

<b>SANYO</b>	No.3093	<b>2SA1707/2SC4487</b>
	PNP/NPN Epitaxial Planar Silicon Transistors	
High-Current Switching Applications		

**Features**

- Adoption of FBET, MBIT processes
- Large current capacity, wide ASO
- Low collector-to-emitter saturation voltage
- Fast switching speed

( ) : 2SA1707

**Absolute Maximum Ratings at Ta = 25°C**

			unit
Collector to Base Voltage	V <sub>CB0</sub>	(-)60	V
Collector to Emitter Voltage	V <sub>CE0</sub>	(-)50	V
Emitter to Base Voltage	V <sub>EB0</sub>	(-)6	V
Collector Current	I <sub>C</sub>	(-)3	A
Collector Current(Pulse)	I <sub>CP</sub>	(-)6	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

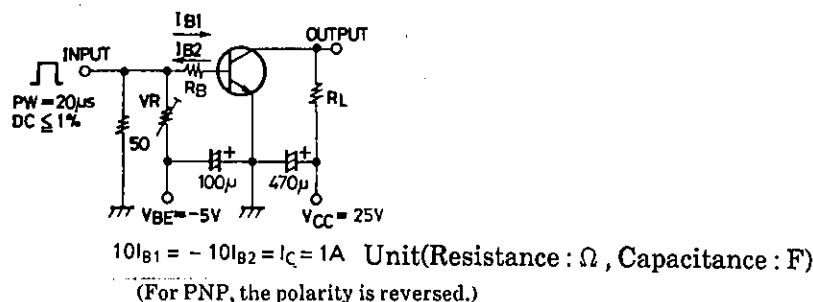
**Electrical Characteristics at Ta = 25°C**

			min	typ	max	unit
Collector Cutoff Current	I <sub>CB0</sub>	V <sub>CB</sub> = (-)40V, I <sub>E</sub> = 0			(-)1	µA
Emitter Cutoff Current	I <sub>EB0</sub>	V <sub>EB</sub> = (-)4V, I <sub>C</sub> = 0			(-)1	µA
DC Current Gain	h <sub>FE</sub> (1)	V <sub>CE</sub> = (-)2V, I <sub>C</sub> = (-)100mA	100*		400*	
	h <sub>FE</sub> (2)	V <sub>CE</sub> = (-)2V, I <sub>C</sub> = (-)3A	35			
Gain-Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> = (-)10V, I <sub>C</sub> = (-)50mA		150		MHz
C-E Saturation Voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = (-)2A, I <sub>B</sub> = (-)100mA	(-)0.35		(-)0.7	V
			0.2		0.5	
B-E Saturation Voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> = (-)2A, I <sub>B</sub> = (-)100mA	(-)0.95		(-)1.2	V
Output Capacitance	c <sub>ob</sub>	V <sub>CB</sub> = (-)10V, f = 1MHz		(39)25		pF
C-B Breakdown Voltage	V <sub>(BR)CBO</sub>	I <sub>C</sub> = (-)10µA, I <sub>E</sub> = 0	(-)60			V
C-E Breakdown Voltage	V <sub>(BR)CEO</sub>	I <sub>C</sub> = (-)1mA, R <sub>BE</sub> = ∞	(-)50			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.		70		ns
Storage Time	t <sub>stg</sub>	"		(450)		ns
				650		
Fall Time	t <sub>f</sub>	"		35		ns

\*: The 2SA1707/2SC4487 are classified by 100mA h<sub>FE</sub> as follows:

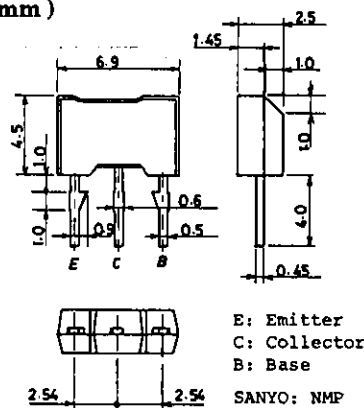
100 R 200	140 S 280	200 T 400
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**Switching Time Test Circuit**

