



2SA1853/2SC4827

High Definition CRT Display Video Output Applications

Applications

- High-definition CRT display video output. Wide-band amplifier.

Features

- Adoption of FBET process.
- High f_T : $f_T=300\text{MHz}$.
- High breakdown voltage : $V_{CEO}=200\text{V}$.
- Small reverse transfer capacitance and excellent high-frequency characteristic :
 $C_{re}=2.2\text{pF/NPN}$, 2.7pF/PNP .
- Possible to offer the 2SA1853/2SC4827 devices in a tepla reel packaging, which facilitates automatic incertion.

() : 2SA1853

Specifications

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

Parameter	Symbol	Conditions	Ratings	Unit
Collector-to-Base Voltage	V_{CBO}		(-200)	V
Collector-to-Emitter Voltage	V_{CEO}		(-200)	V
Emitter-to-Base Voltage	V_{EBO}		(-3)	V
Collector Current	I_C		(-200)	mA
Collector Current (Pulse)	I_{CP}		(-300)	mA
Collector Dissipation	P_C		1.3	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}	$V_{CB}=(-)150\text{V}$, $I_E=0$			(-0.1)	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=(-)2\text{V}$, $I_C=0$			(-1.0)	μA
DC Current Gain	h_{FE1}	$V_{CE}=(-)10\text{V}$, $I_C=(-)10\text{mA}$	60*		320*	
	h_{FE2}	$V_{CE}=(-)10\text{V}$, $I_C=(-)100\text{mA}$	20			
Gain Bandwidth Product	f_T	$V_{CE}=(-)30\text{V}$, $I_C=(-)50\text{mA}$		300		MHz
Output Capacitance	C_{ob}	$V_{CB}=(-)30\text{V}$, $f=1\text{MHz}$		2.7		pF
				(3.2)		pF
Reverse Transfer Capacitance	C_{re}	$V_{CB}=(-)30\text{V}$, $f=1\text{MHz}$		2.2		pF
				(2.7)		pF

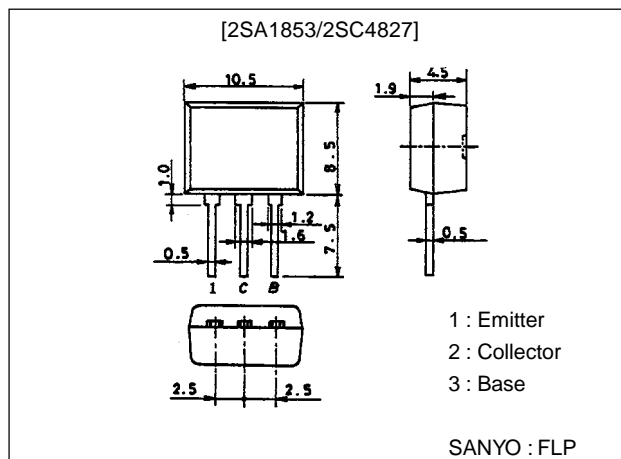
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Package Dimensions

