

SANYO

No.779C

2SA1209/2SC2911

PNP/NPN Epitaxial Planar Silicon Transistors

**160V/140mA High-Voltage Switching
and AF 100W Predriver Applications****Features**

- Adoption of FBET process
- High breakdown voltage
- Good linearity of h_{FE} and small C_{ob}
- Fast switching speed

(): 2SA1209

Maximum Ratings/ $T_a = 25^\circ\text{C}$

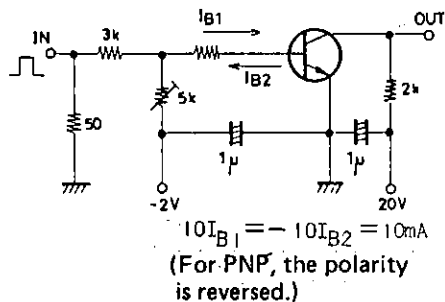
Maximum Ratings/ $T_a = 25^{\circ}\text{C}$			unit	
Collector-to-base voltage	V_{CBO}	(-)-180	V	
Collector-to-emitter voltage	V_{CEO}	(-)-160	V	
Emitter-to-base voltage	V_{EBO}	(-)-5	V	
Collector current	I_C	(-)-140	mA	
Collector Current (Pulse)	I_{CP}	(-)-200	mA	
Collector dissipation	P_C	1	W	
		$T_C = 25^{\circ}\text{C}$	10	W
Junction temperature	T_j	150	$^{\circ}\text{C}$	
Storage temperature	T_{sta}	-55 ~ +150	$^{\circ}\text{C}$	

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

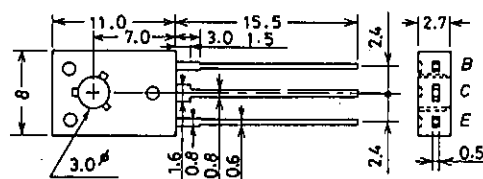
			min	typ	max	unit
Collector cutoff current	I_{CBO}	$V_{CB} = (-)80, I_E = 0$			(-)-0.1	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = (-)4\text{ V}, I_C = 0$			(-)-0.1	μA
Common emitter DC current gain	h_{FE}	$V_{CE} = (-)5\text{ V}, I_C = (-)10\text{ mA}$	100*		400*	
Gain-band width product	f_T	$V_{CE} = (-)10\text{ V}, I_C = (-)10\text{ mA}$		150		MHz
Common base output capacitance	C_{ob}	$V_{CB} = (-)10\text{ V}, f = 1\text{ MHz}$		(4.0)		pF
				3.0		
Collector to emitter saturation voltage $V_{CE(sat)}$		$I_C = (-)50\text{ mA}, I_B = (-)5\text{ mA}$	(-)-0.14	(-)-0.4		V
			0.07	0.3		
Turn-on time	T_{on}	See specified test circuit.		0.1		μs
Storage time	t_{stg}	See specified test circuit.		1.5		μs
Fall time	t_f	See specified test circuit.		0.1		μs

*: The 2SA1209/2SC2911 are classified by 10 mA h_{FE} as follows:

100	R	200	140	S	280	200	T	400
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Switching Time Test CircuitUnit (resistance: Ω , capacitance: F)**Package Dimensions 2009A**

(unit: mm)