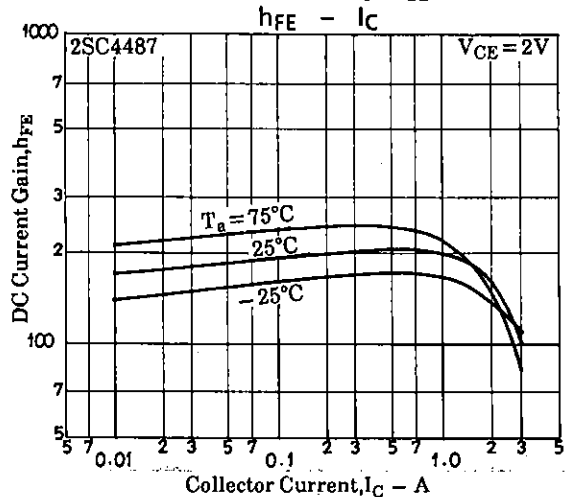
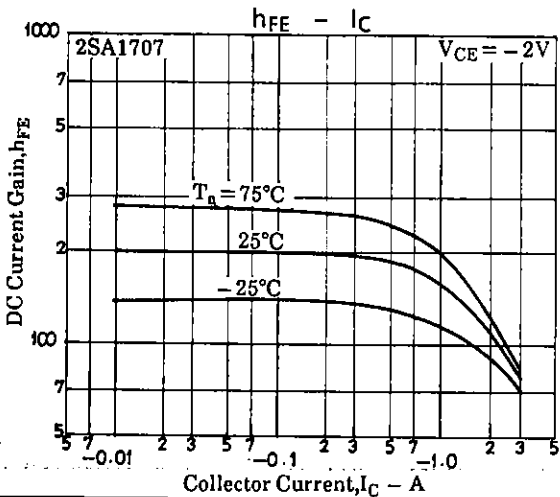
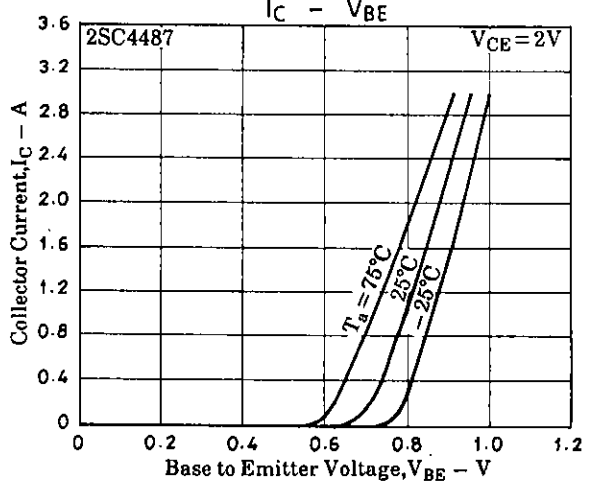
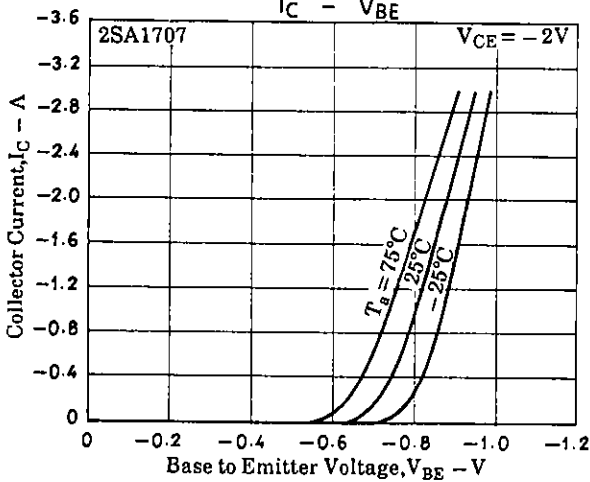
