

<b>SANYO</b>	No.3094	<b>2SA1708/2SC4488</b>
		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 Ta = 25°C**

			unit
Collector to Base Voltage	V <sub>CB0</sub>	(-)120	V
Collector to Emitter Voltage	V <sub>CEO</sub>	(-)100	V
Emitter to Base Voltage	V <sub>EBO</sub>	(-)6	V
Collector Current	I <sub>C</sub>	(-)1	A
Collector Current(Pulse)	I <sub>CP</sub>	(-)2	A
Collector Dissipation	P <sub>C</sub>	1	W
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	- 55 to + 150	°C

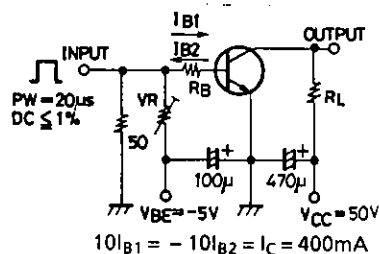
**Electrical Characteristics at Ta = 25°C**

			min	typ	max	unit
Collector Cutoff Current	I <sub>CB0</sub>	V <sub>CB</sub> = (-)100V, I <sub>E</sub> = 0			(-)100	nA
Emitter Cutoff Current	I <sub>EBO</sub>	V <sub>EB</sub> = (-)4V, I <sub>C</sub> = 0			(-)100	nA
DC Current Gain	h <sub>FE</sub>	V <sub>CE</sub> = (-)5V, I <sub>C</sub> = (-)100mA	100*		400*	
Gain-Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> = (-)10V, I <sub>C</sub> = (-)100mA		120		MHz
C-E Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = (-)400mA, I <sub>B</sub> = (-)40mA	(-)0.2	(-)0.6		V
B-E Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> = (-)400mA, I <sub>B</sub> = (-)40mA	(-)0.85	(-)1.2		V
Output Capacitance	c <sub>ob</sub>	V <sub>CB</sub> = (-)10V, f = 1MHz		(13)8.5		pF
C-B Breakdown Voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> = (-)10μA, I <sub>E</sub> = 0	(-)120			V
C-E Breakdown Voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> = (-)1mA, R <sub>BE</sub> = ∞	(-)100			V
E-B Breakdown Voltage	V <sub>(BR)EBO</sub>	I <sub>E</sub> = (-)10μA, I <sub>C</sub> = 0	(-)6			V
Turn-ON Time	t <sub>on</sub>	See specified Test Circuit.		80		ns
Storage Time	t <sub>stg</sub>	∕		(700)		ns
				850		
Fall Time	t <sub>f</sub>	∕		(40)50		ns

※: The 2SA1708/2SC4488 are classified by 100mA h<sub>FE</sub> as follows:

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

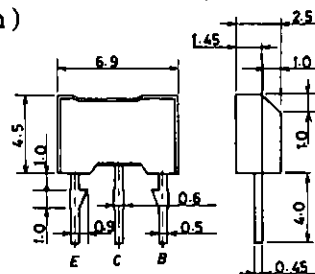


(For PNP, the polarity is reversed.)

Unit(Resistance : Ω , Capacitance : F)