unit:mm

2084B

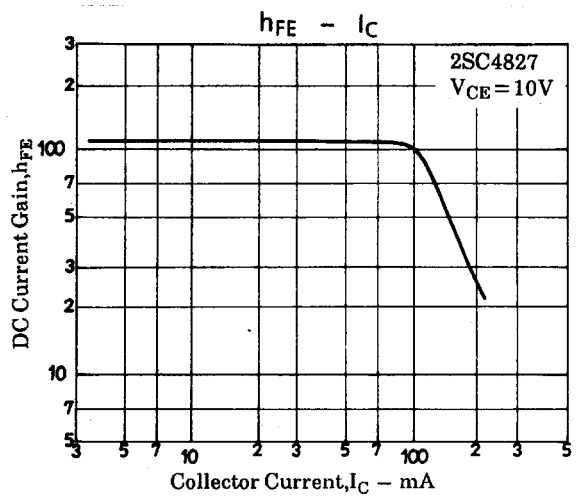
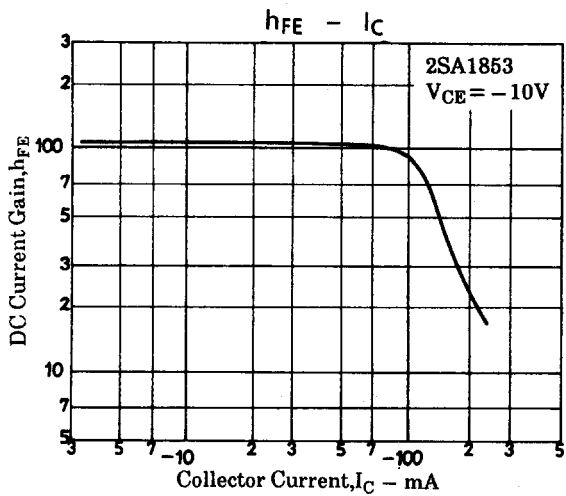
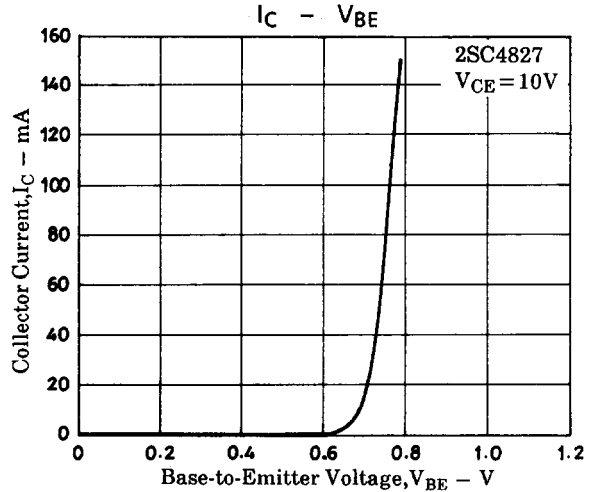
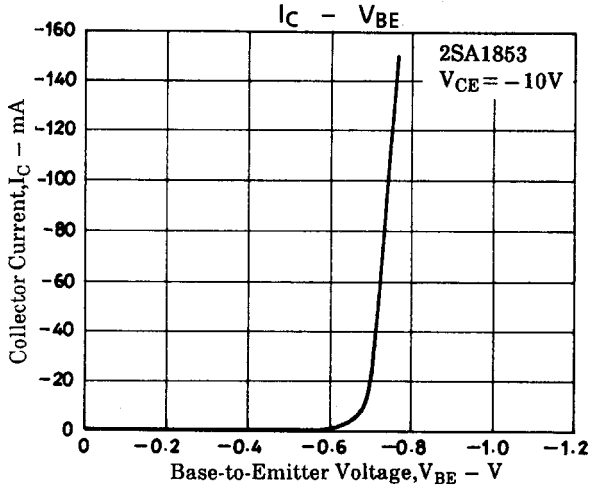
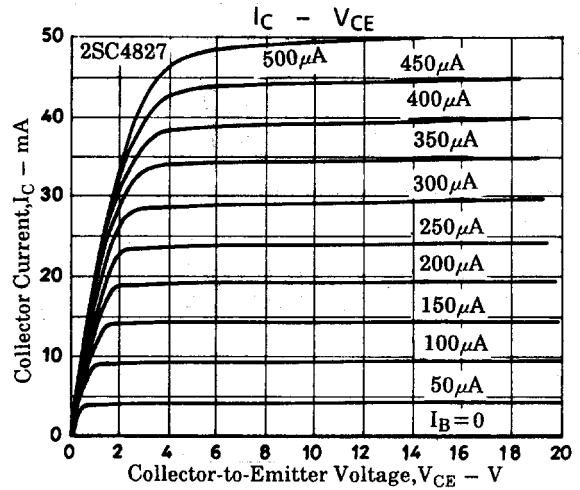
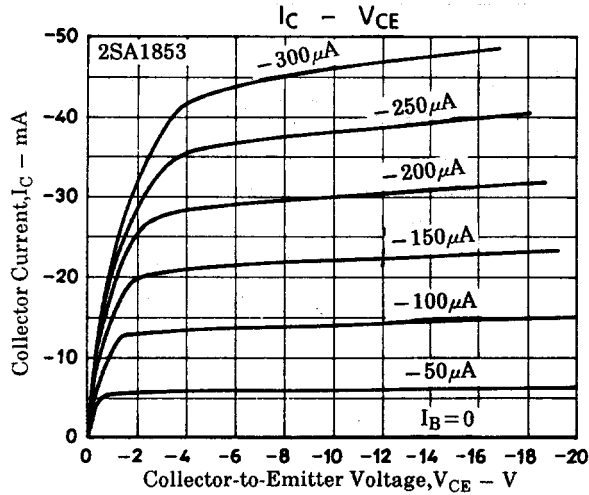