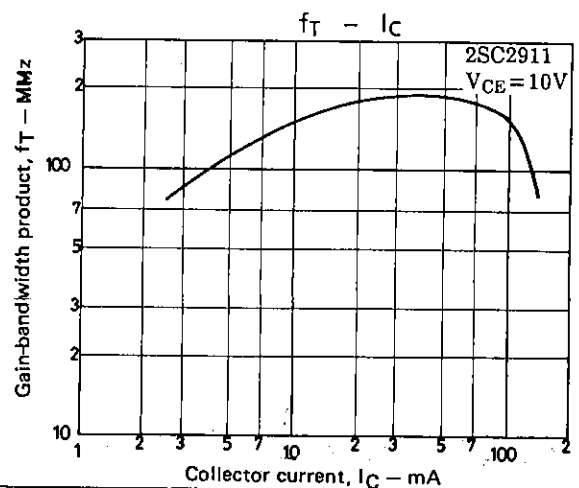
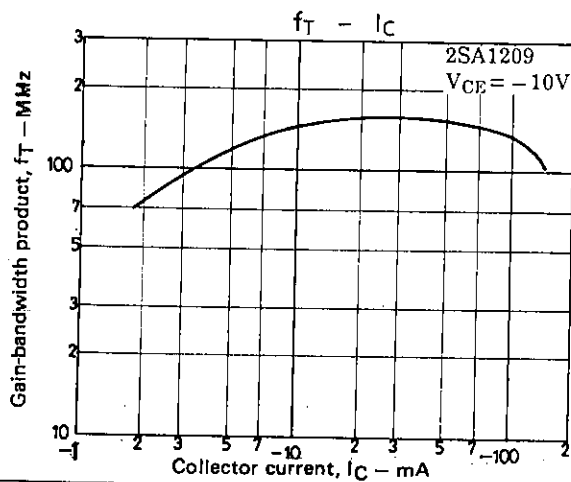
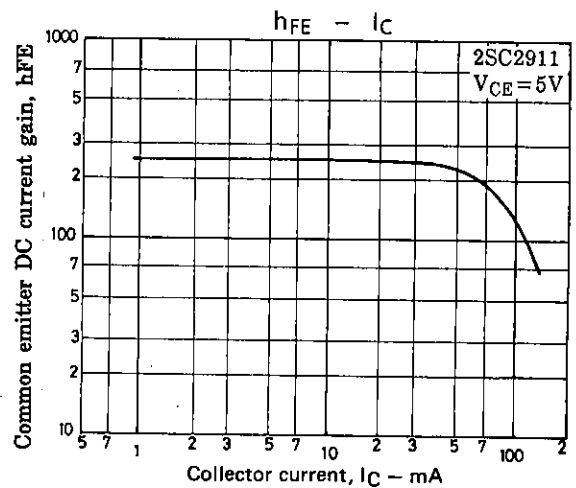
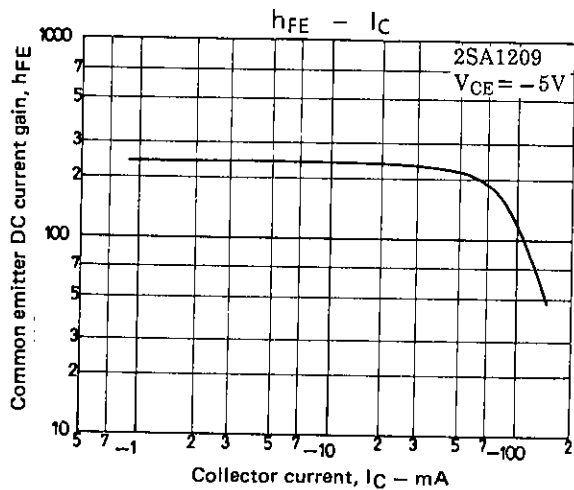
