

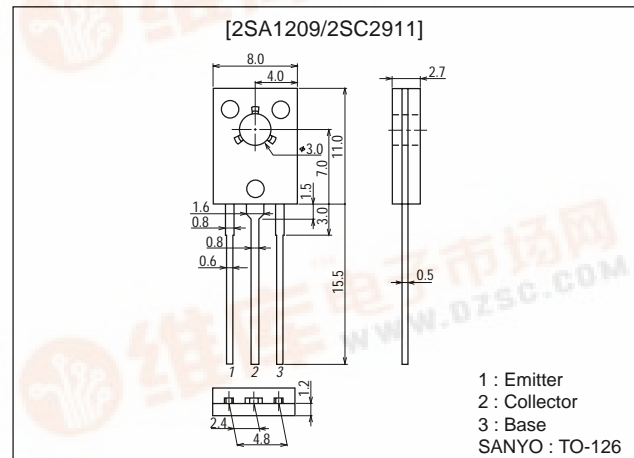
SANYO**2SA1209/2SC2911****160V/140mA High-Voltage Switching
and AF 100W Predriver Applications****Features**

- 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	$T_c=25^\circ\text{C}$	1	W
			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.

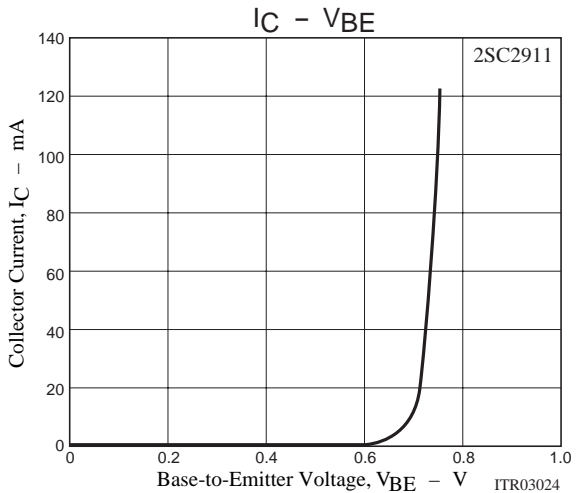
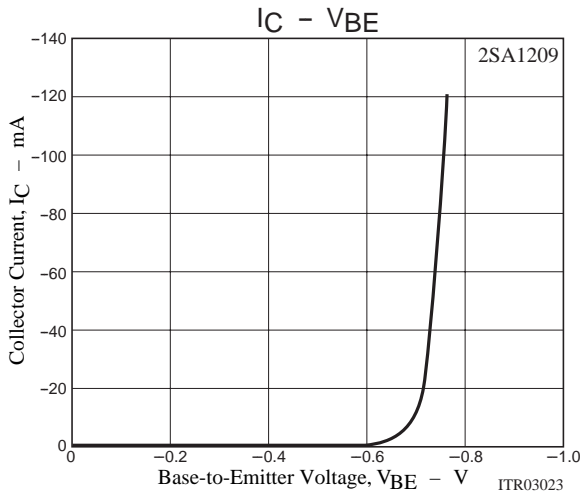
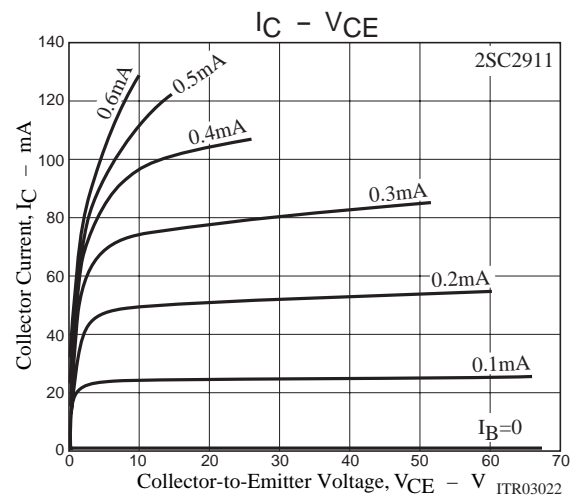
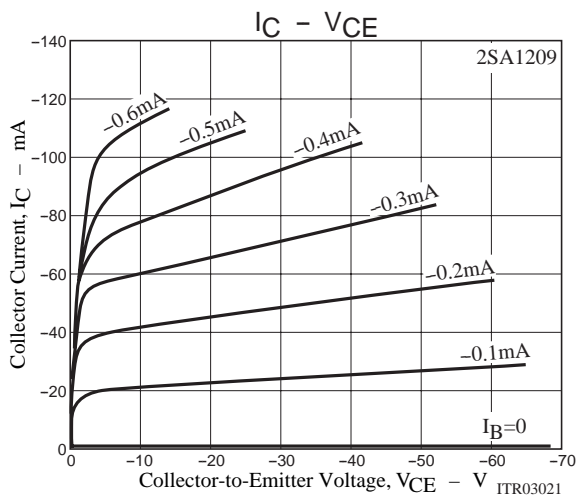
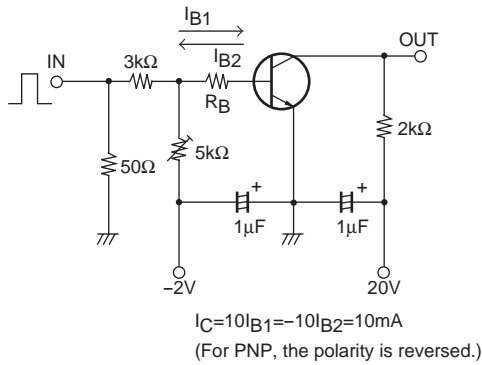
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2SA1209/2SC2911

