

SANYO	No.779C	<h1 style="margin: 0;">2SA1209/2SC2911</h1> <p style="margin: 0;">PNP/NPN Epitaxial Planar Silicon Transistors</p> <p style="margin: 0;">160V/140mA High-Voltage Switching and AF 100W Predriver Applications</p>
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Features

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

() : 2SA1209

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

			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
Junction temperature	T_j		150
Storage temperature	T_{stg}		-55 ~ +150

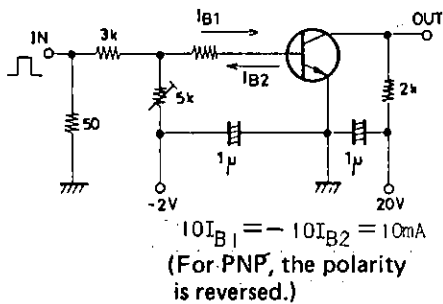
Electrical Characteristics/ $T_a = 25^\circ\text{C}$

			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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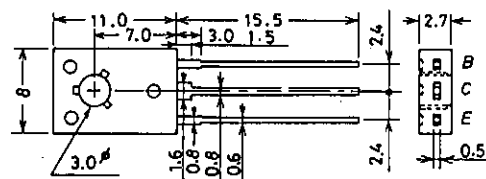
Switching Time Test Circuit



Unit (resistance: Ω , capacitance: F)

