

<b>SANYO</b>	No.778E	<b>2SA1207/2SC2909</b>
		PNP/NPN Epitaxial Planar Silicon Transistors High-Voltage Switching, AF 60W Predriver Applications

**Features**

- Adoption of FBET process.
- High breakdown voltage.
- Excellent linearity of  $h_{FE}$  and small  $c_{ob}$ .
- Fast switching speed.

( ): 2SA1207

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

			unit
Collector to Base Voltage	$V_{CB0}$	(-)	180 V
Collector to Emitter Voltage	$V_{CEO}$	(-)	160 V
Emitter to Base Voltage	$V_{EBO}$	(-)	5 V
Collector Current	$I_C$	(-)	70 mA
Collector Current(Pulse)	$I_{CP}$	(-)	140 mA
Collector Dissipation	$P_C$		600 mW
Junction Temperature	$T_j$		150 $^\circ\text{C}$
Storage Temperature	$T_{stg}$		-55 to +150 $^\circ\text{C}$

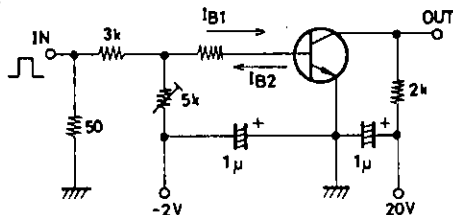
**Electrical Characteristics at  $T_a = 25^\circ\text{C}$**

			min	typ	max	unit
Collector Cutoff Current	$I_{CBO}$	$V_{CB} = (-)80\text{V}, I_E = 0$			(-)	0.1 $\mu\text{A}$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB} = (-)4\text{V}, I_C = 0$			(-)	0.1 $\mu\text{A}$
DC Current Gain	$h_{FE}$	$V_{CE} = (-)5\text{V}, I_C = (-)10\text{mA}$	100*		400*	
Gain-Bandwidth Product	$f_T$	$V_{CE} = (-)10\text{V}, I_C = (-)10\text{mA}$		150		MHz
Output Capacitance	$c_{ob}$	$V_{CB} = (-)10\text{V}, f = 1\text{MHz}$	(2.5)	2.0		pF
C-E Saturation Voltage	$V_{CE(sat)}$	$I_C = (-)30\text{mA}, I_B = (-)3\text{mA}$	(0.14)	0.08	0.3	V
Turn-ON Time	$t_{on}$	See specified Test Circuit.		0.1		$\mu\text{s}$
Fall Time	$t_f$	"		0.2		$\mu\text{s}$
Storage Time	$t_{stg}$	"		1.0		$\mu\text{s}$

\* : The 2SA1207/2SC2909 are classified by 10mA  $h_{FE}$  as follows :

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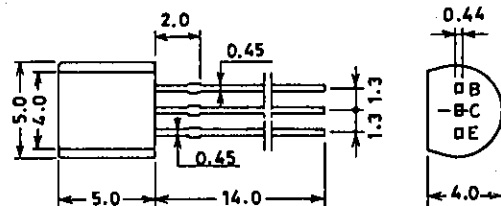
**Switching Time Test Circuit**



$I_C = 10I_{B1} = -10I_{B2} = 10\text{mA}$   
(For PNP, the polarity is reversed.)