**Package Dimensions 2064**

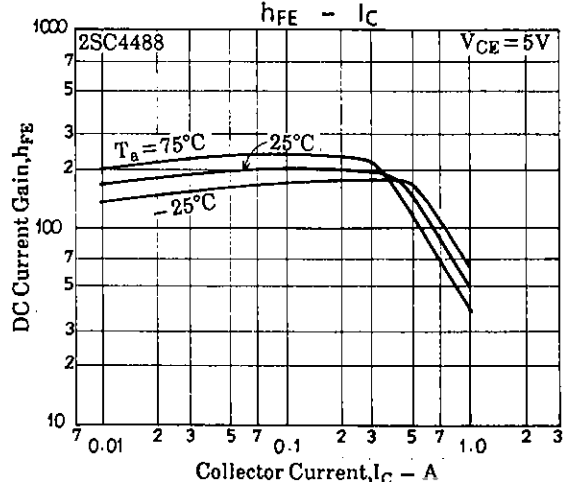
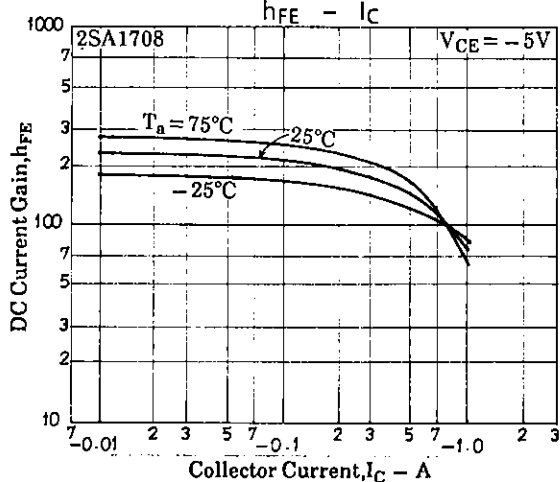
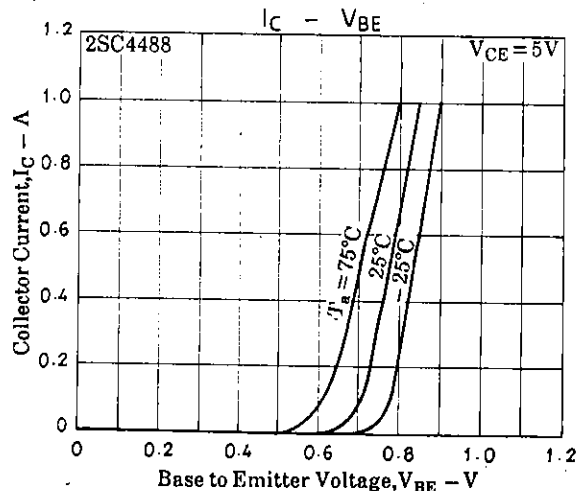
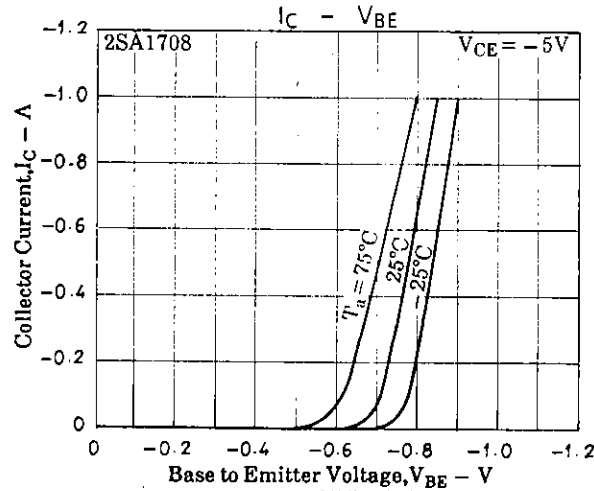
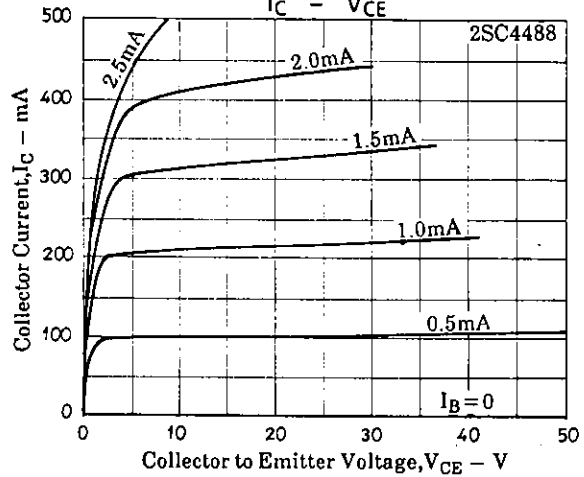
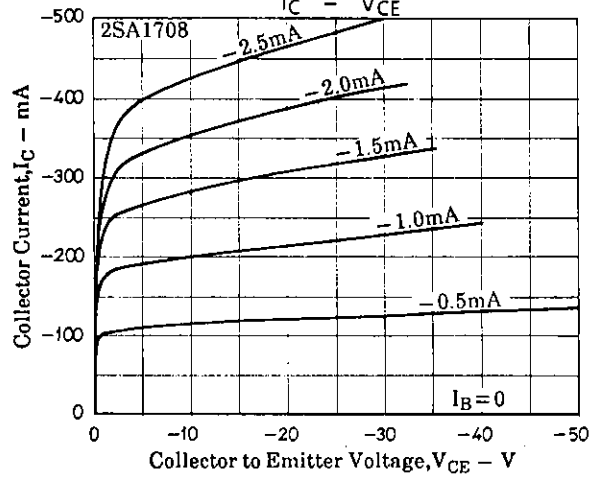
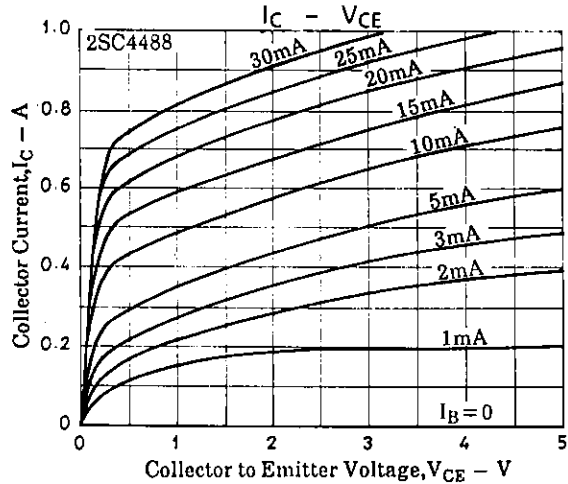
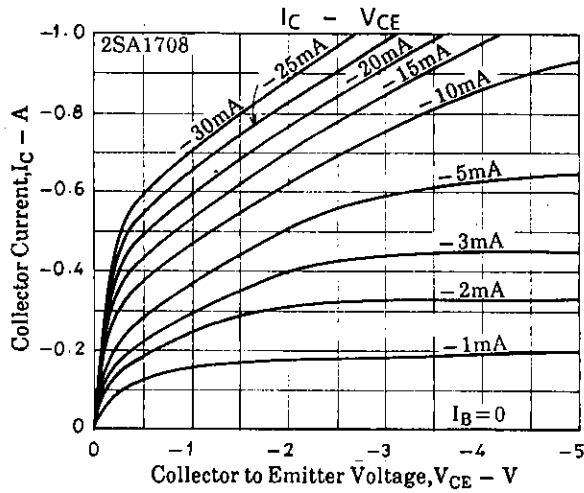
(unit: mm)



