

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_{CE0}	(-)	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 $^\circ\text{C}$

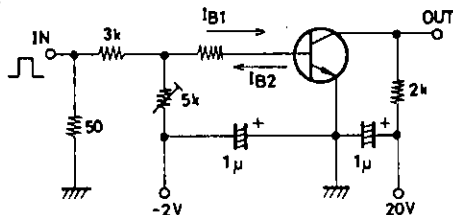
Electrical Characteristics at $T_a = 25^\circ\text{C}$

			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
-----------	-----------	-----------

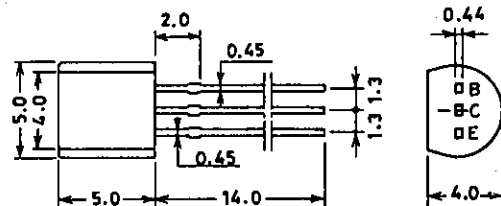
Switching Time Test Circuit



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

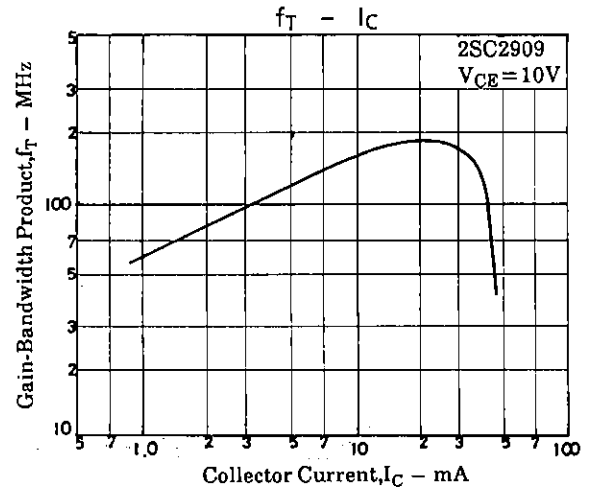
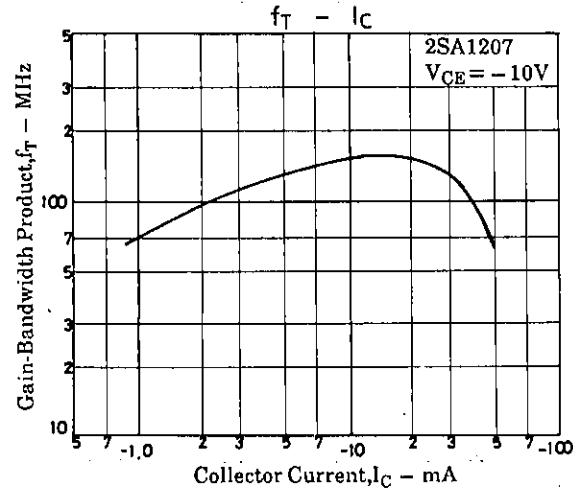
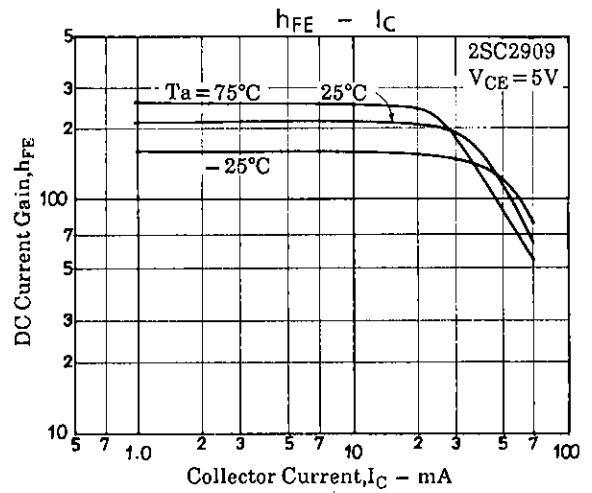
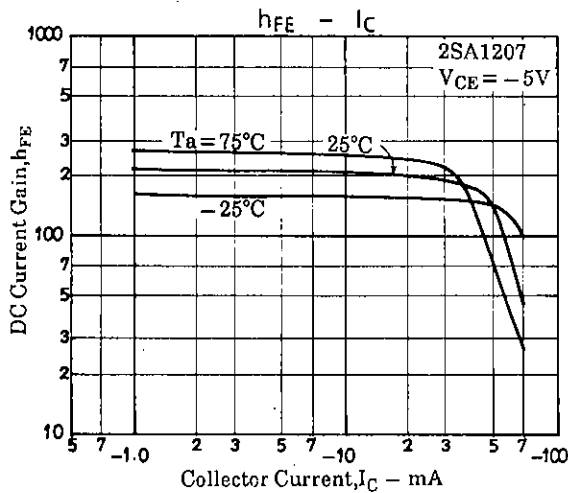
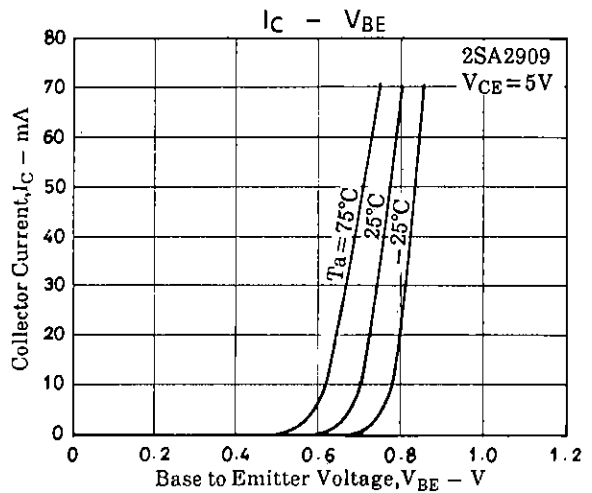
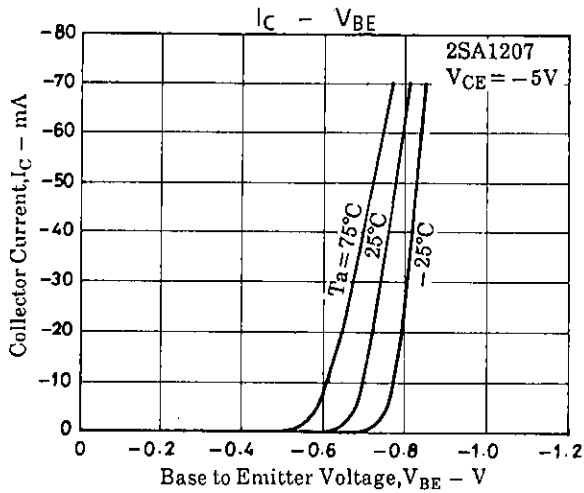
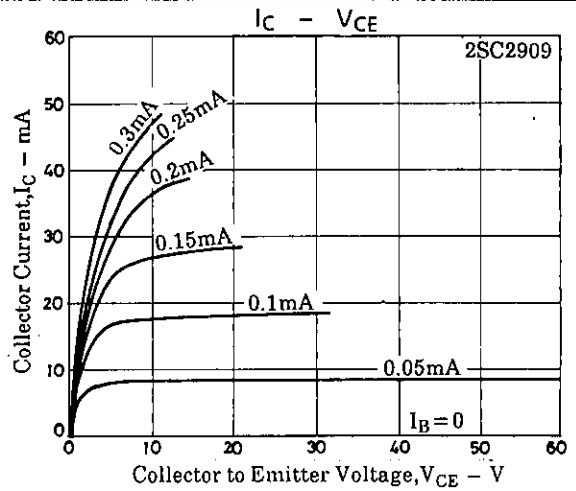
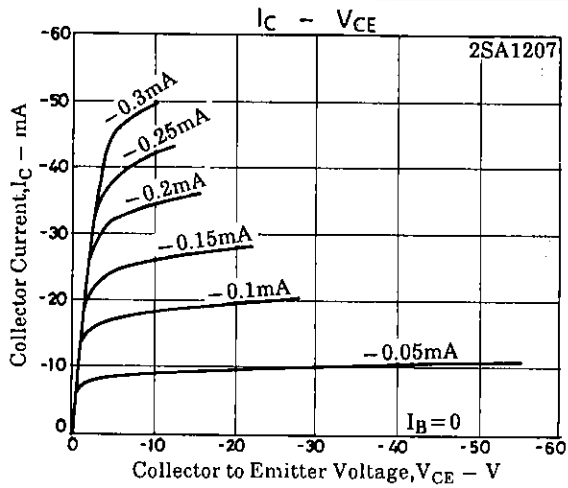
Unit(Resistance : Ω , Capacitance : F)

Package Dimensions 2003A
(unit: mm)