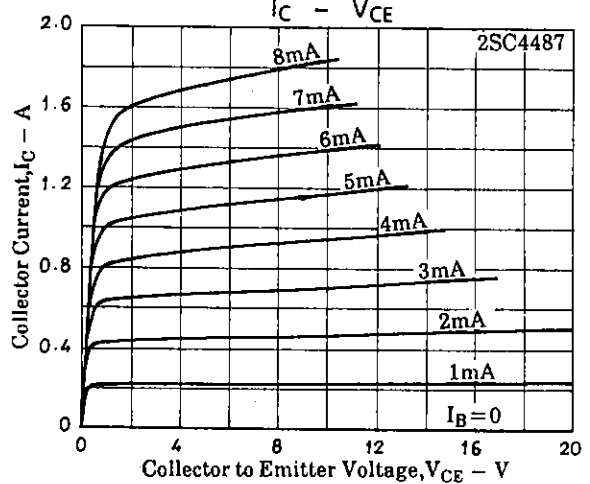
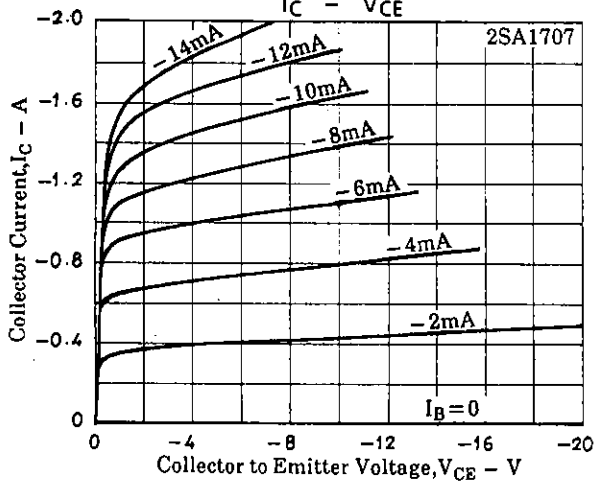
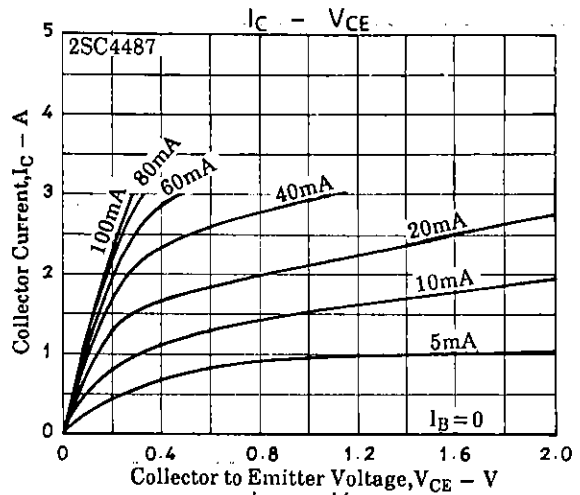
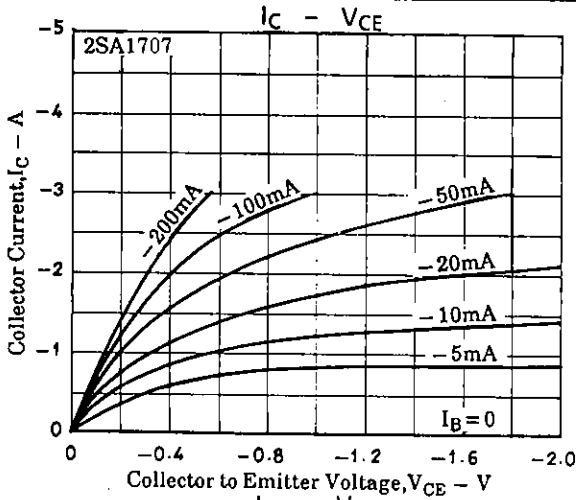