Package Dimensions 2009A

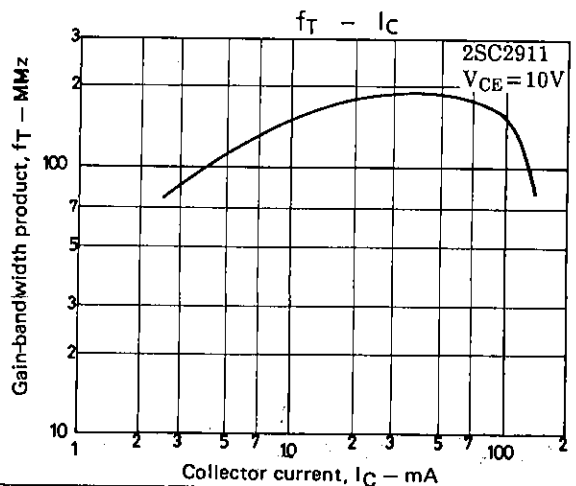
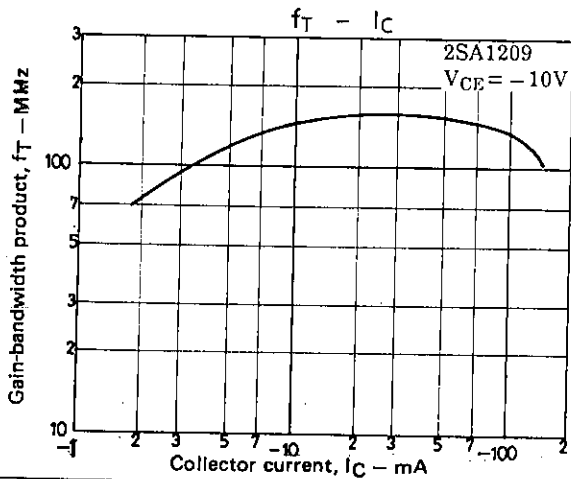
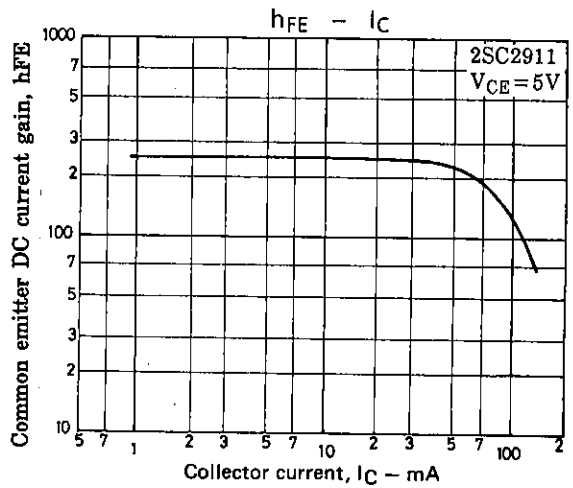
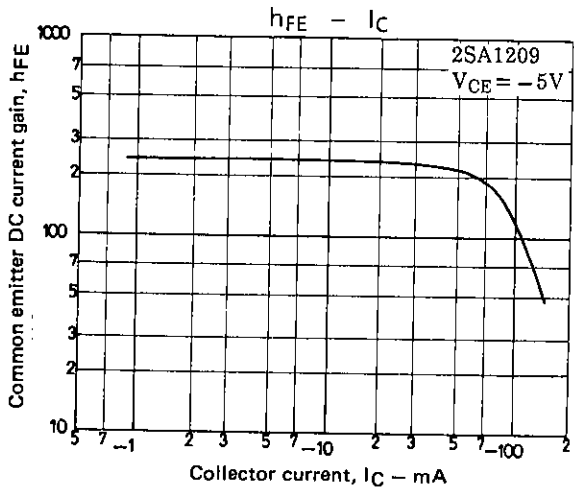
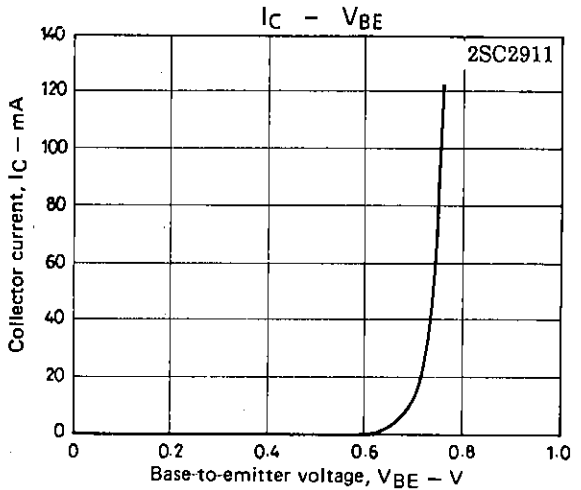
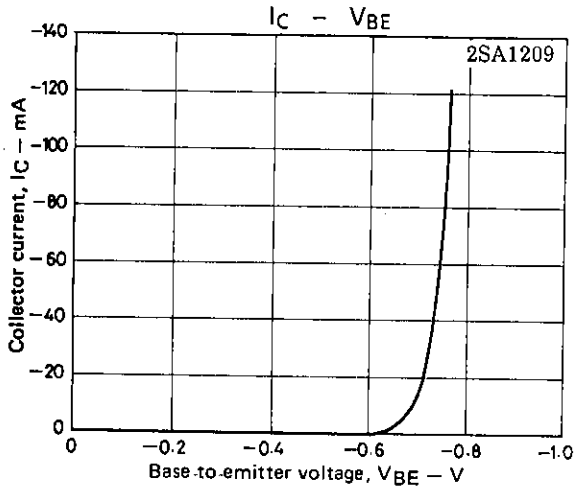
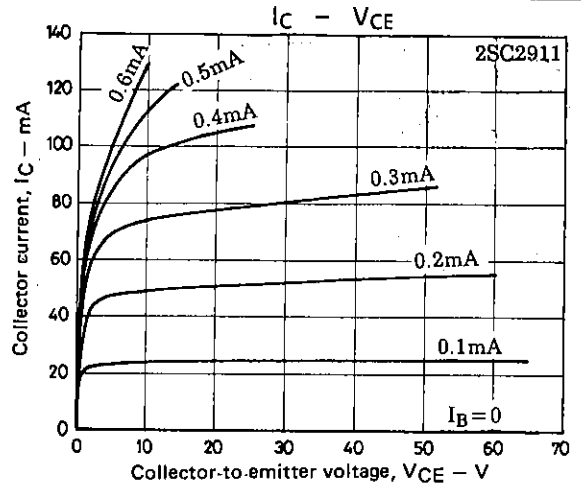
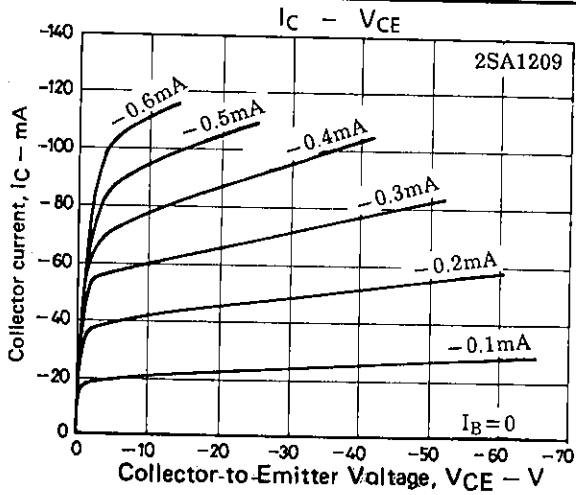
(unit: mm)



