



2SA1209/2SC2911

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

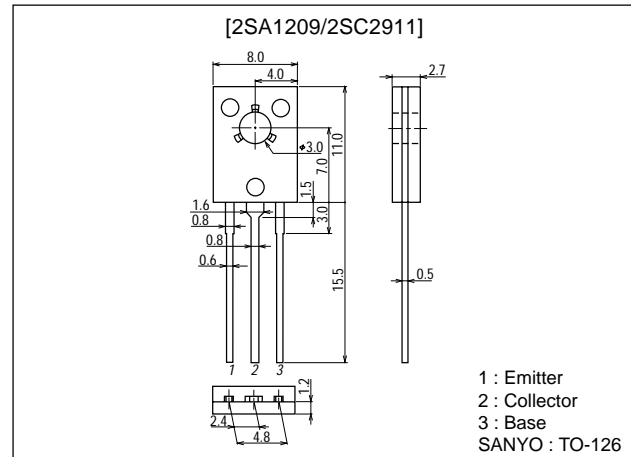
Features

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

Package Dimensions

unit:mm

2009B



() : 2SA1209

Specifications

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

Parameter	Symbol	Conditions	Ratings	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		(-)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_{stg}		-55 to +150	$^\circ\text{C}$

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

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
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}	$V_{CB} = (-)10\text{V}, f = 1\text{MHz}$		(4.0)3.0		pF

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

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Rank	R	S	T
h_{FE}	100 to 200	140 to 280	200 to 400

■ Any and all SANYO products described or contained herein do not have specifications that can handle applications that require extremely high levels of reliability, such as life-support systems, aircraft's control systems, or other applications whose failure can be reasonably expected to result in serious physical and/or material damage. Consult with your SANYO representative nearest you before using any SANYO products described or contained herein in such applications.

■ SANYO assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all SANYO products described or contained herein.