**Package Dimensions**  
(unit: mm)

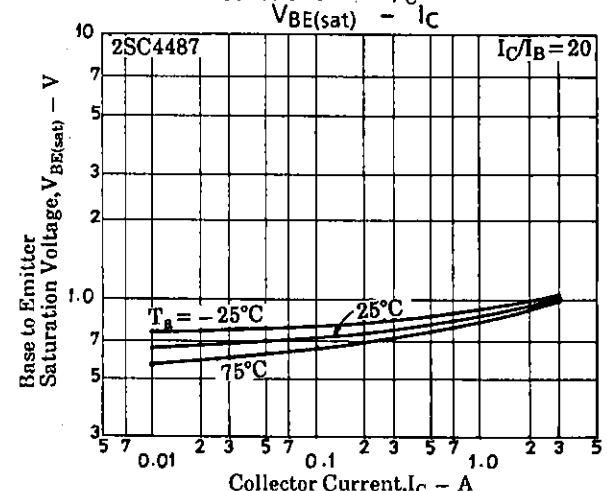
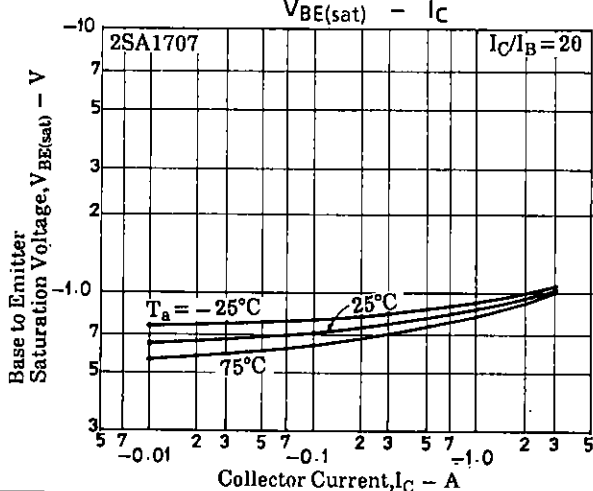
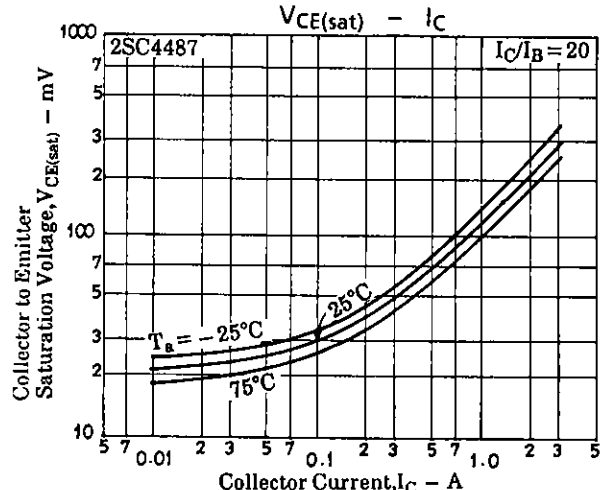
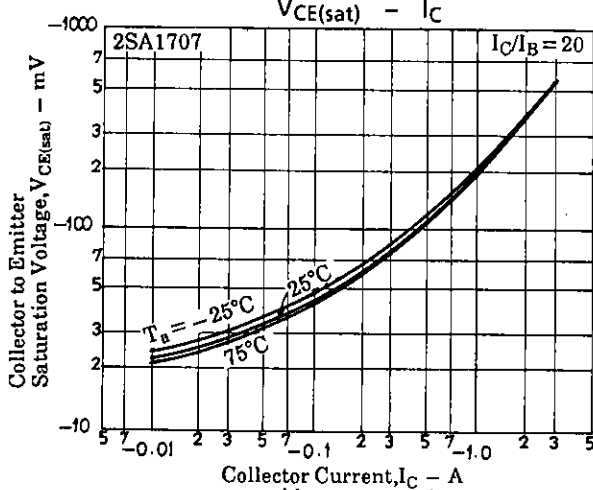
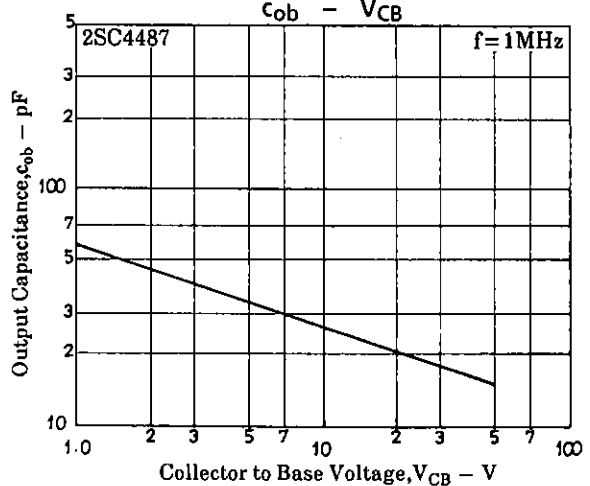
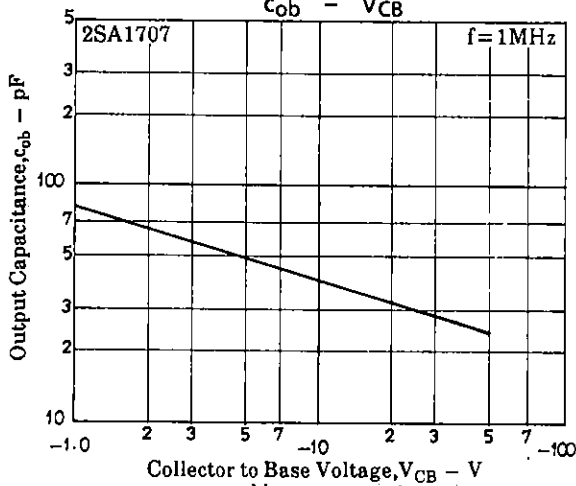