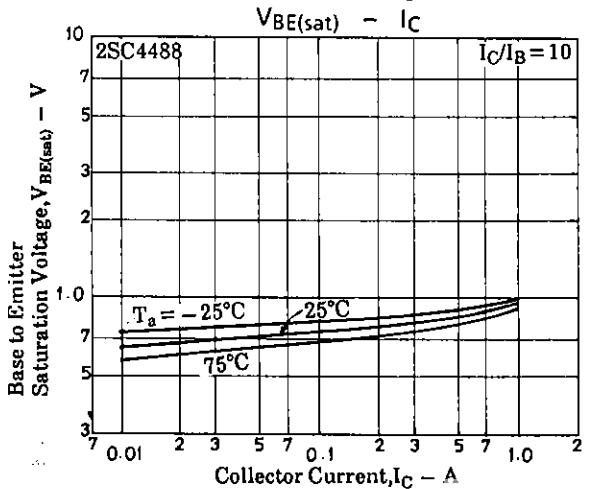
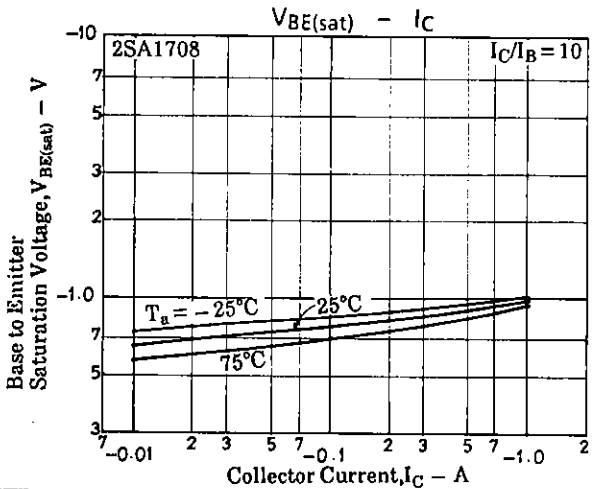
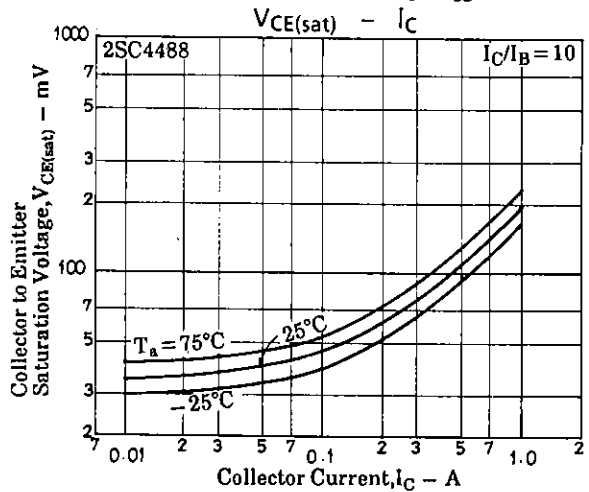
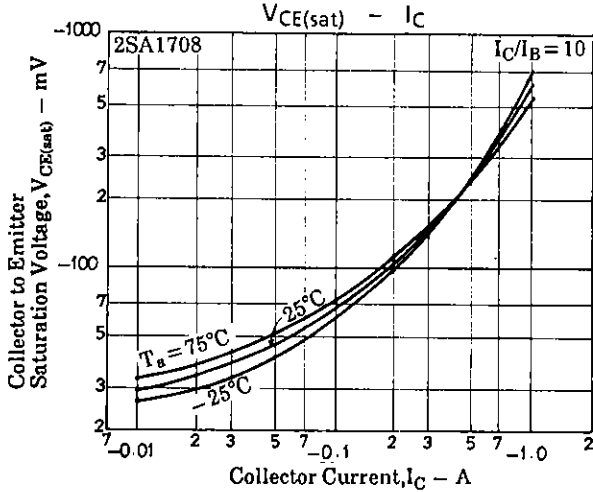