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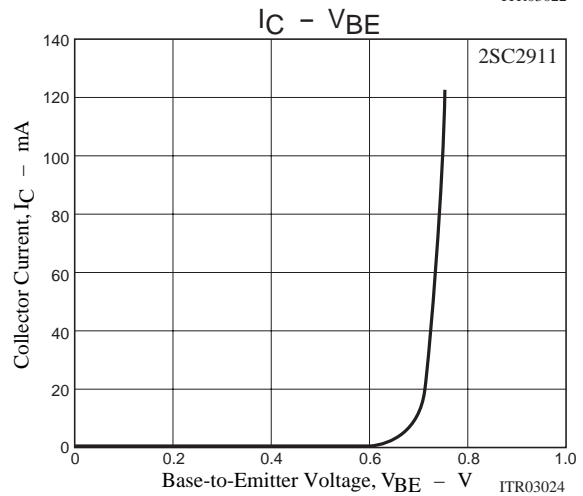
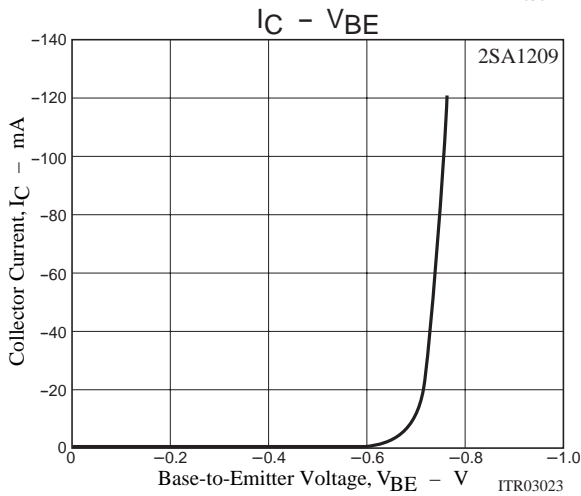
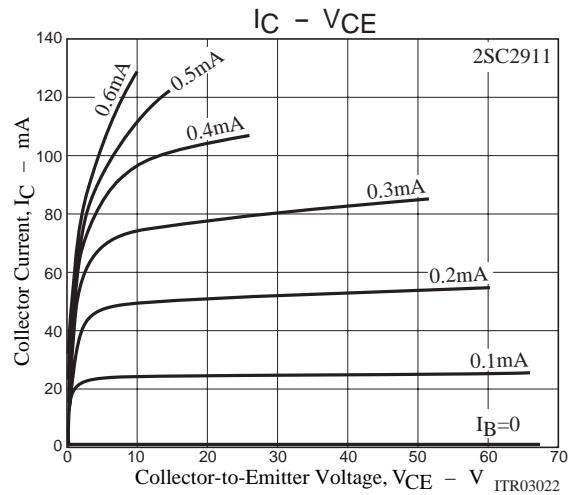
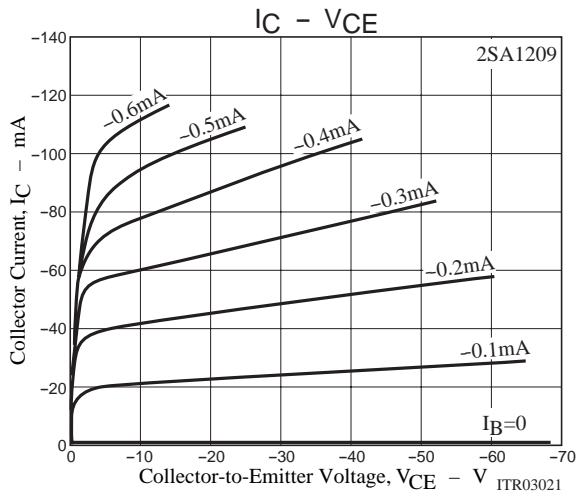
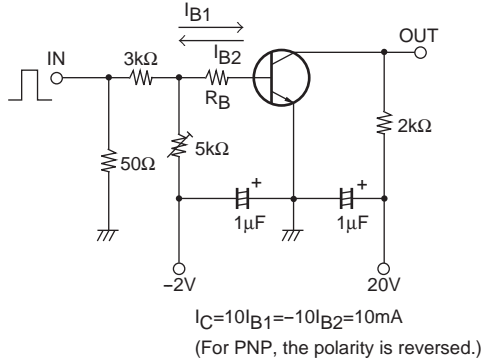
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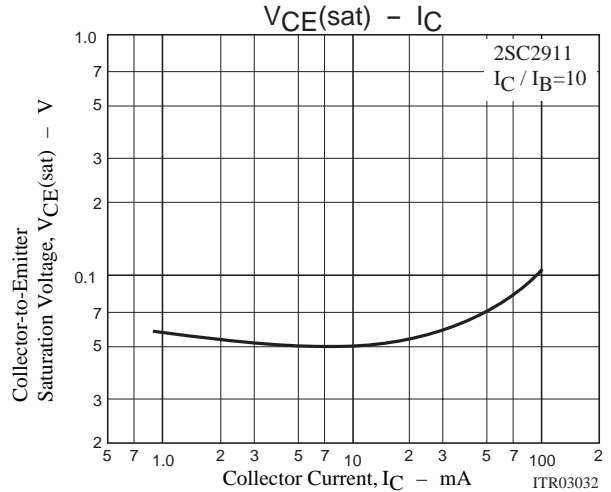
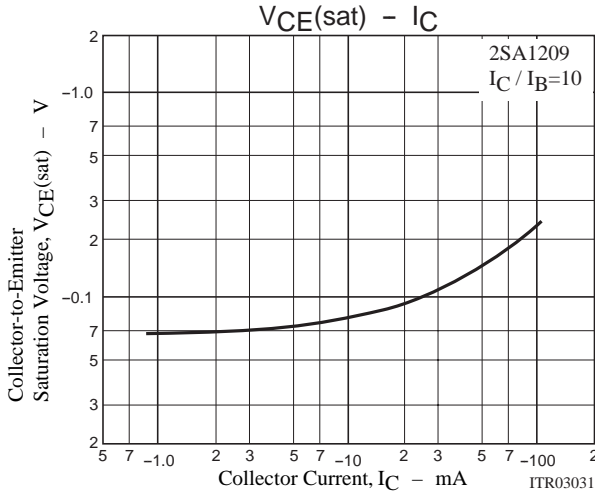
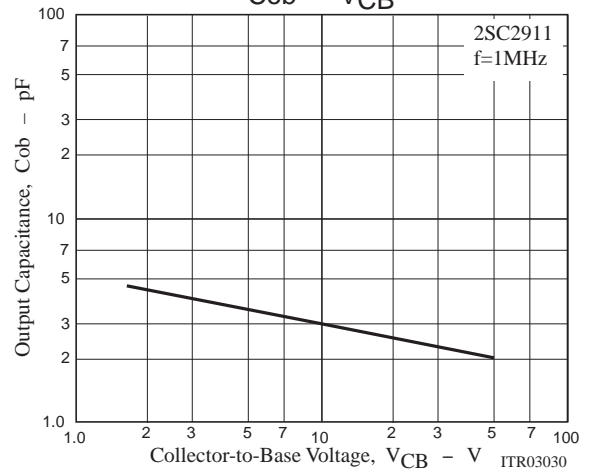
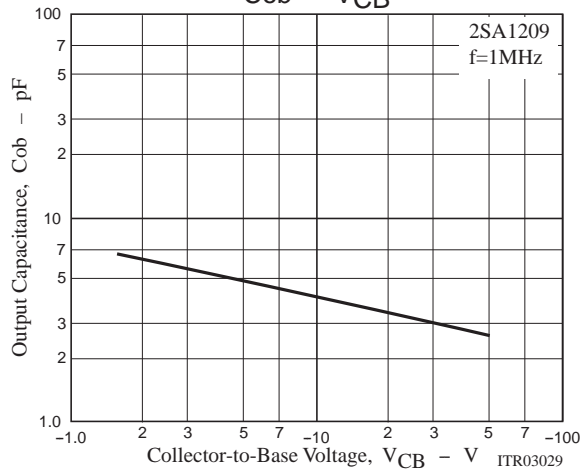
