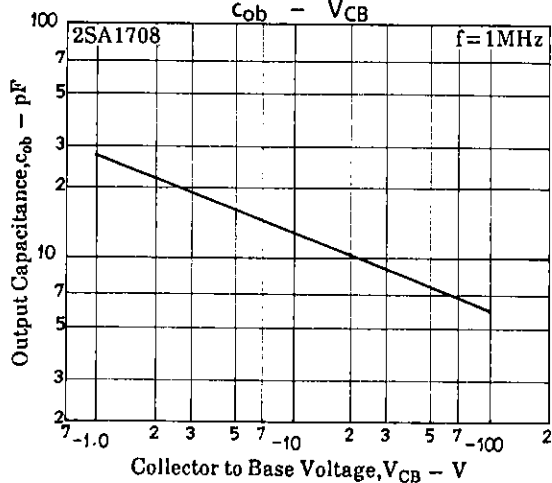
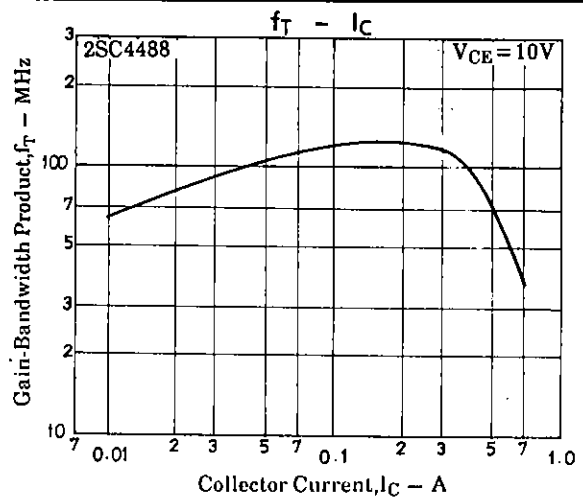
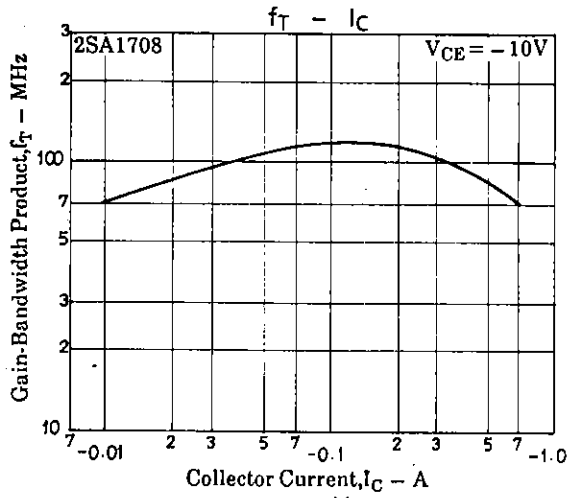
Switching Time Test CircuitUnit(Resistance : Ω , Capacitance : F)**Package Dimensions 2064**
(unit: mm)

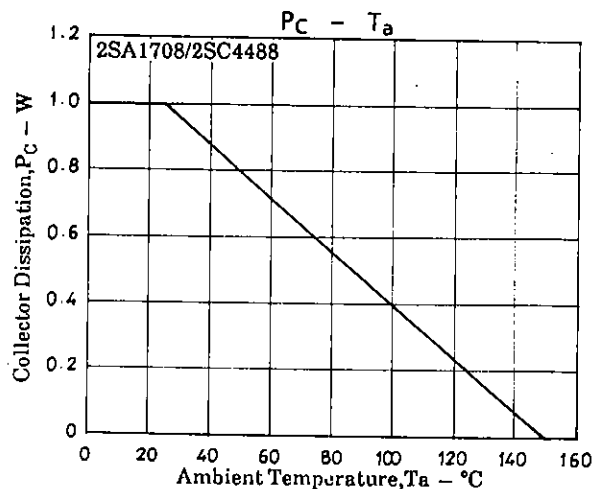
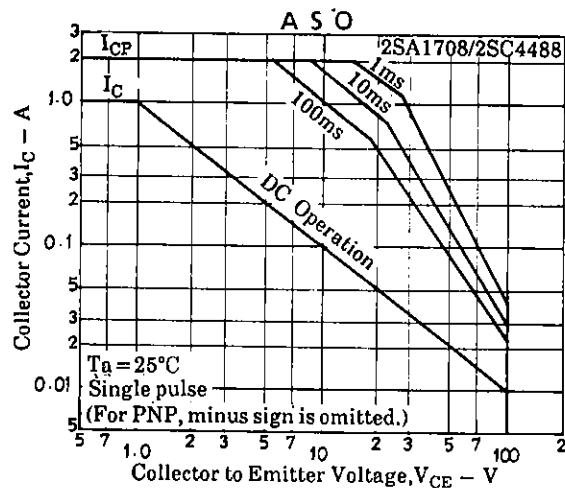
E: Emitter
C: Collector
B: Base
SANYO: NMP

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