

	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_{CBO}	(-)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	$^\circ\text{C}$

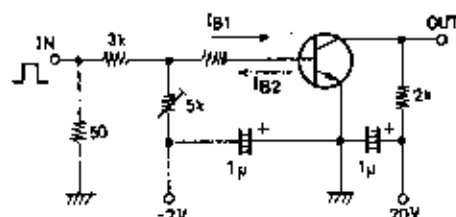
Electrical Characteristics at $T_a = 25^\circ\text{C}$

			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	$V_{CE(sat)}$	$I_C = (-)30\text{mA}, I_B = (-)3\text{mA}$	0.08	0.3		V
			(0.14)	(0.4)		
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

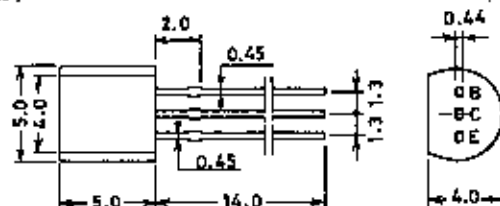


$$I_C = 10I_{B1} = -10I_{B2} = 10\text{mA}$$

(For PNP, the polarity is reversed.)

Unit(Resistance: Ω , Capacitance: F)

Package Dimensions 2003A (unit: mm)



JEDEC: TO-92

EIAJ: SC-43

SANYO: NP

B: Base

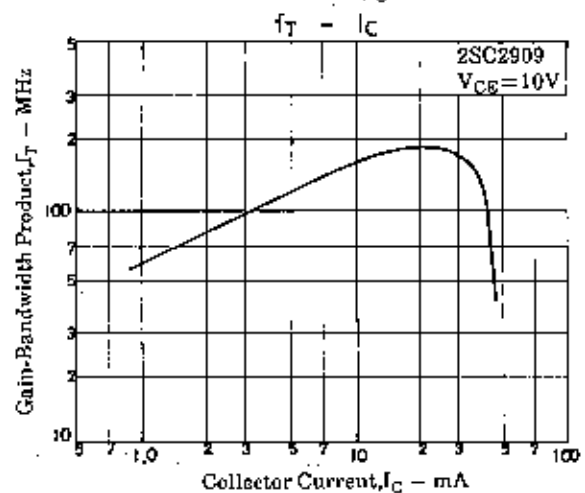
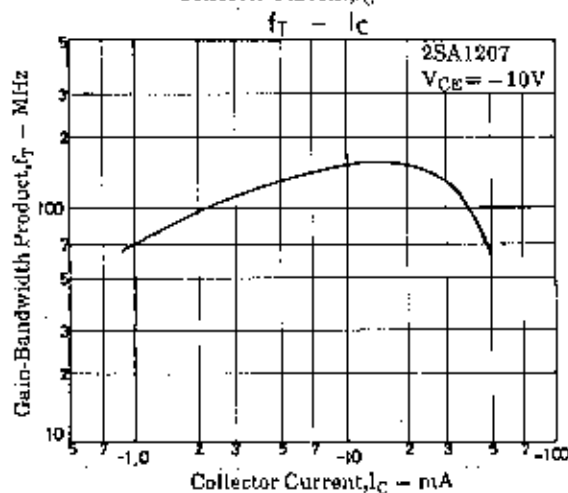
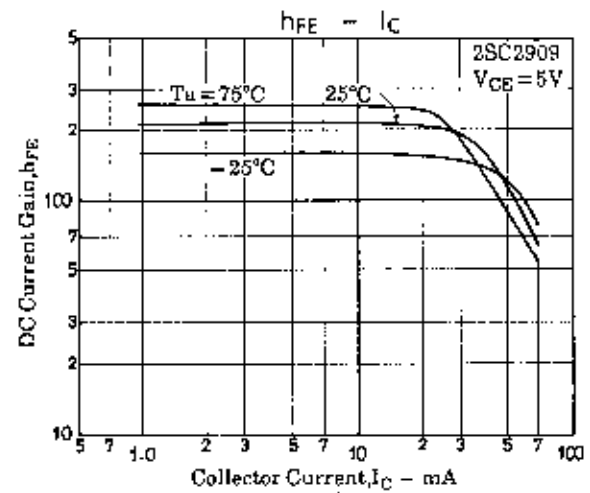
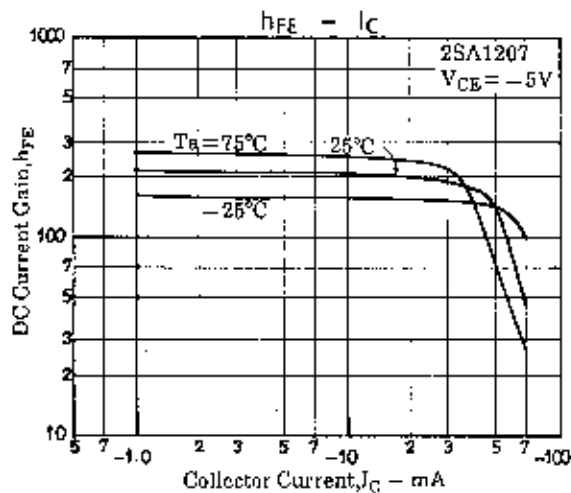
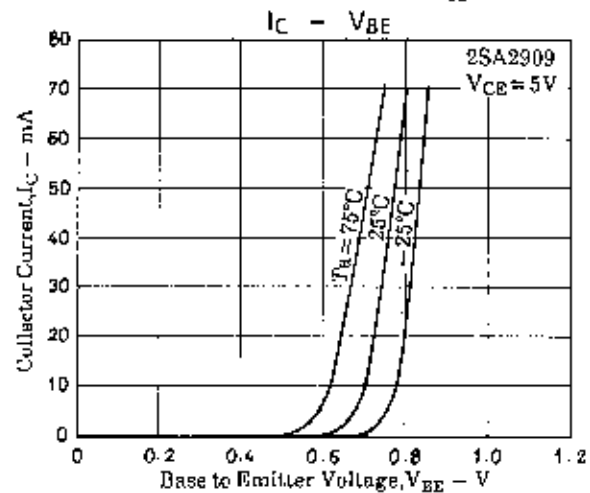
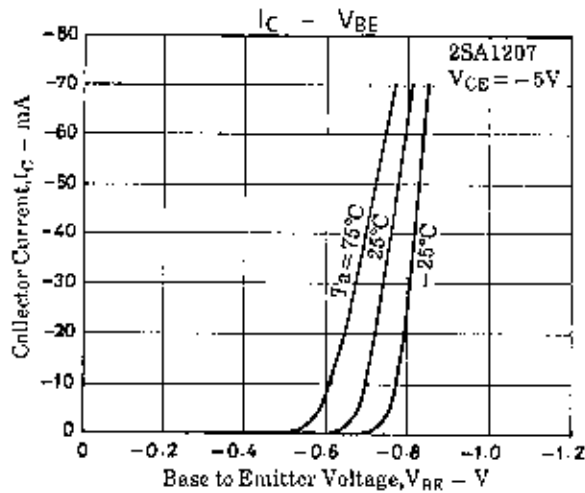
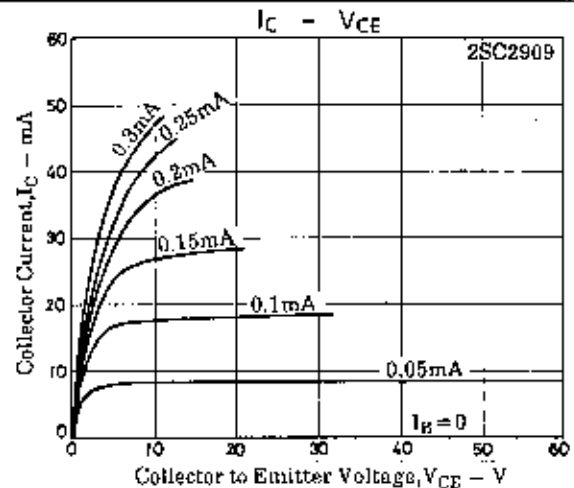
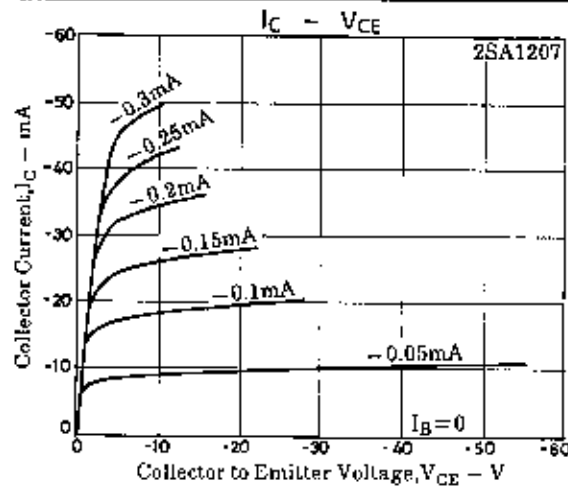
C: Collector