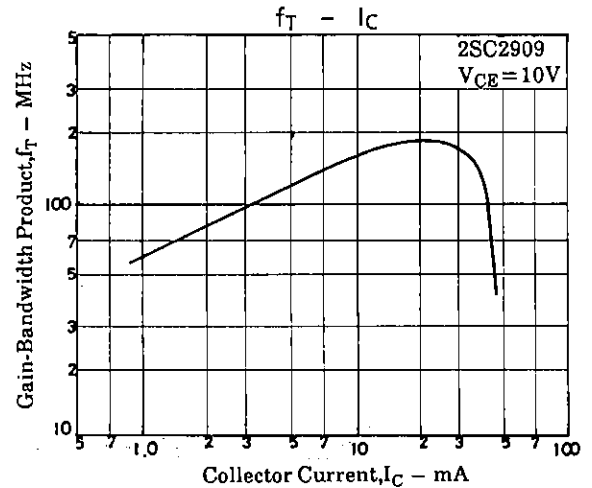
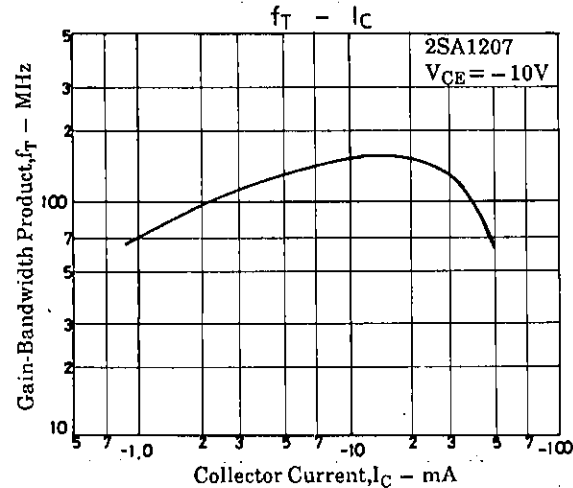
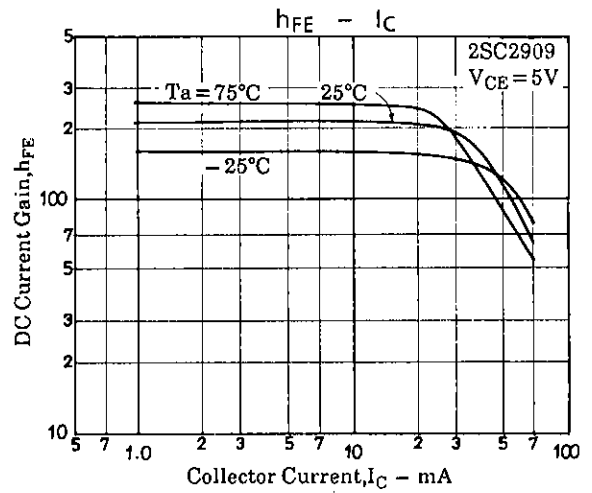
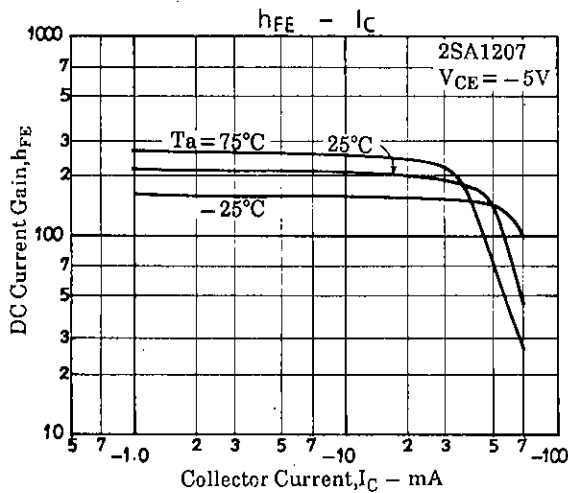
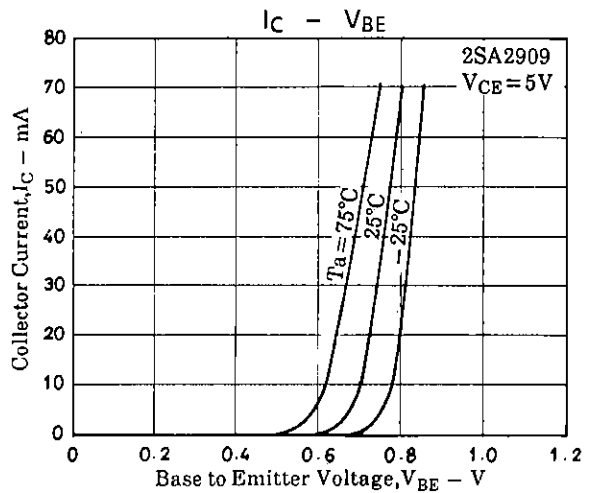
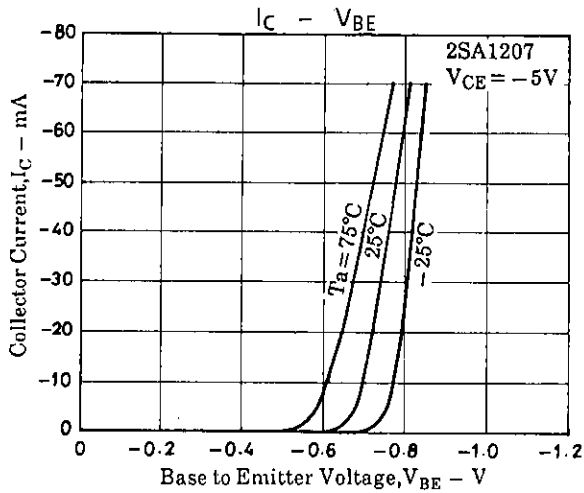
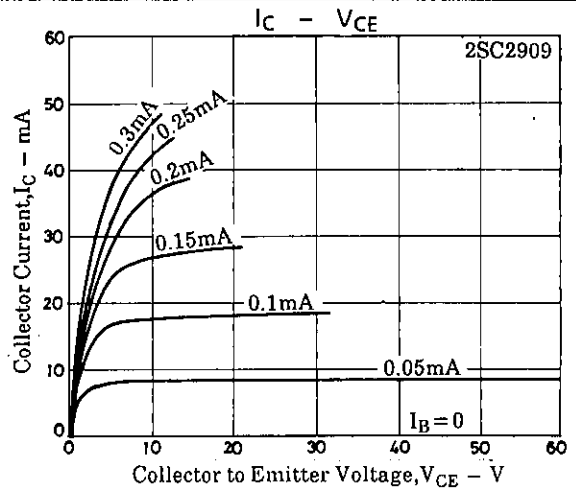
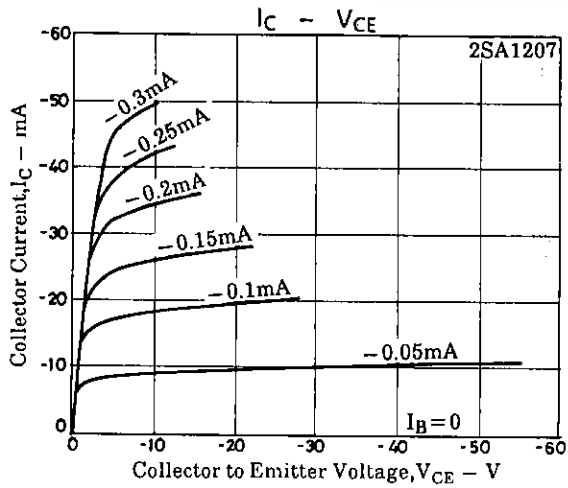
Unit(Resistance :  $\Omega$  , Capacitance : F)

