

SANYO	No.778E	2SA1207/2SC2909
		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 $^\circ\text{C}$

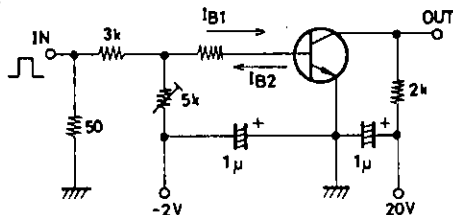
Electrical Characteristics at $T_a = 25^\circ\text{C}$

			min	typ	max	unit
Collector Cutoff Current	I_{CBO}	$V_{CB} = (-)80\text{V}, I_E = 0$			(-)	0.1 μA
Emitter Cutoff Current	I_{EBO}	$V_{EB} = (-)4\text{V}, I_C = 0$			(-)	0.1 μA
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		μs
Fall Time	t_f	"		0.2		μs
Storage Time	t_{stg}	"		1.0		μs

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

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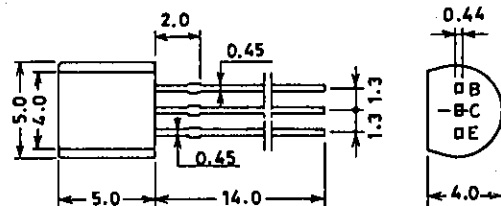
Switching Time Test Circuit