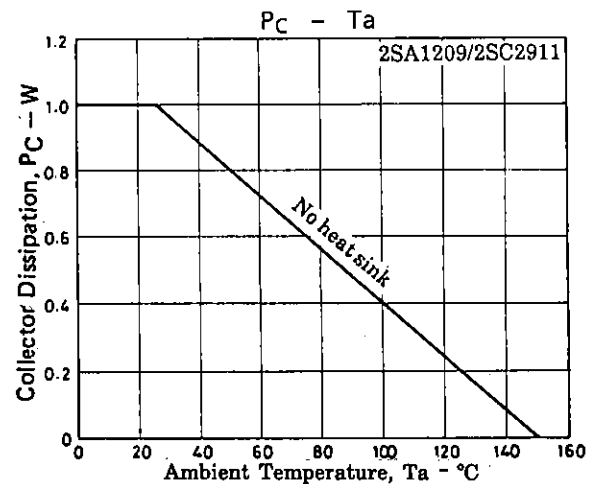
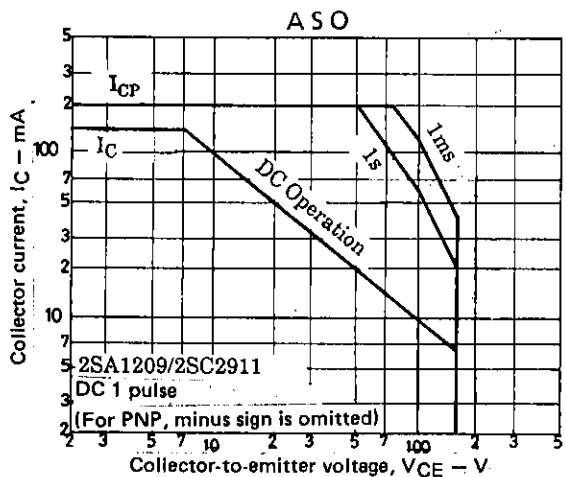
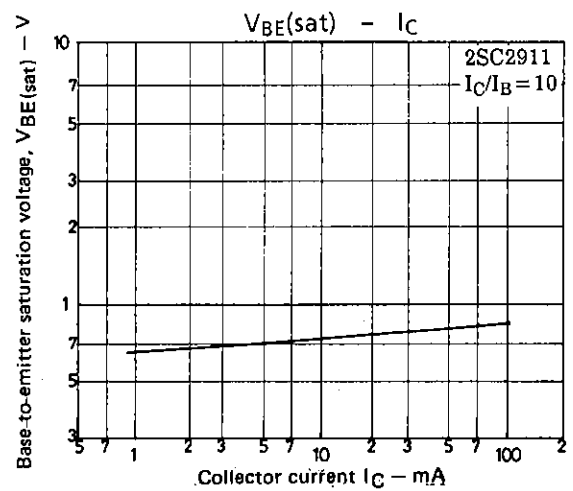
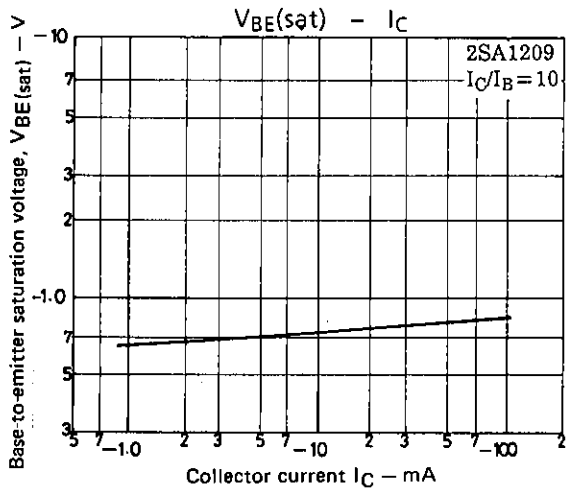
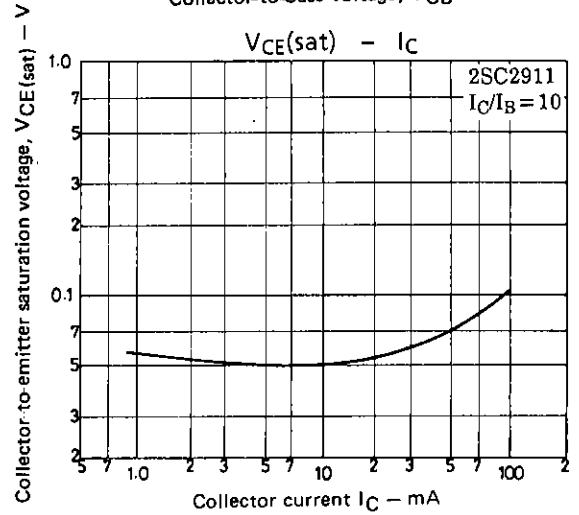
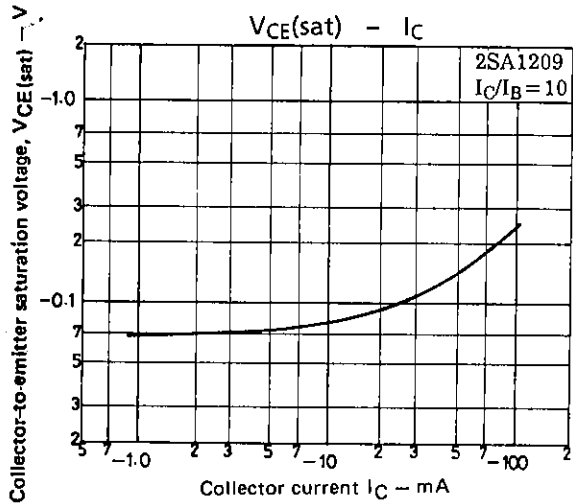
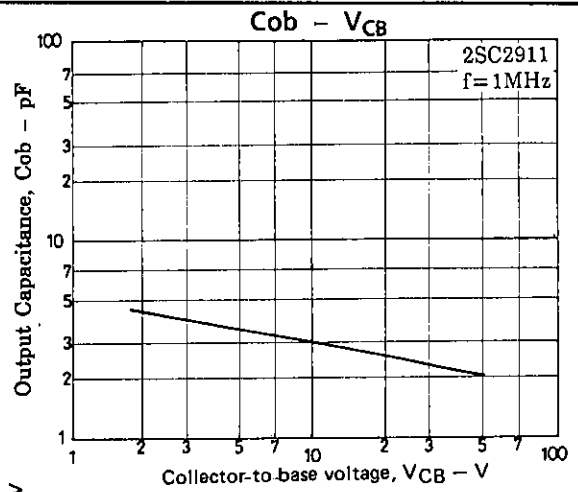