**Package Dimensions 2003A**  
(unit: mm)

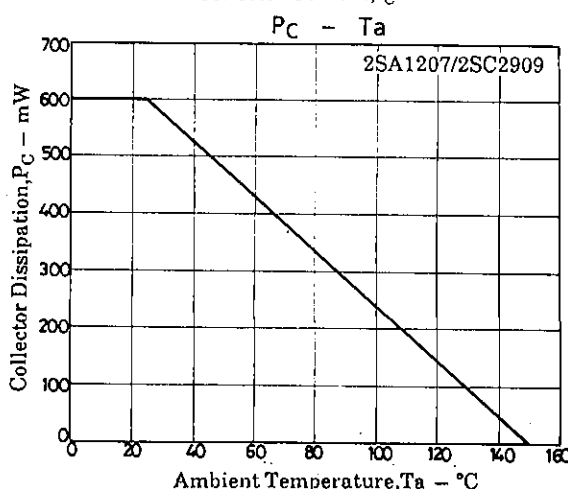
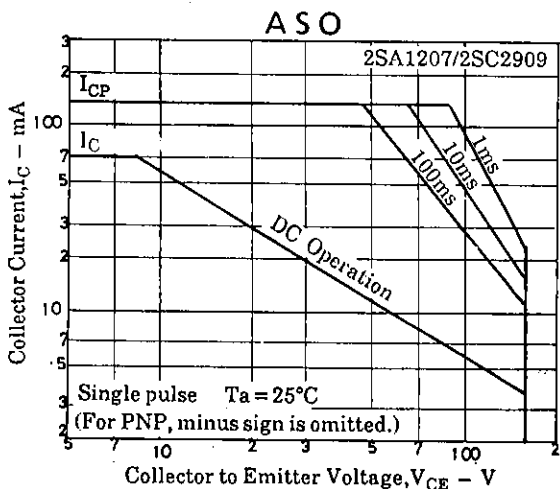
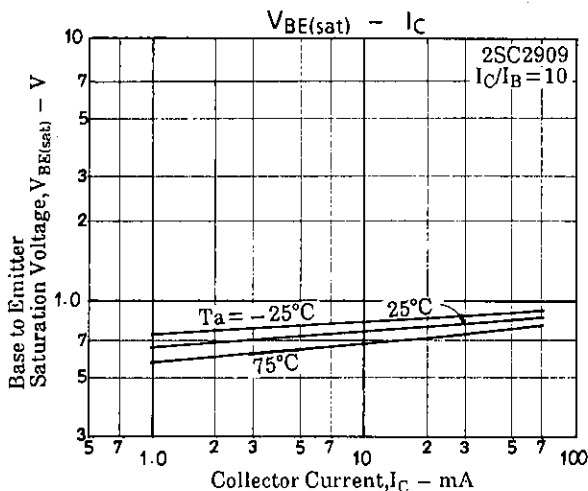
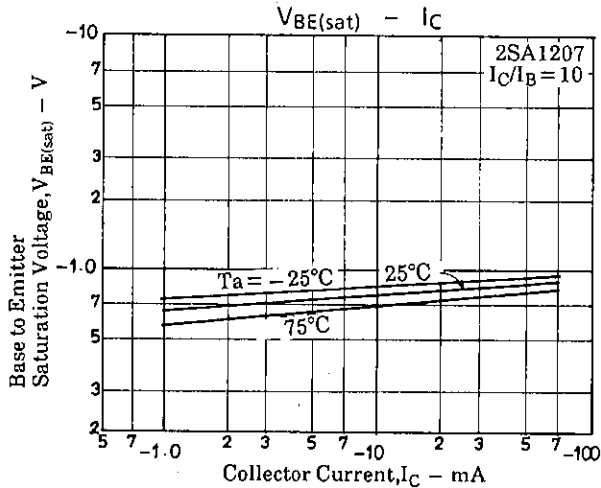
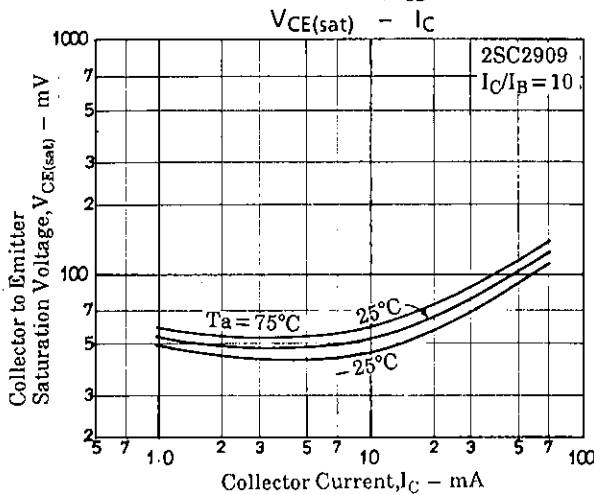