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

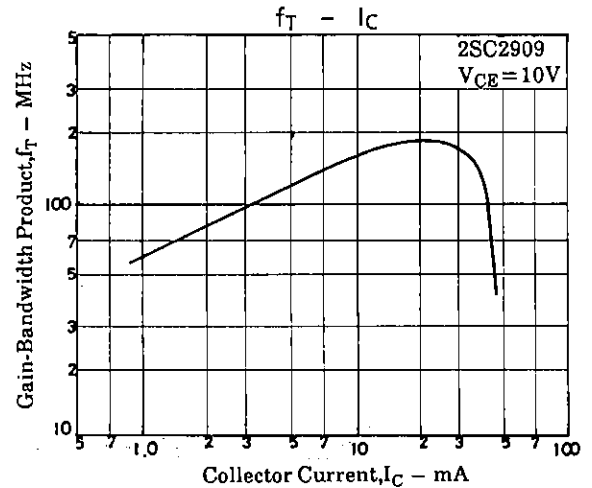
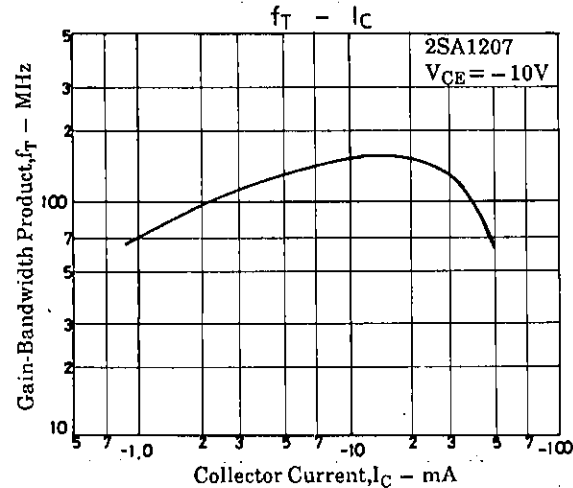
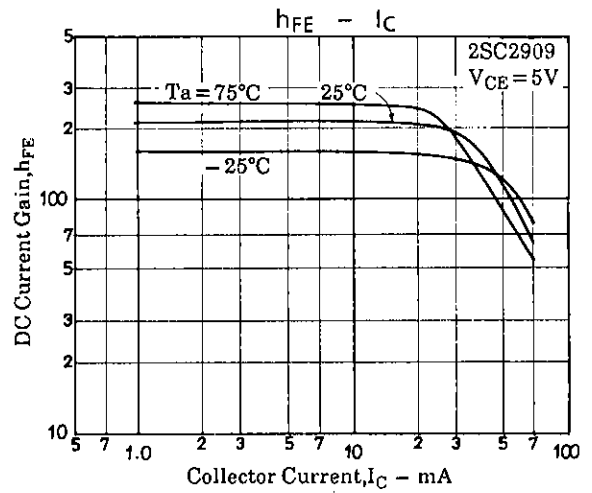
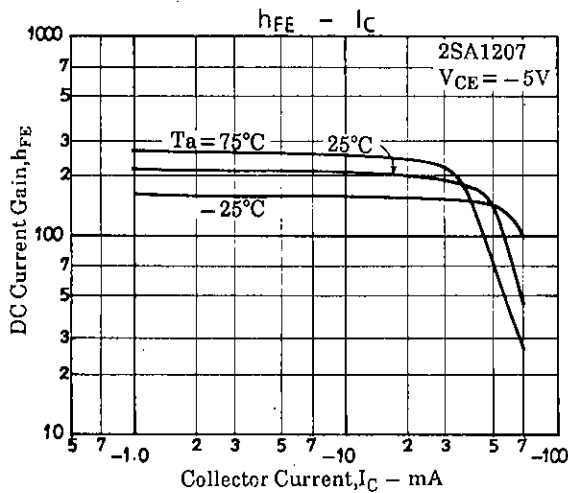
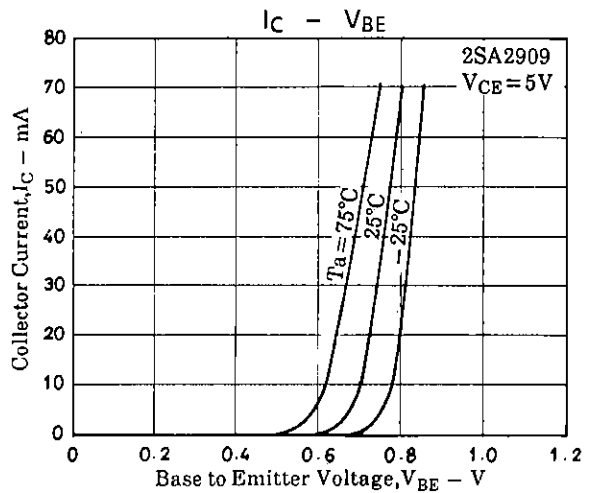
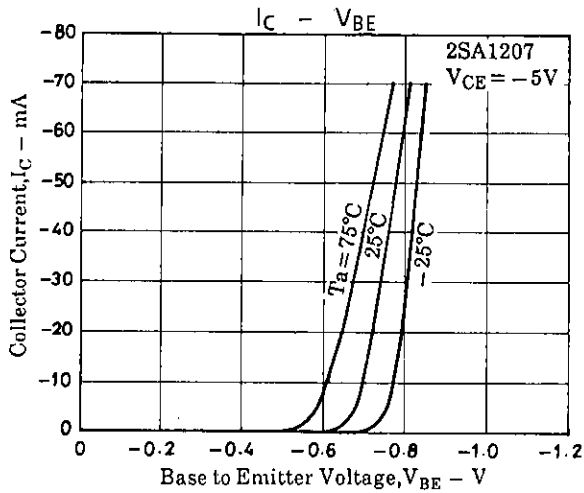
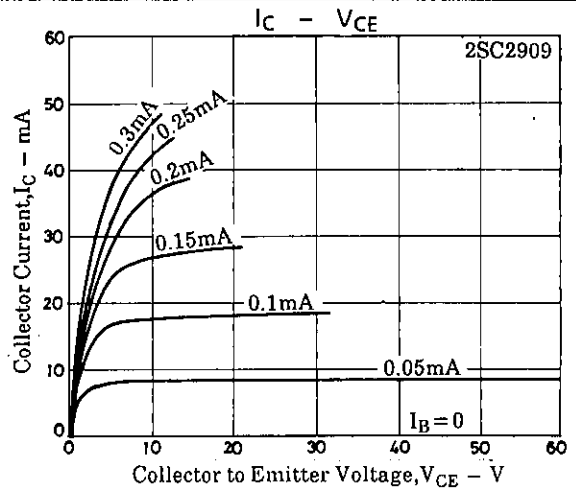
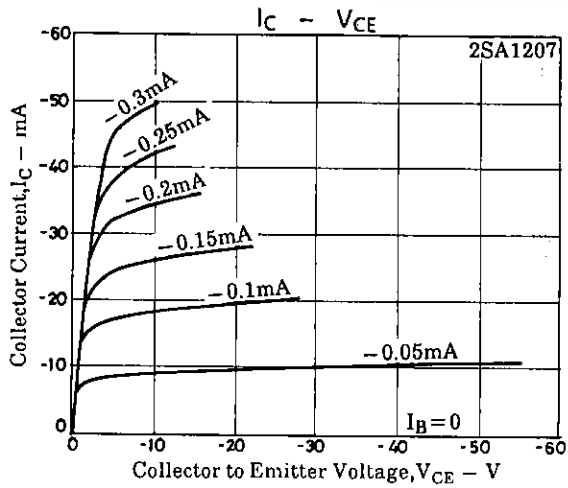
Unit(Resistance : Ω , Capacitance : F)

