

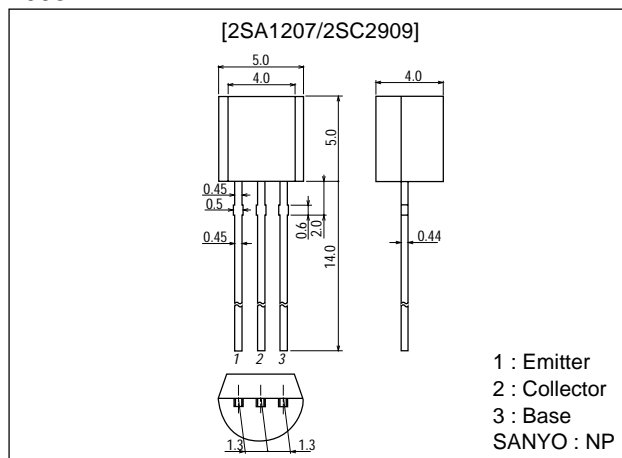
**SANYO****2SA1207/2SC2909****High-Voltage Switching  
AF 60W Predriver Applications****Features**

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

**Package Dimensions**

unit:mm

2003B



() : 2SA1207

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

Parameter	Symbol	Conditions	Ratings	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	$I_C$		(-)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  $T_a = 25^\circ\text{C}$ 

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=(-)80\text{V}, I_E=0$			(-)0.1	$\mu\text{A}$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=(-)4\text{V}, I_C=0$			(-)0.1	$\mu\text{A}$
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
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)30\text{mA}, I_B=(-)3\text{mA}$		0.08 (-0.14)	0.3 (-0.4)	V

\* : The 2SA1207/2SC2909 are classified by 10mA  $h_{FE}$  as follows :

Continued on next page.

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

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■ 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.

**SANYO Electric Co.,Ltd. Semiconductor Company**

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70502TN (KT)/71598HA (KT)/4190MO/3187AT/2255MY, TS No.778-1/4