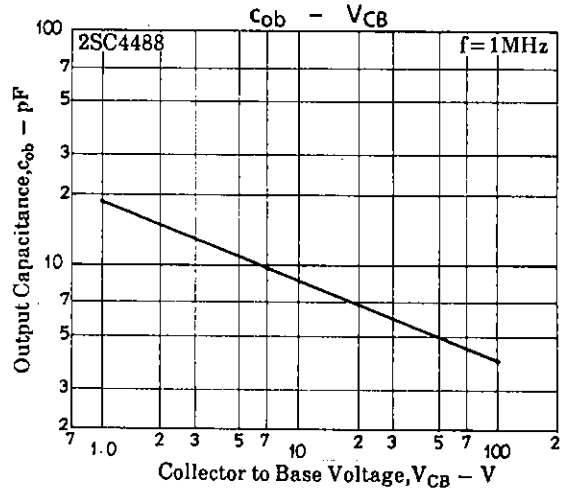
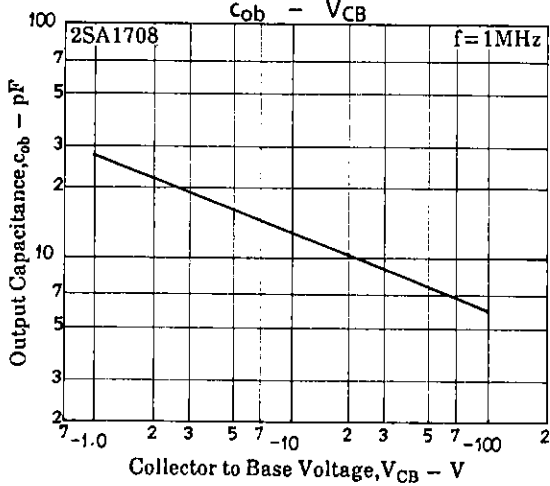
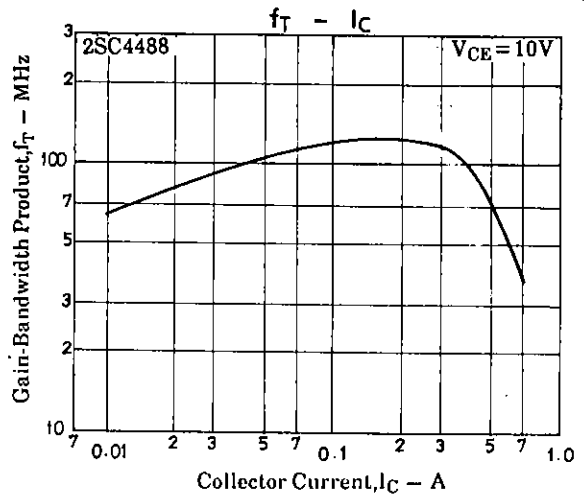
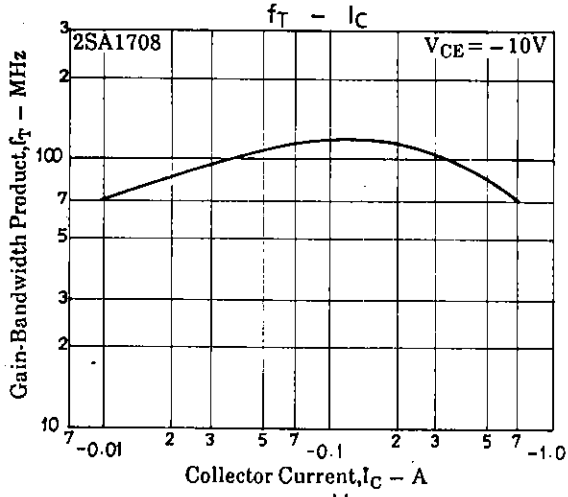
E: Emitter  
C: Collector  
B: Base