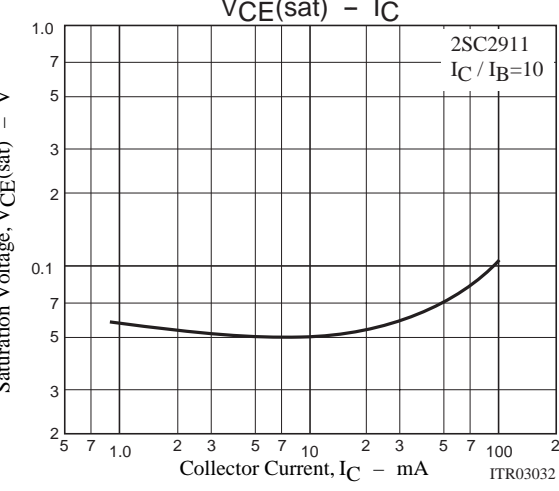
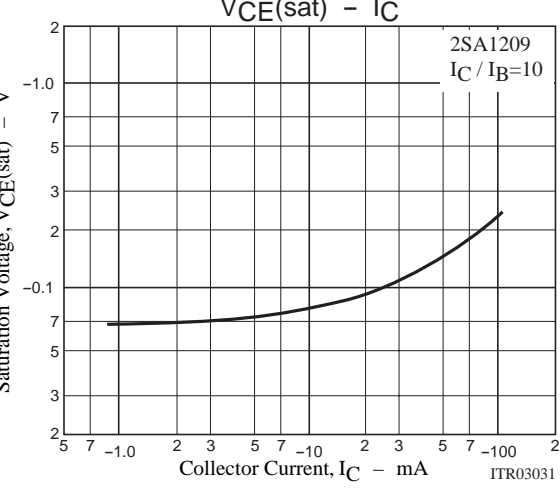
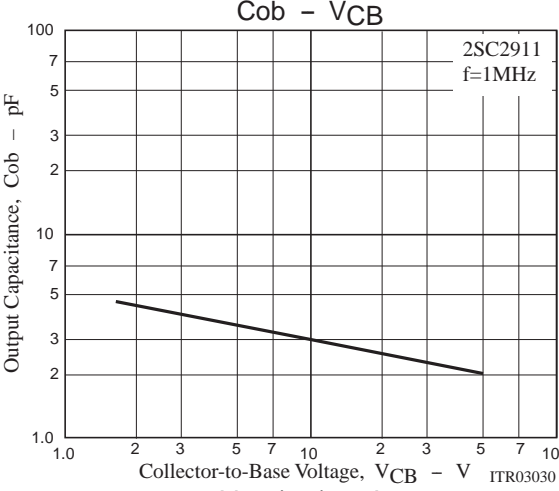
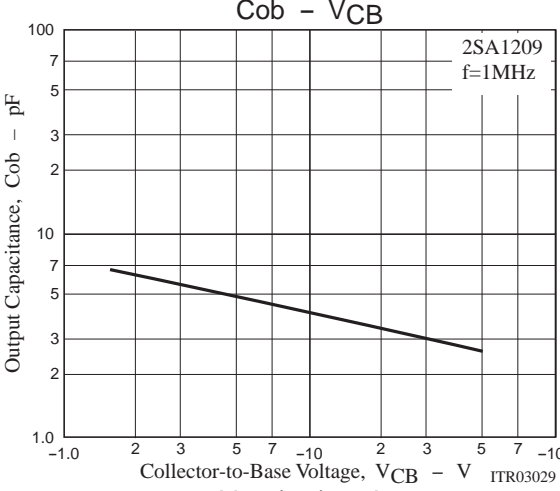
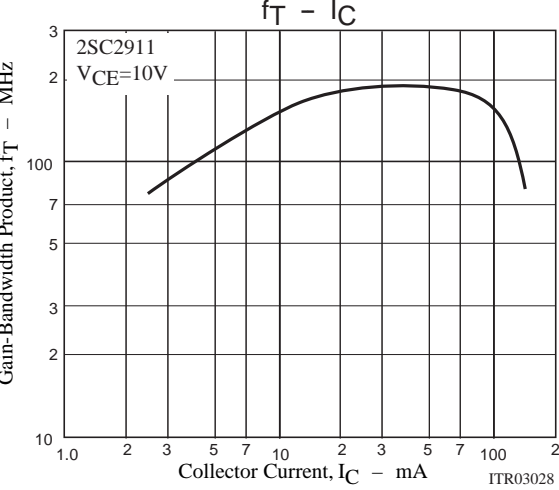
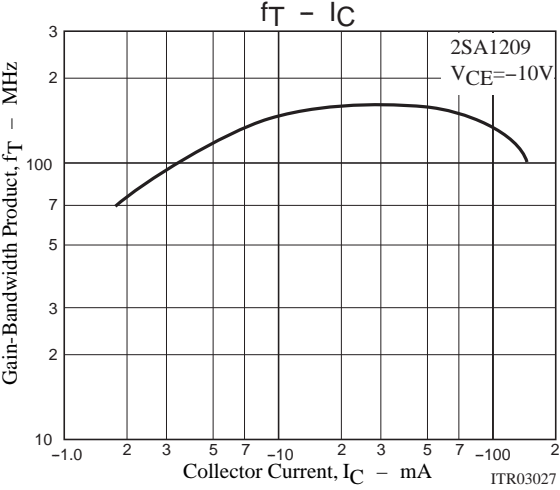
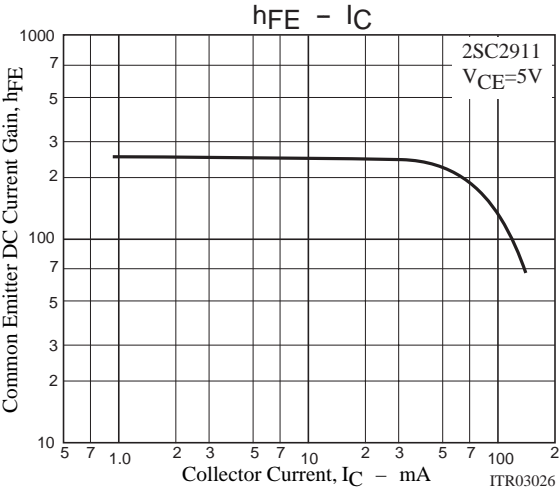
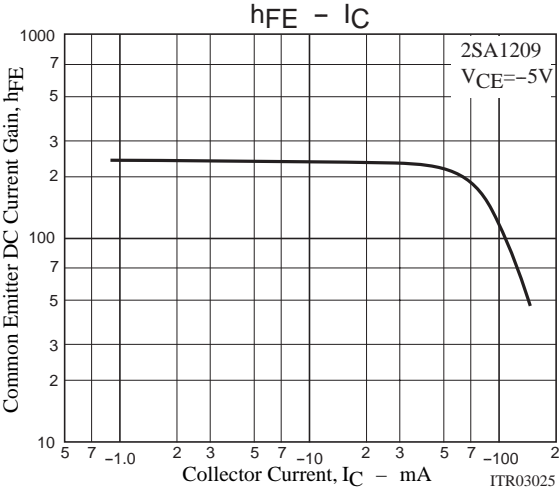
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Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)50\text{mA}$, $I_B=(-)5\text{mA}$		0.07 (-0.14)	0.3 (-0.4)	V
Turn-ON Time	t_{on}	See specified Test Circuit		0.1		μs
Fall Time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