Package Dimensions 2003A
(unit: mm)

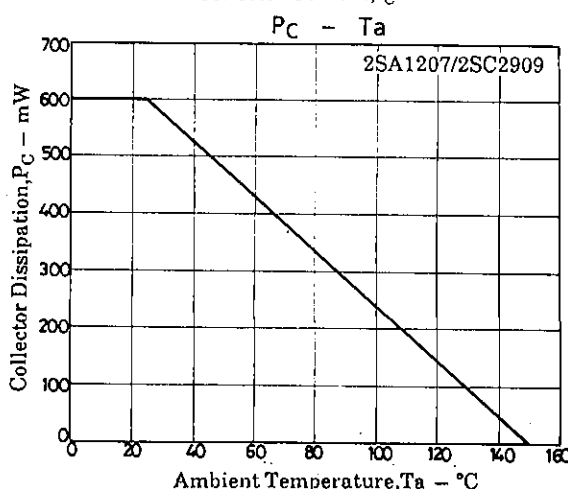
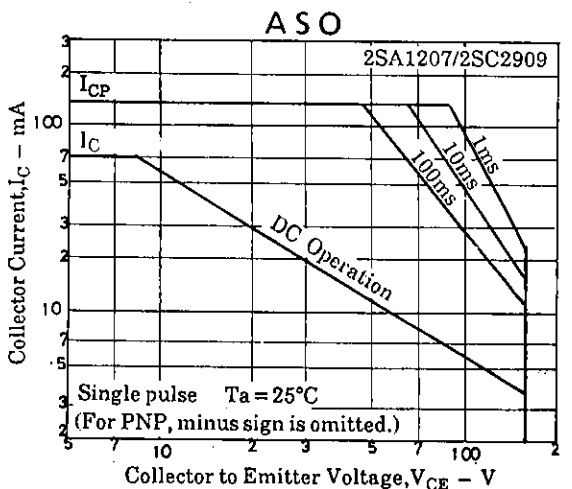
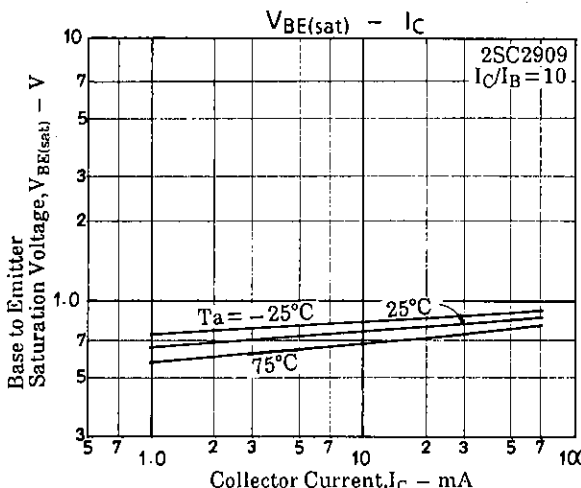
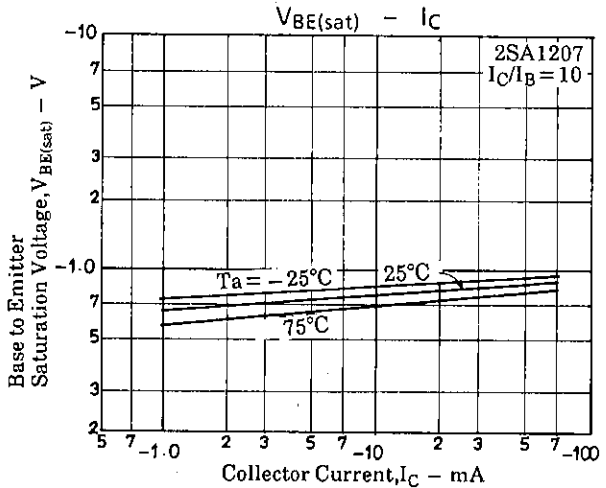
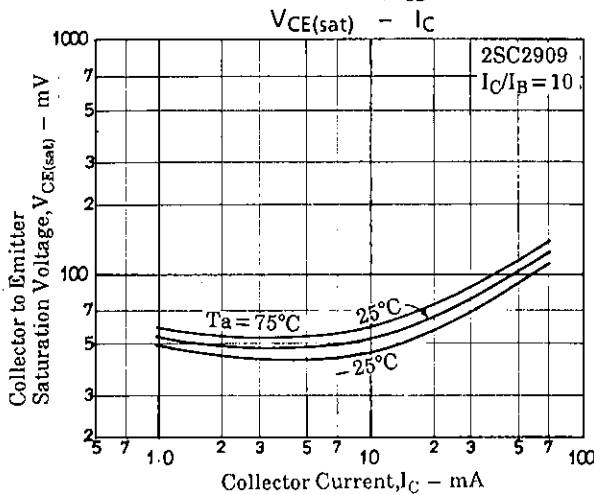