SANYO: NMP

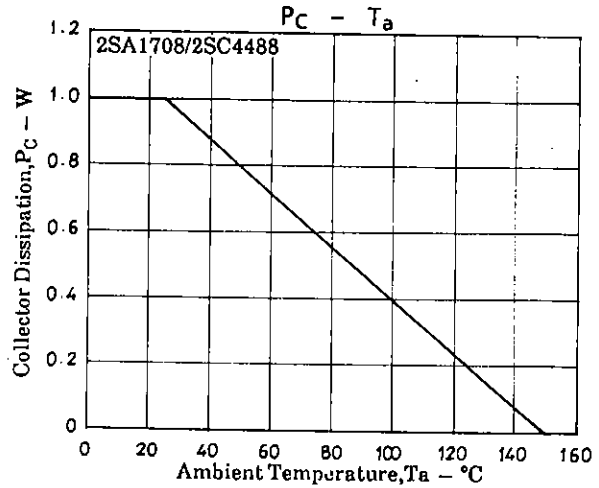
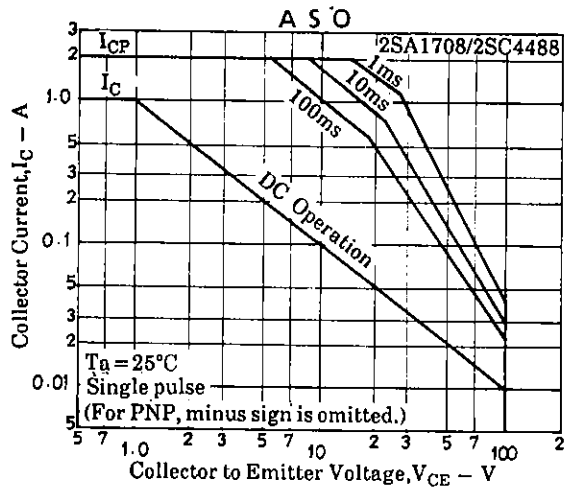
2SA1708/2SC4488



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