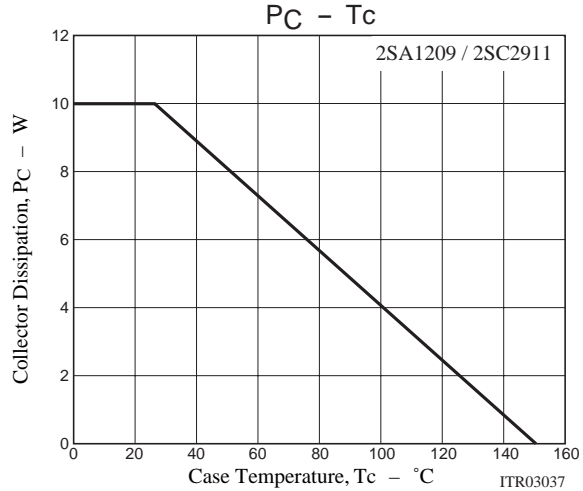
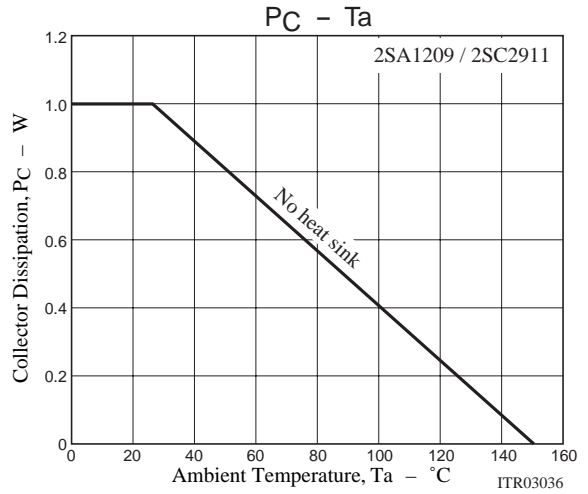
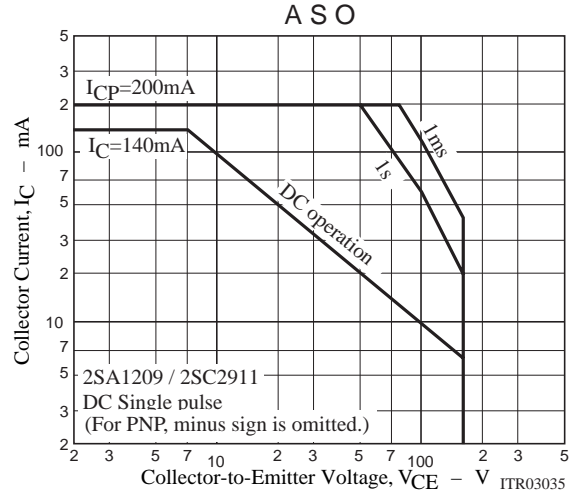
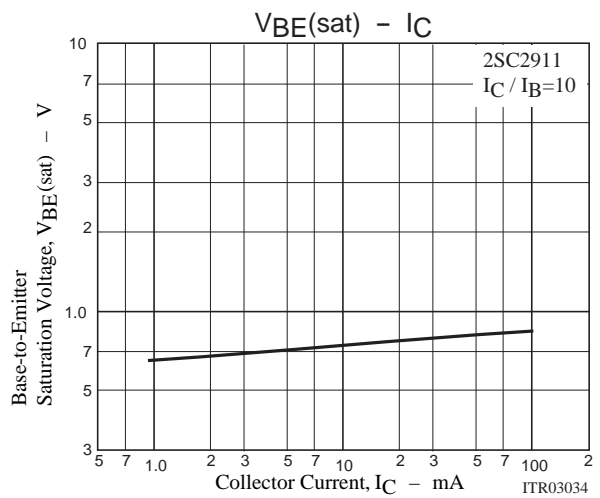
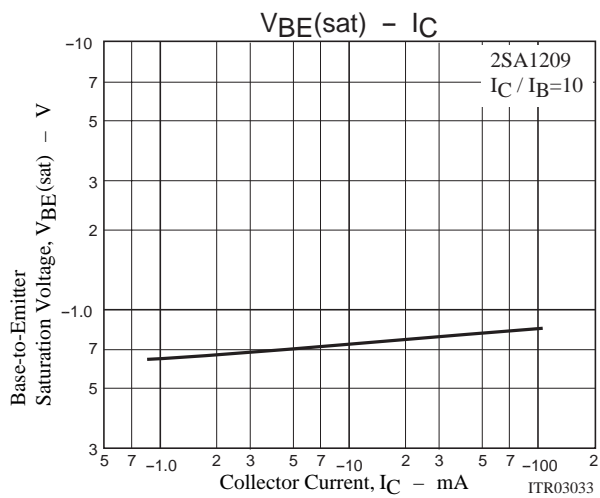
Switching Test Circuit



2SA1209/2SC2911



2SA1209/2SC2911



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