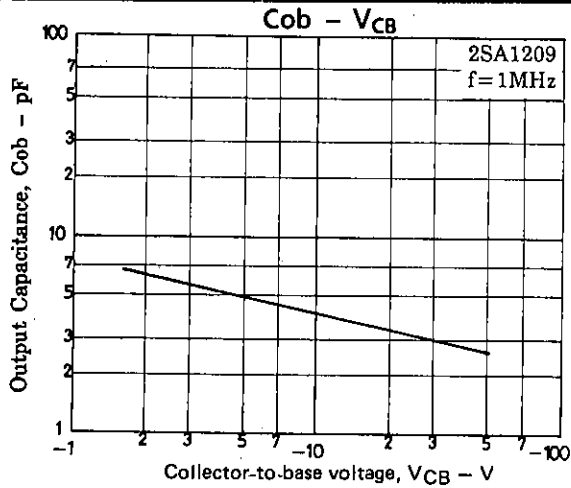
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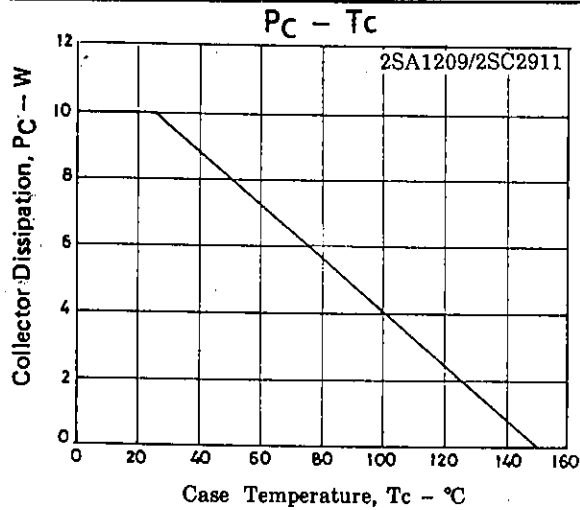
B: Base
C: Collector
E: Emitter

2SA1209/2SC2911



2SA1209/2SC2911





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