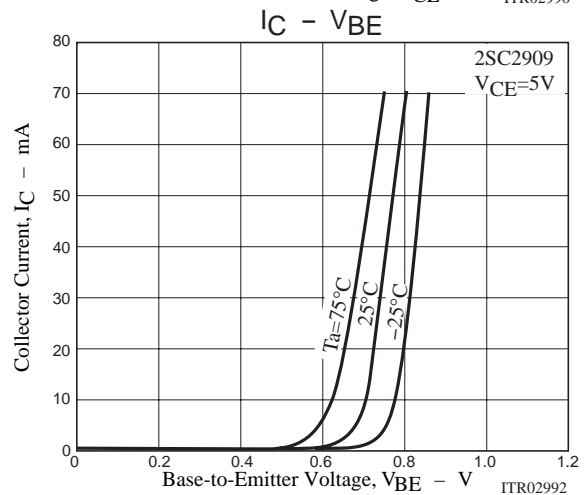
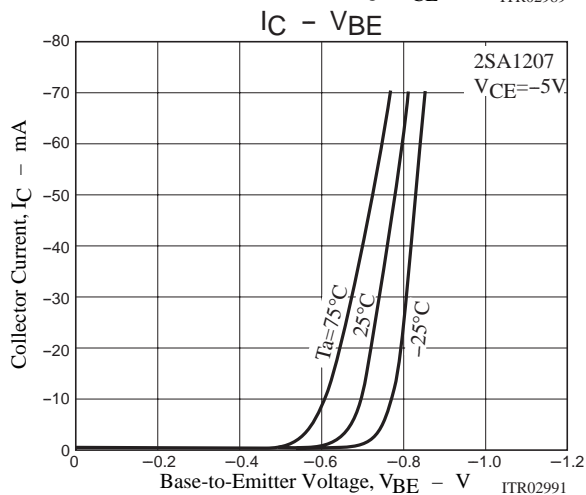
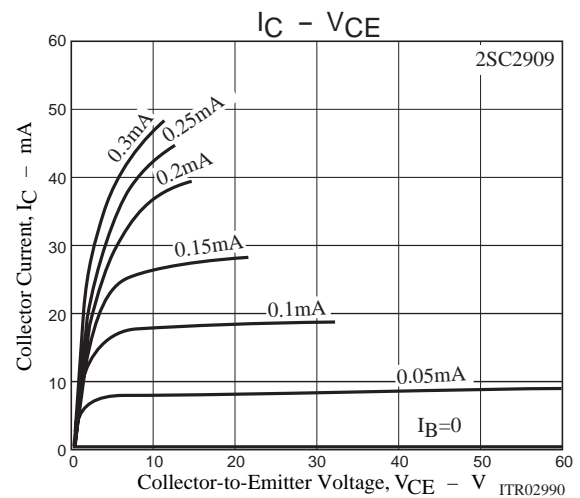
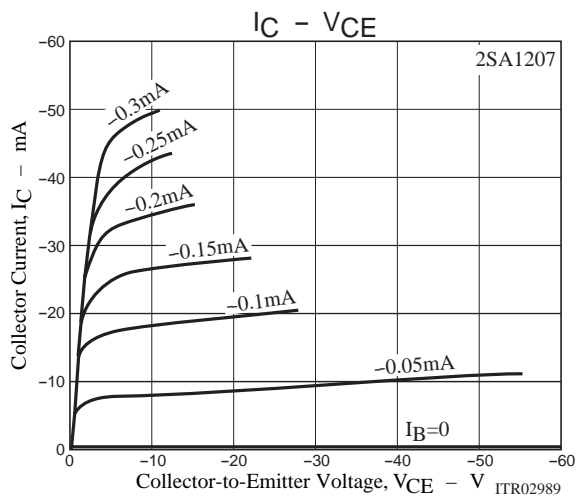
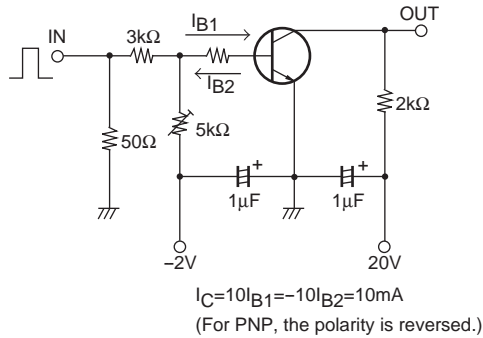
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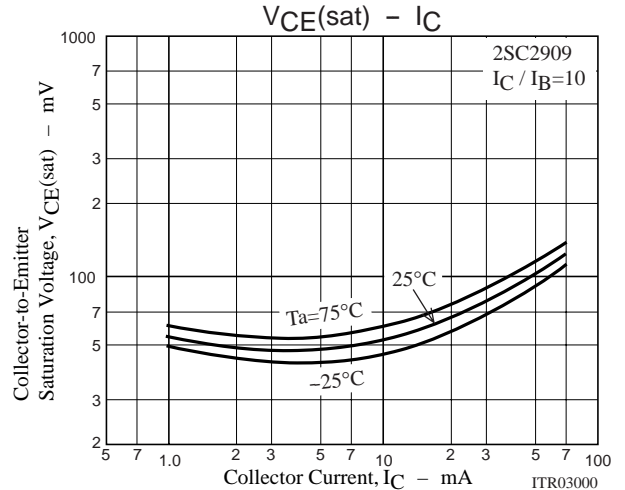
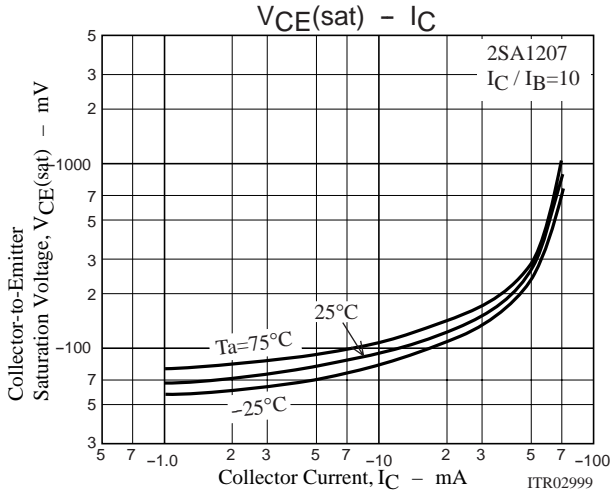
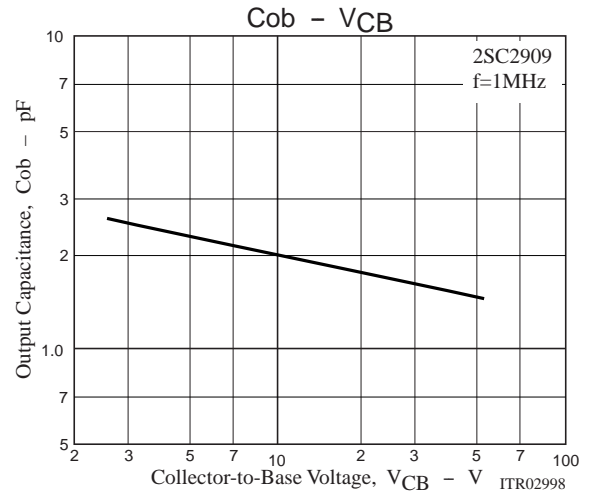
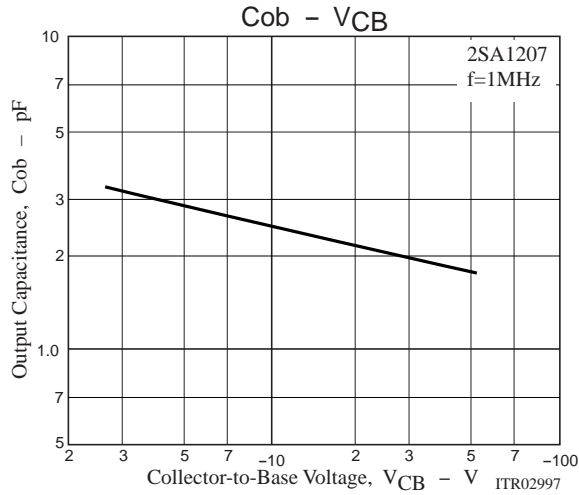