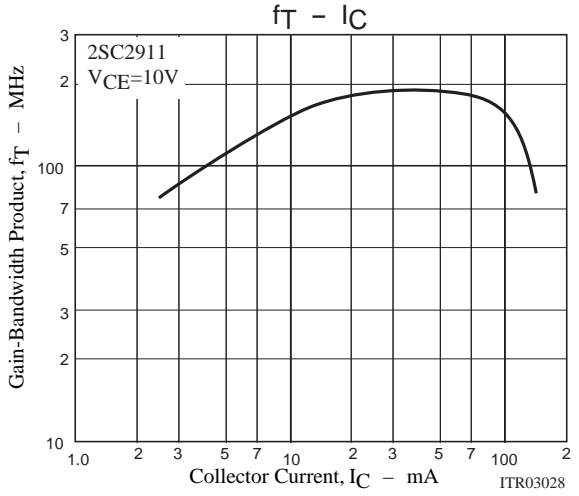
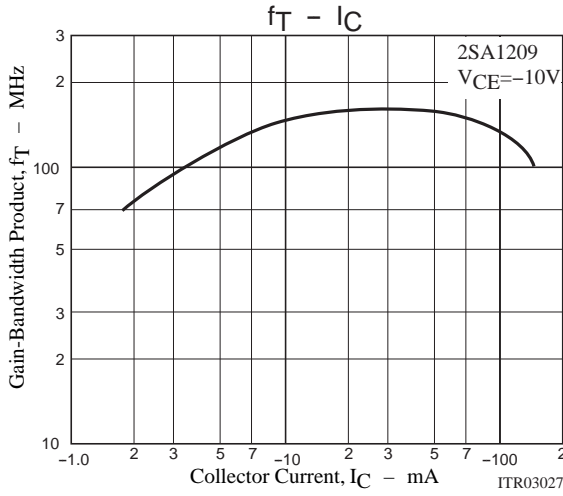
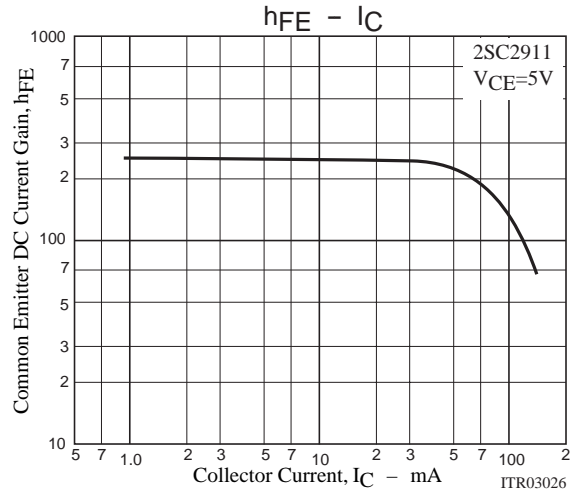
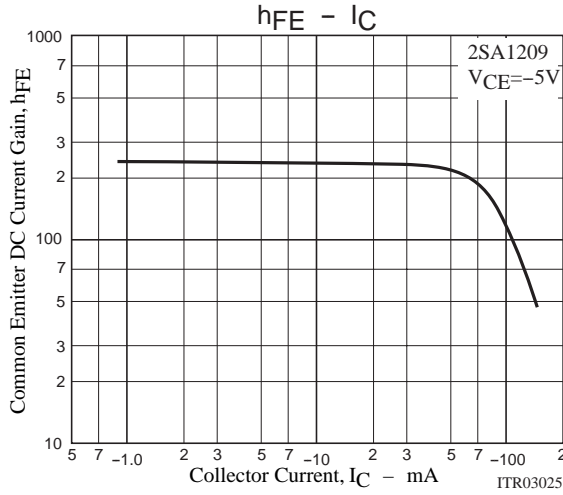
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)50mA, I_B=(-)5mA$		0.07 (-0.14)	0.3 (-0.4)	V
Turn-ON Time	t_{on}	See specified Test Circuit		0.1		μs
Fall Time	t_f	See specified Test Circuit		0.1		μs
Storage Time	t_{stg}	See specified Test Circuit		1.5		μs

Switching Test Circuit



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