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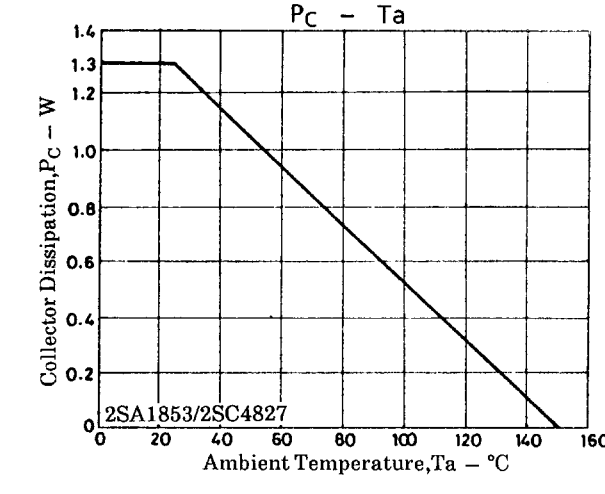
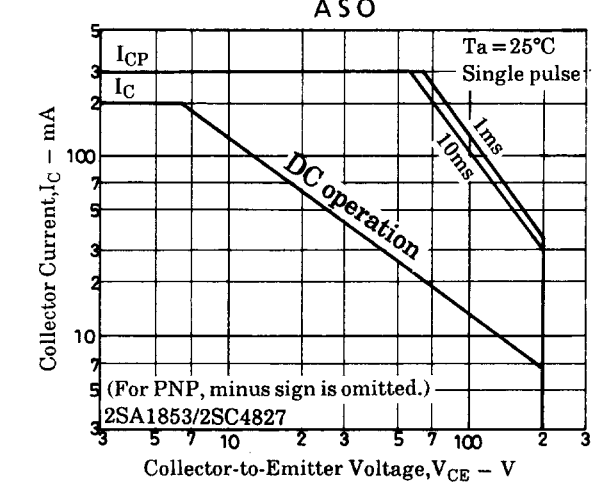
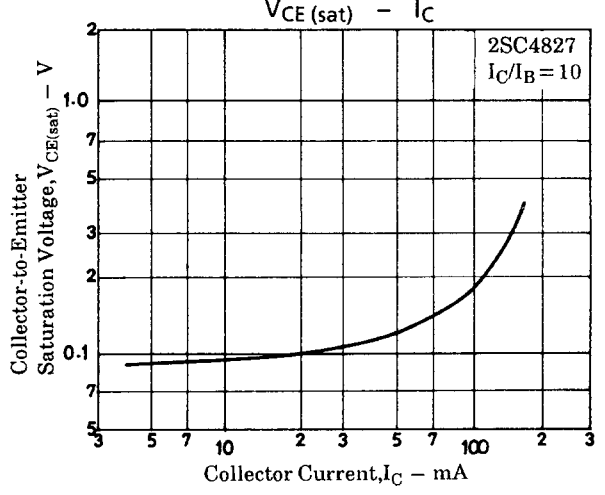
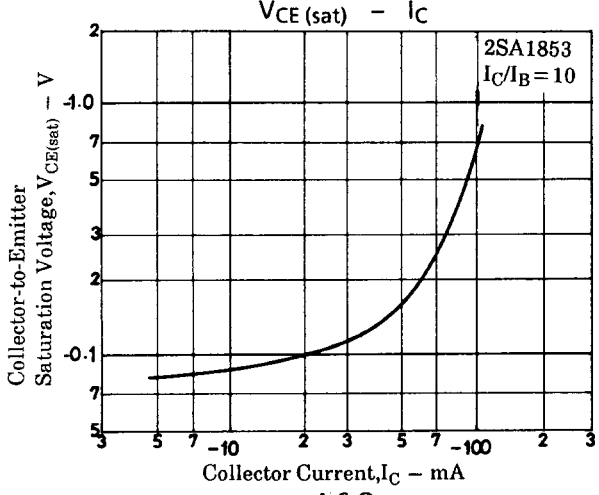
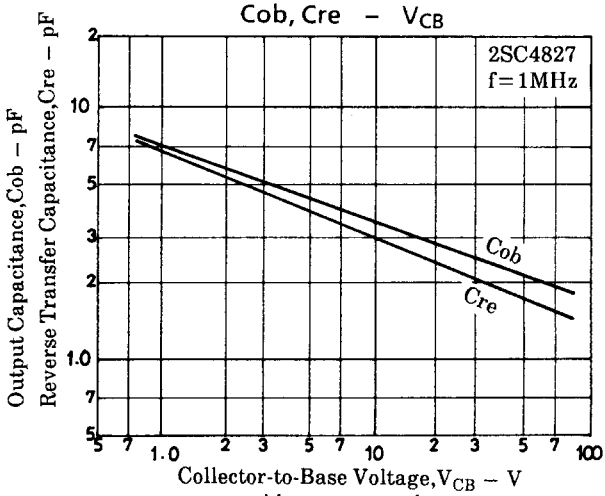
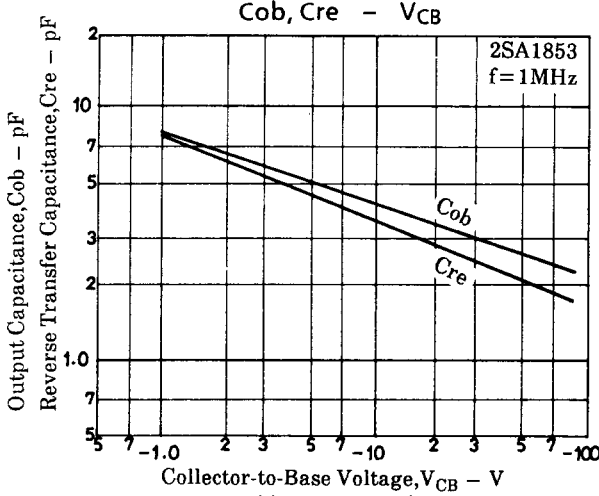
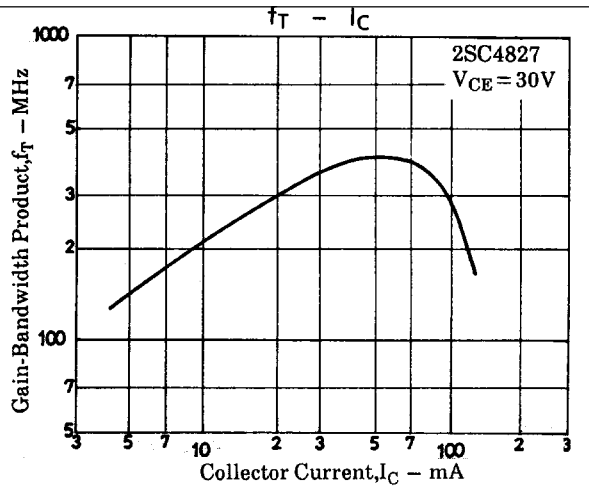
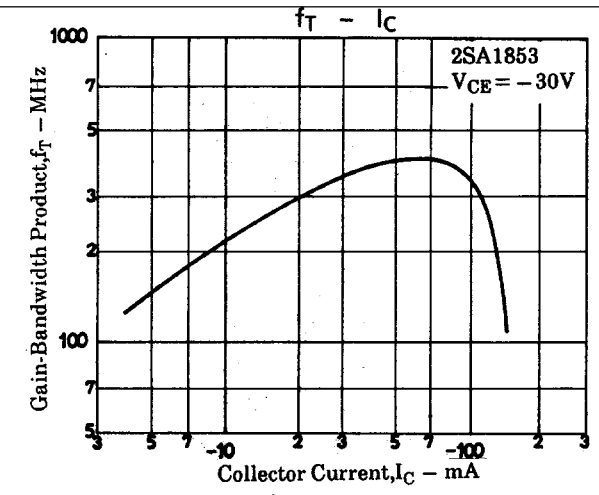
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=(-)30mA, I_B=(-)3mA$			(-) 1.0	V
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=(-)30mA, I_B=(-)3mA$			(-) 1.0	V

* : The 2SA1853/2SC4827 are classified by 10mA h_{FE} as follows :

60	D	120	100	E	200	160	F	320
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2SA1853/2SC4827



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