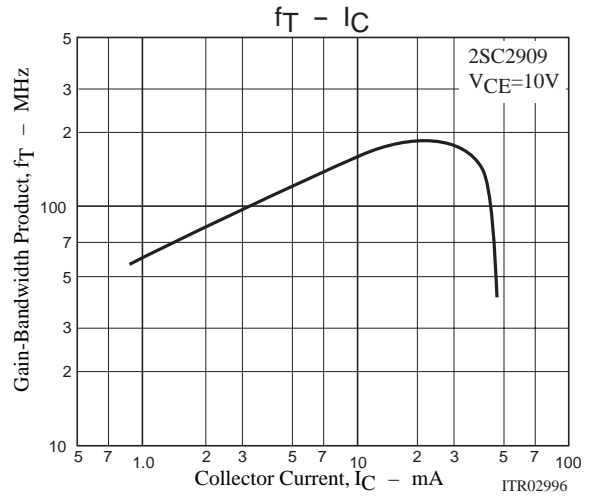
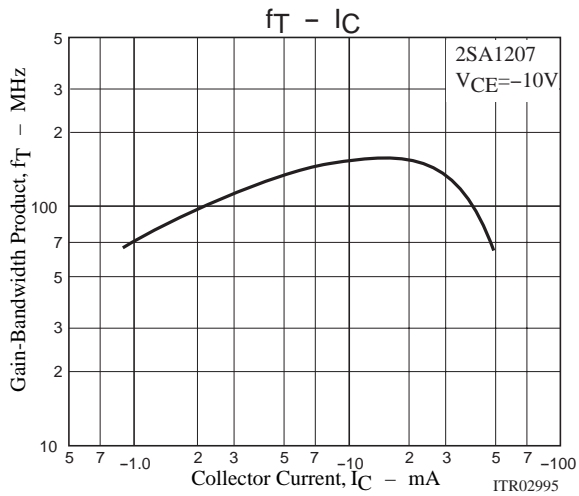
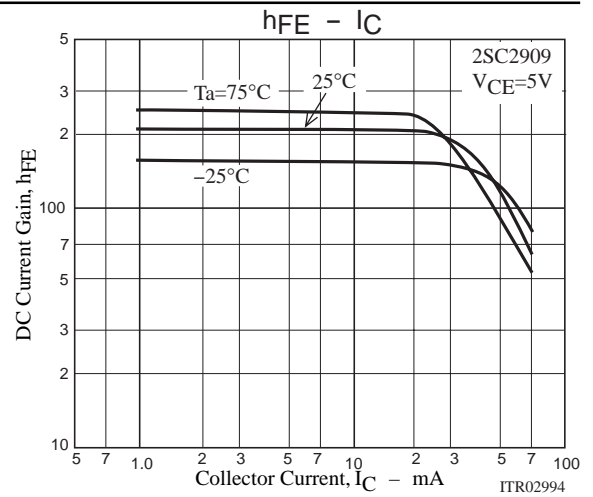
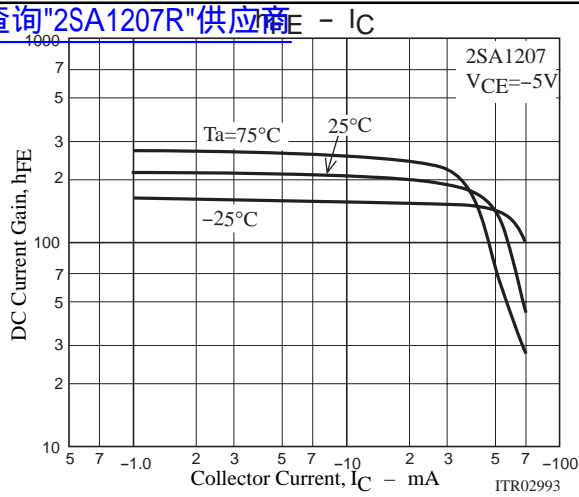
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Turn-ON Time	$t_{on}$	See specified Test Circuit		0.1		$\mu s$
Fall Time	$t_f$	See specified Test Circuit		0.2		$\mu s$
Storage Time	$t_{stg}$	See specified Test Circuit		1.0		$\mu s$