E: Emitter

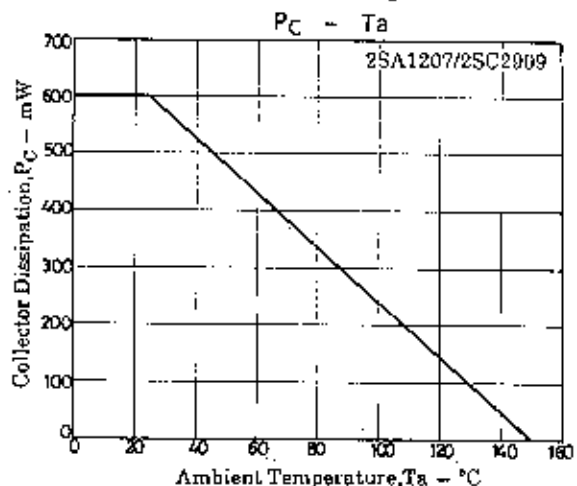
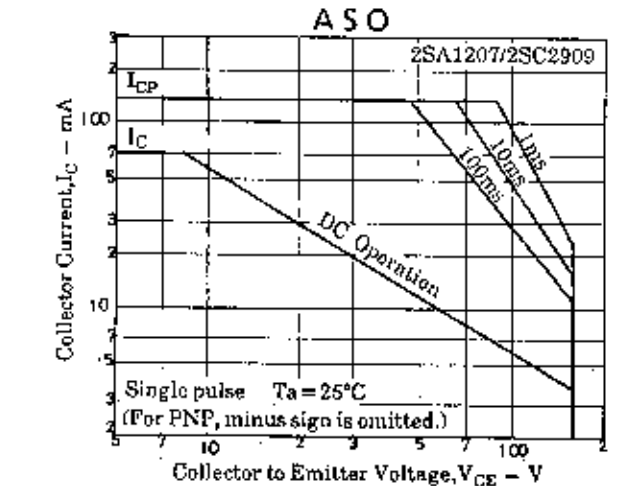
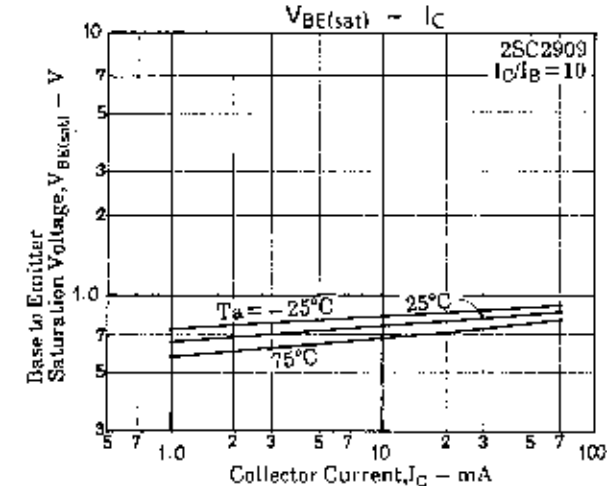
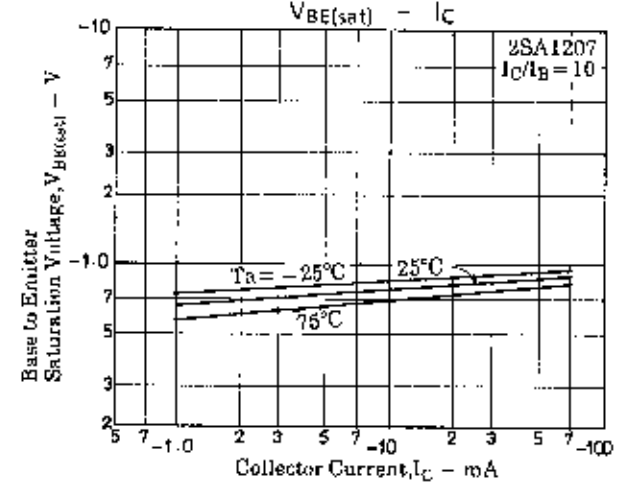
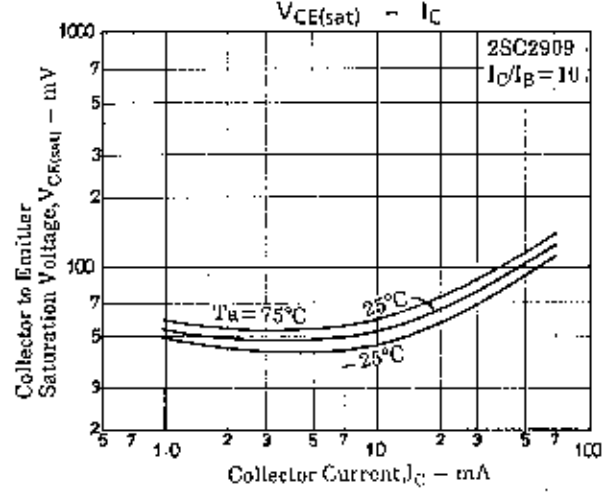