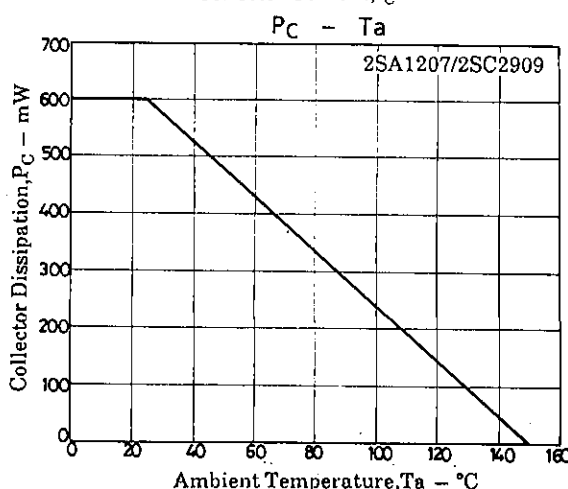
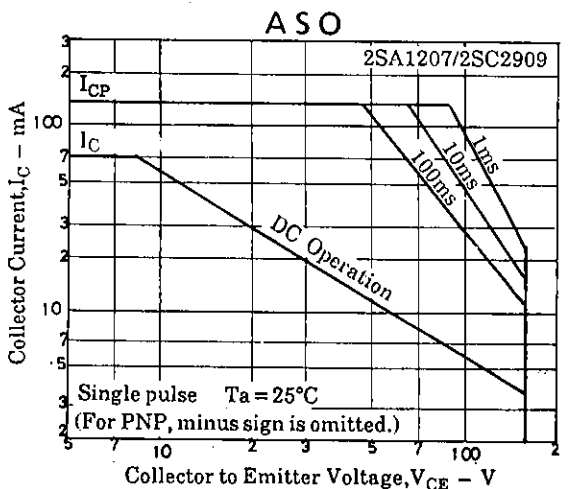
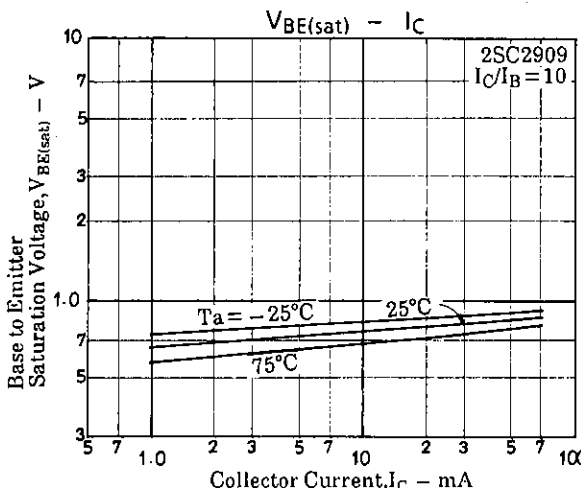
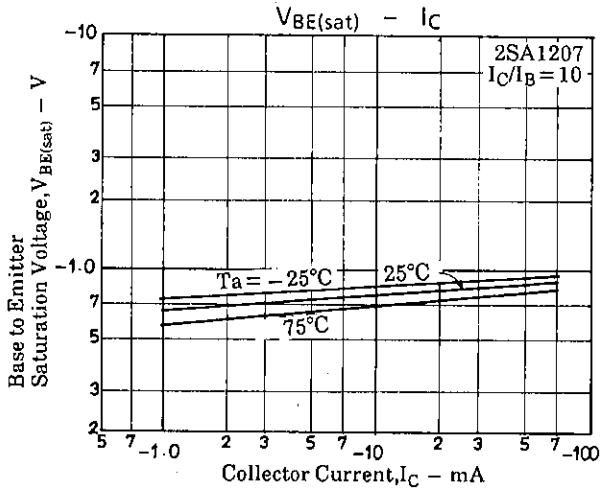
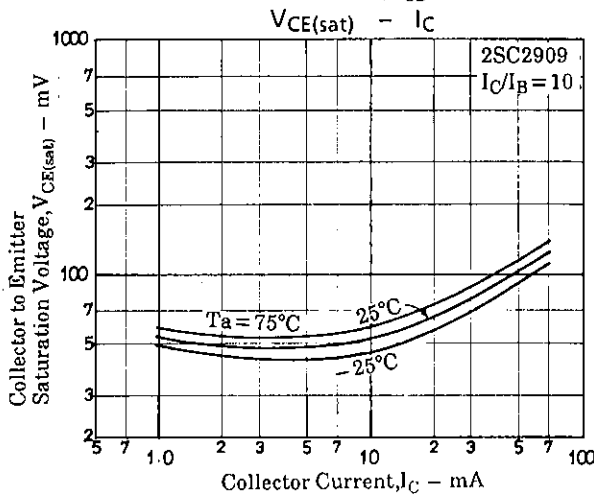
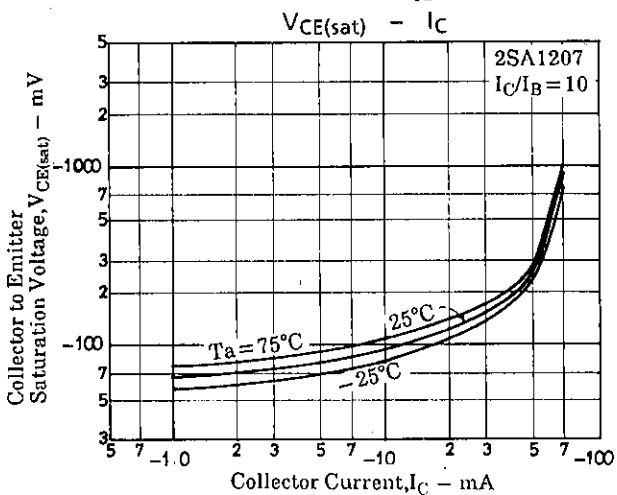
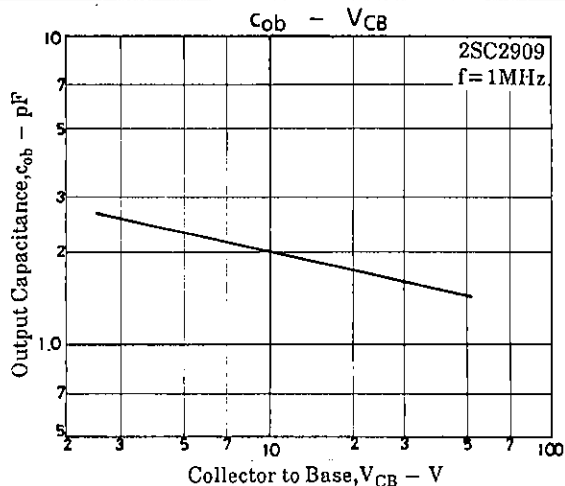
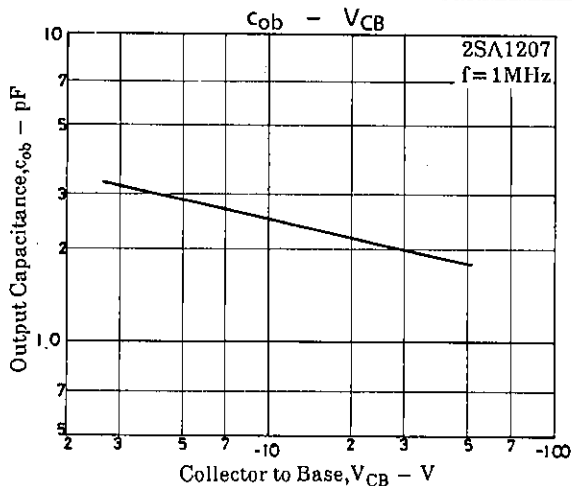


JEDEC: TO-92 B: Base
EIAJ : SC-43 C: Collector
SANYO: NP E: Emitter

2SA1207/2SC2909



2SA1207/2SC2909



- No products described or contained herein are intended for use in surgical implants, life-support systems, aerospace equipment, nuclear power control systems, vehicles, disaster/crime-prevention equipment and the like, the failure of which may directly or indirectly cause injury, death or property loss.
- Anyone purchasing any products described or contained herein for an above-mentioned use shall:
 - ① Accept full responsibility and indemnify and defend SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors and all their officers and employees, jointly and severally, against any and all claims and litigation and all damages, cost and expenses associated with such use:
 - ② Not impose any responsibility for any fault or negligence which may be cited in any such claim or litigation on SANYO ELECTRIC CO., LTD., its affiliates, subsidiaries and distributors or any of their officers and employees jointly or severally.
- Information (including circuit diagrams and circuit parameters) herein is for example only; it is not guaranteed for volume production. SANYO believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.