Switching Time Test Circuit



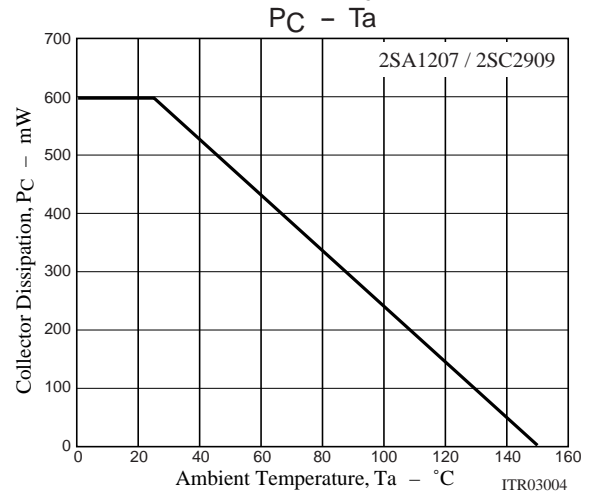
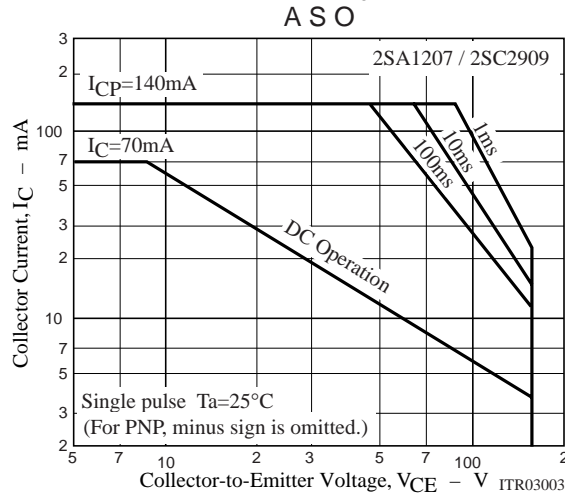
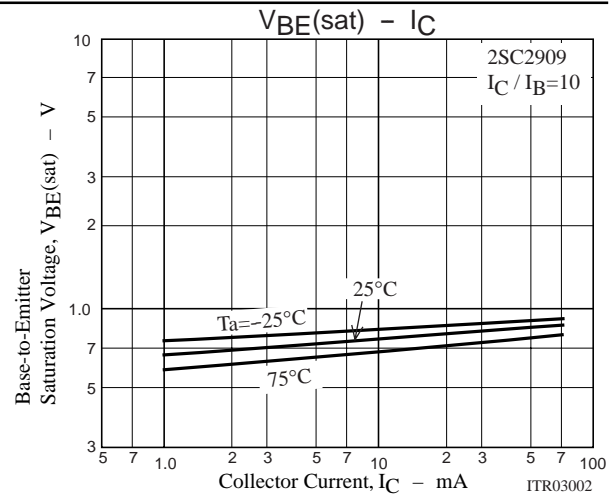
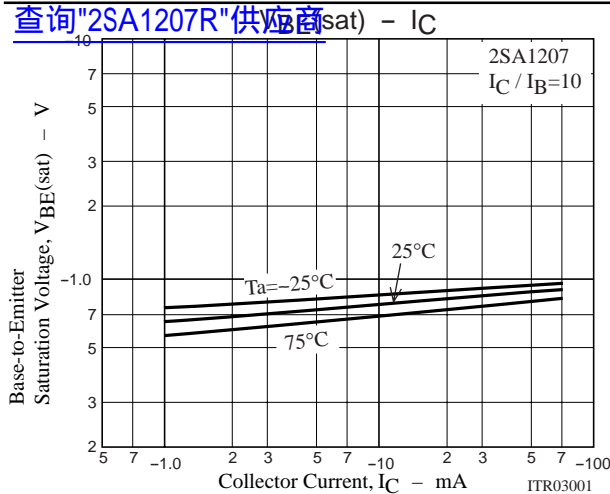
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