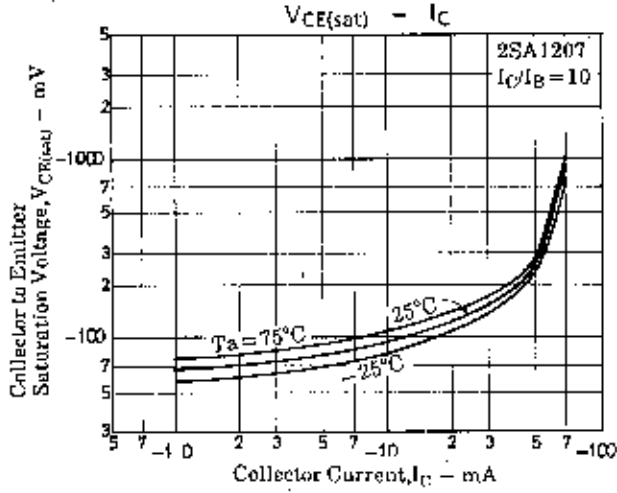
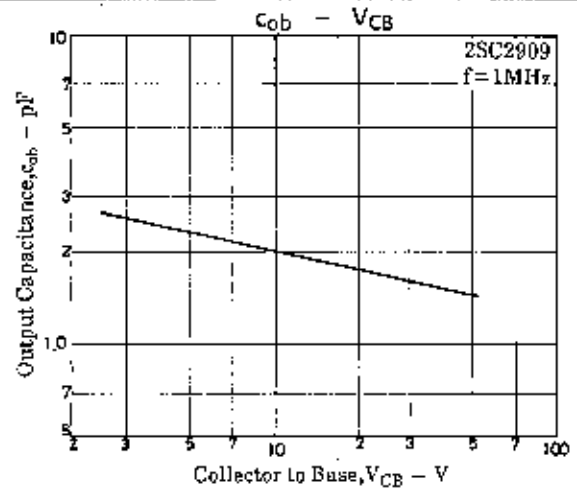
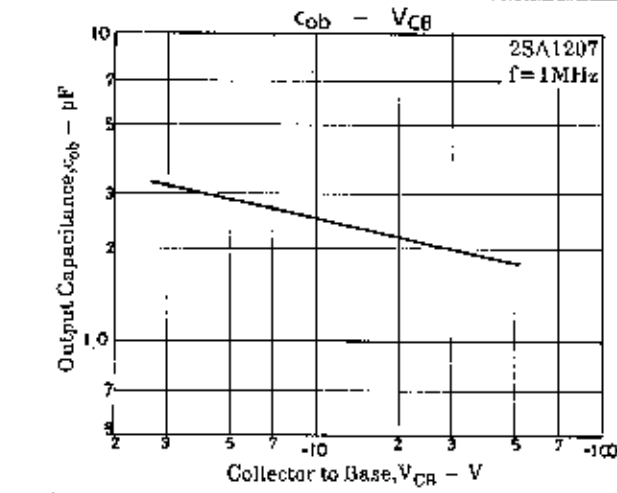
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2SA1207/2SC2909



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