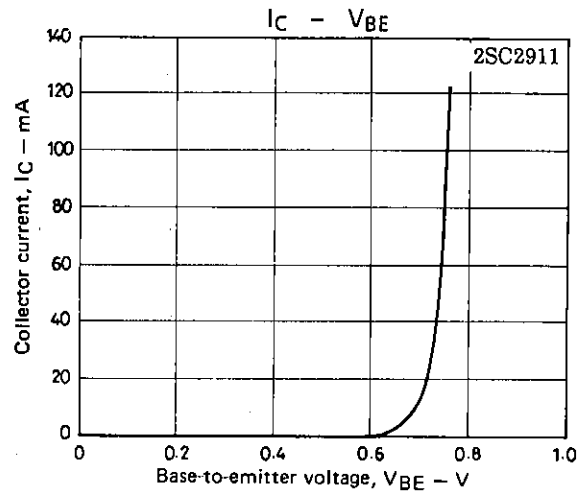
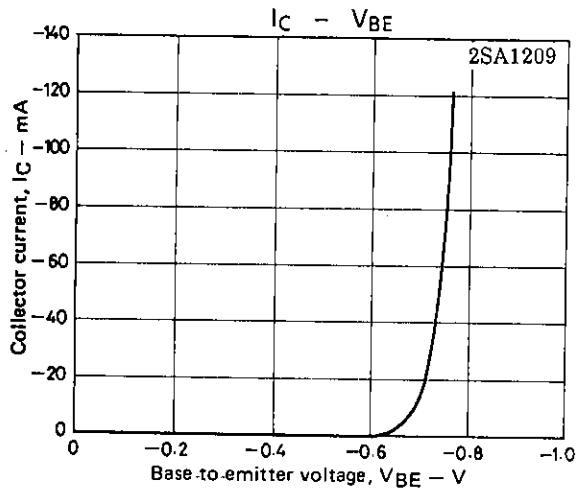
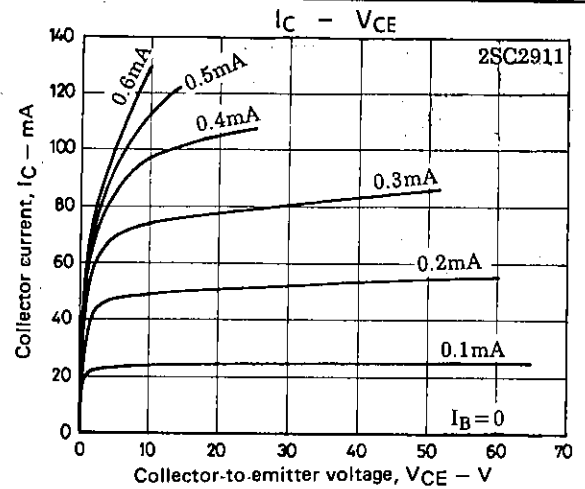
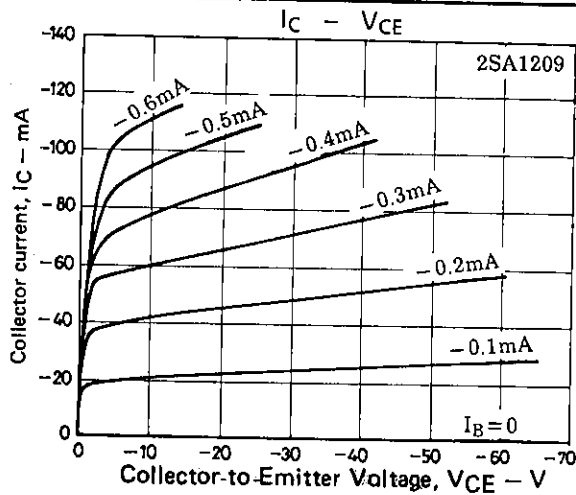