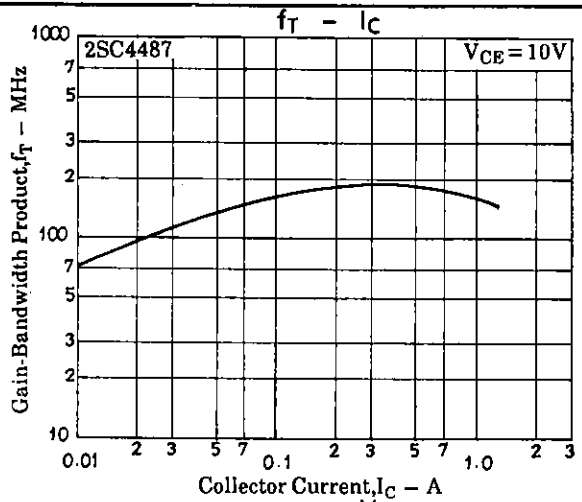
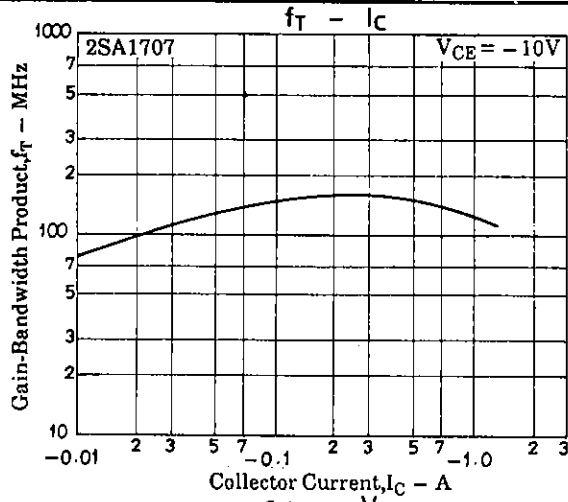
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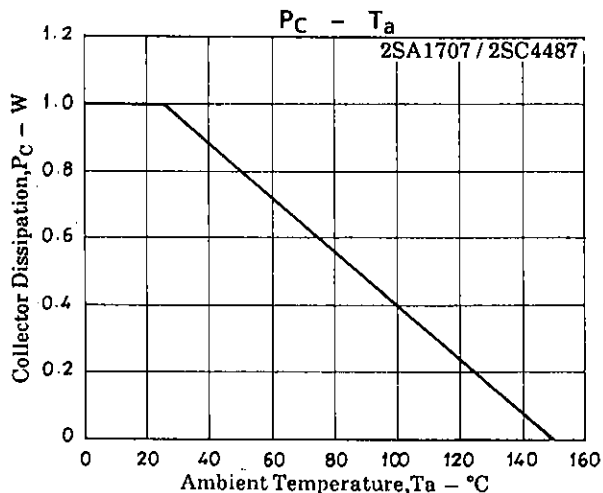
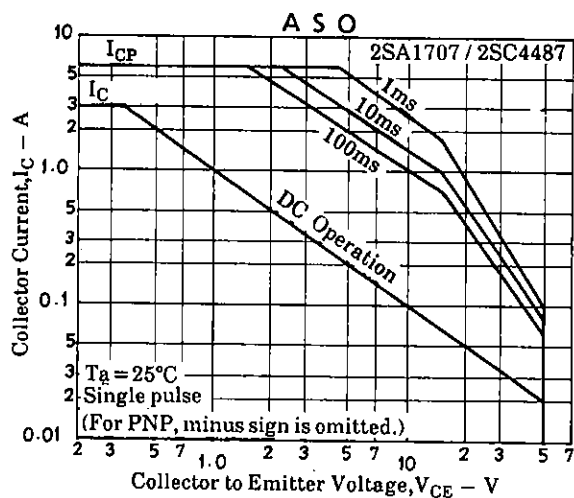


2SA1707/2SC4487



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