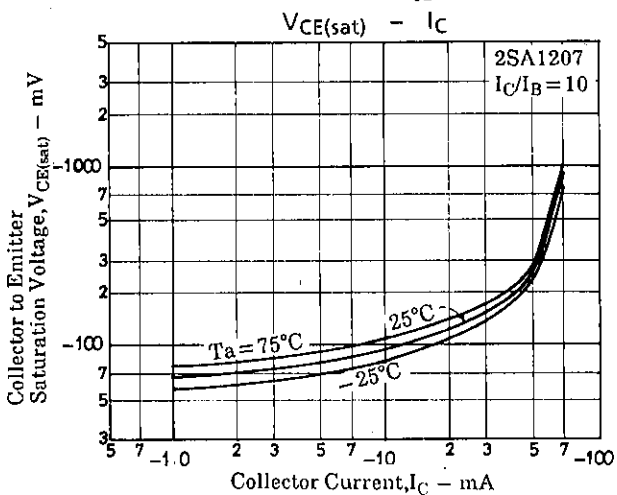
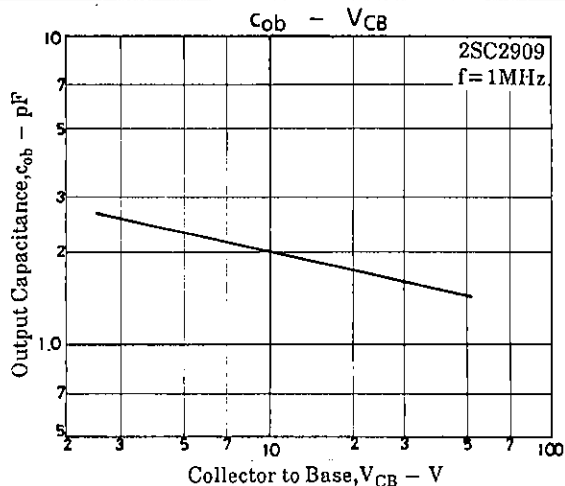
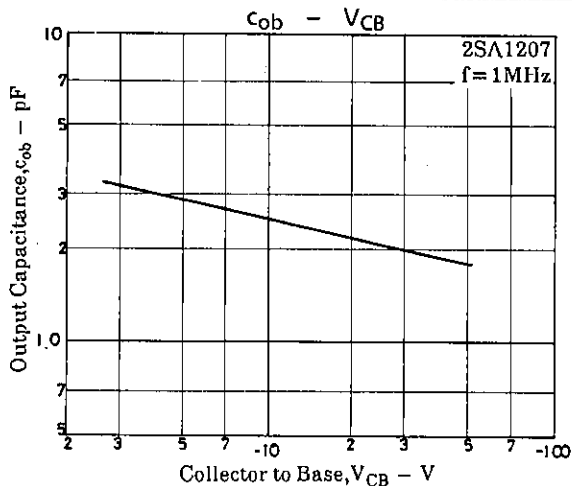


JEDEC: TO-92 B: Base
EIAJ : SC-43 C: Collector
SANYO: NP E: Emitter

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