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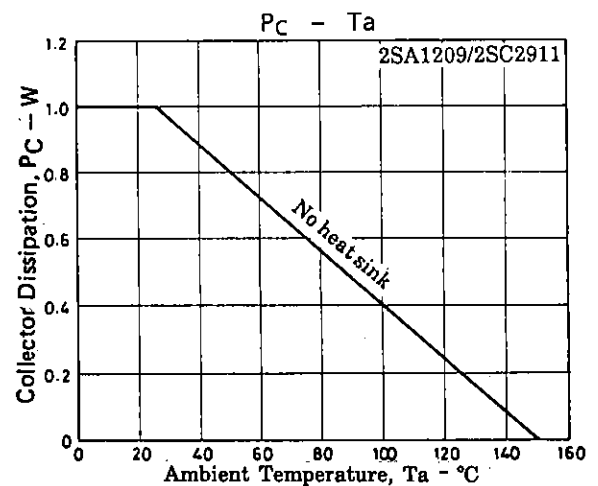
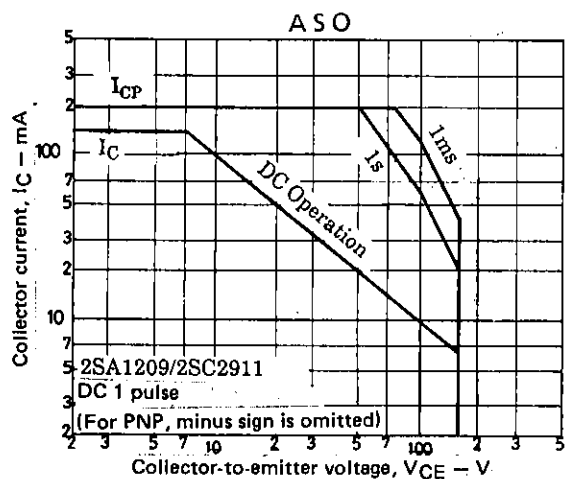
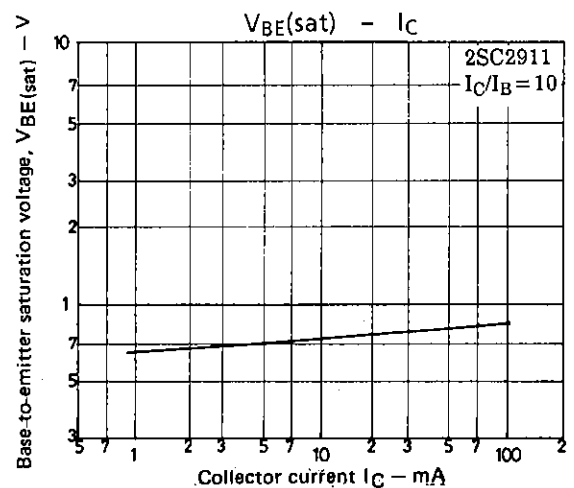
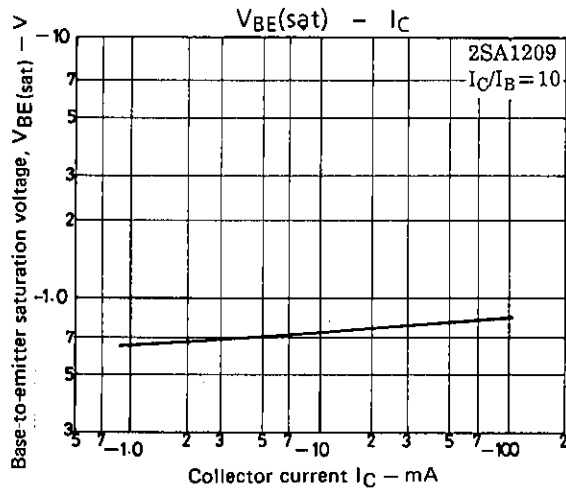
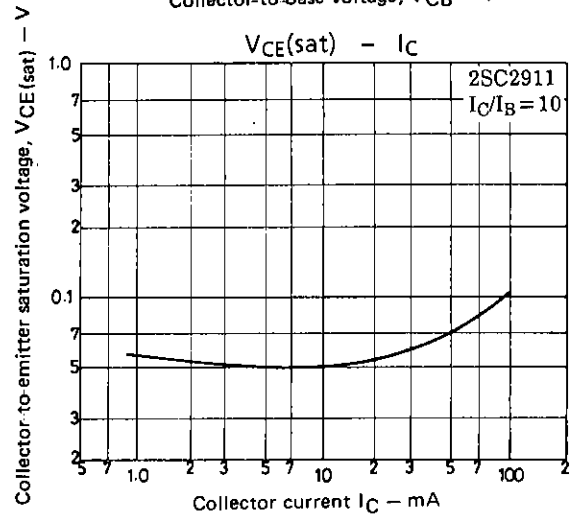