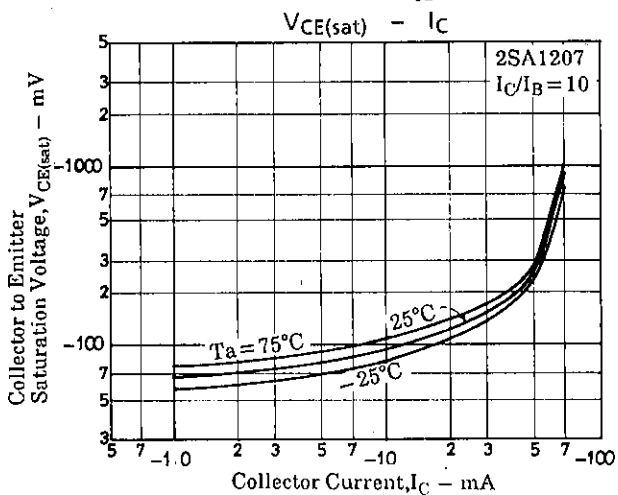
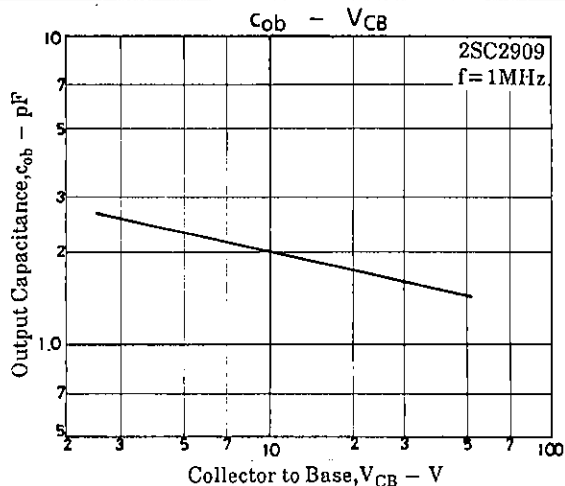
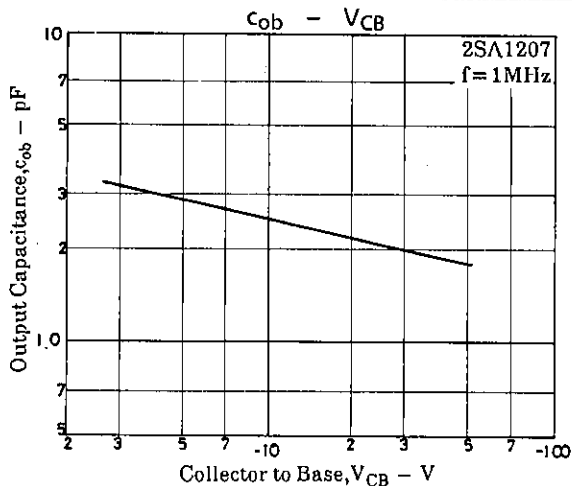


JEDEC: TO-92      B: Base  
EIAJ : SC-43      C: Collector  
SANYO: NP        E: Emitter

2SA1207/2SC2909



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