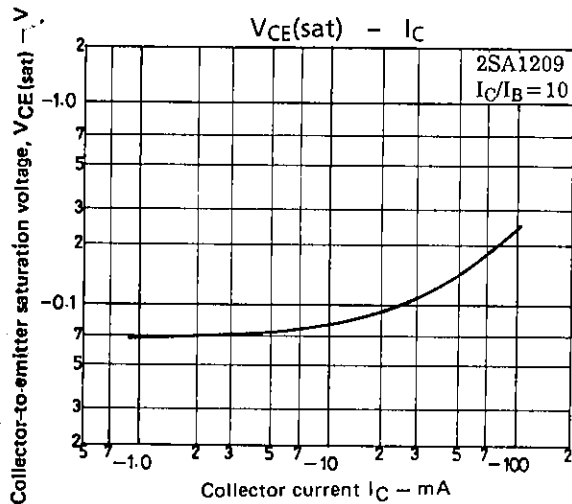
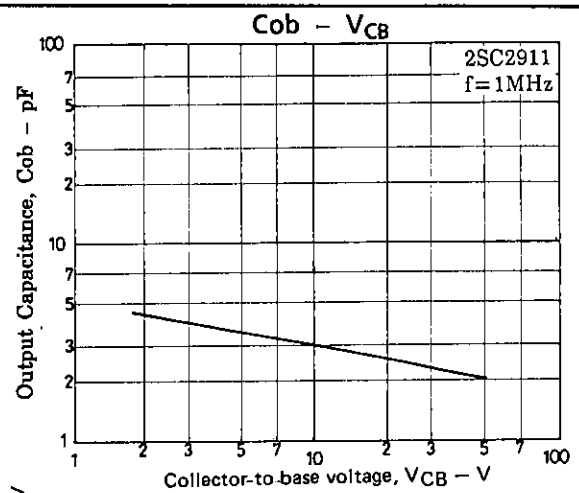
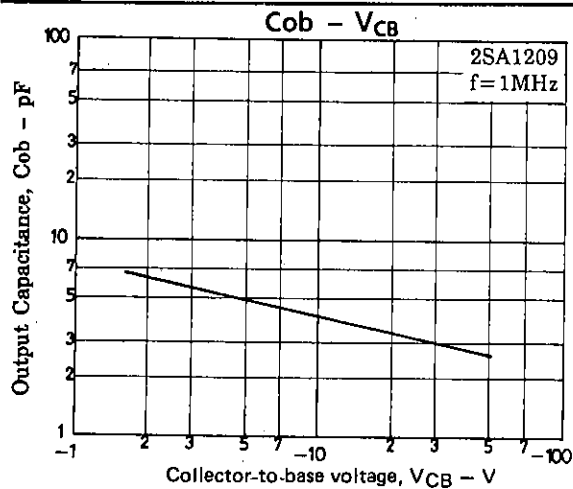
B: Base
C: Collector
E: Emitter

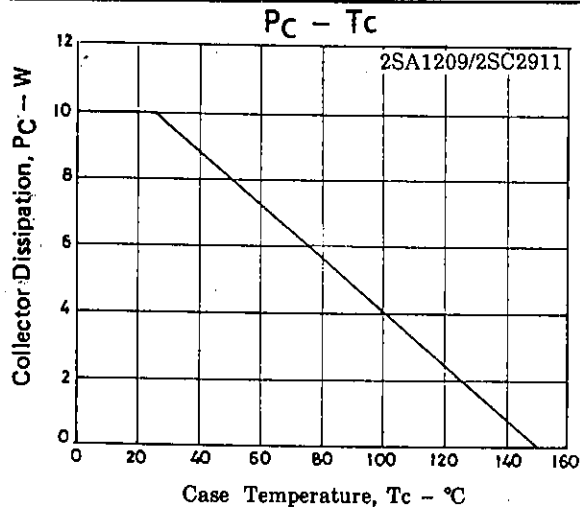
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